

Industrial Mineral Potential in Nova Scotia

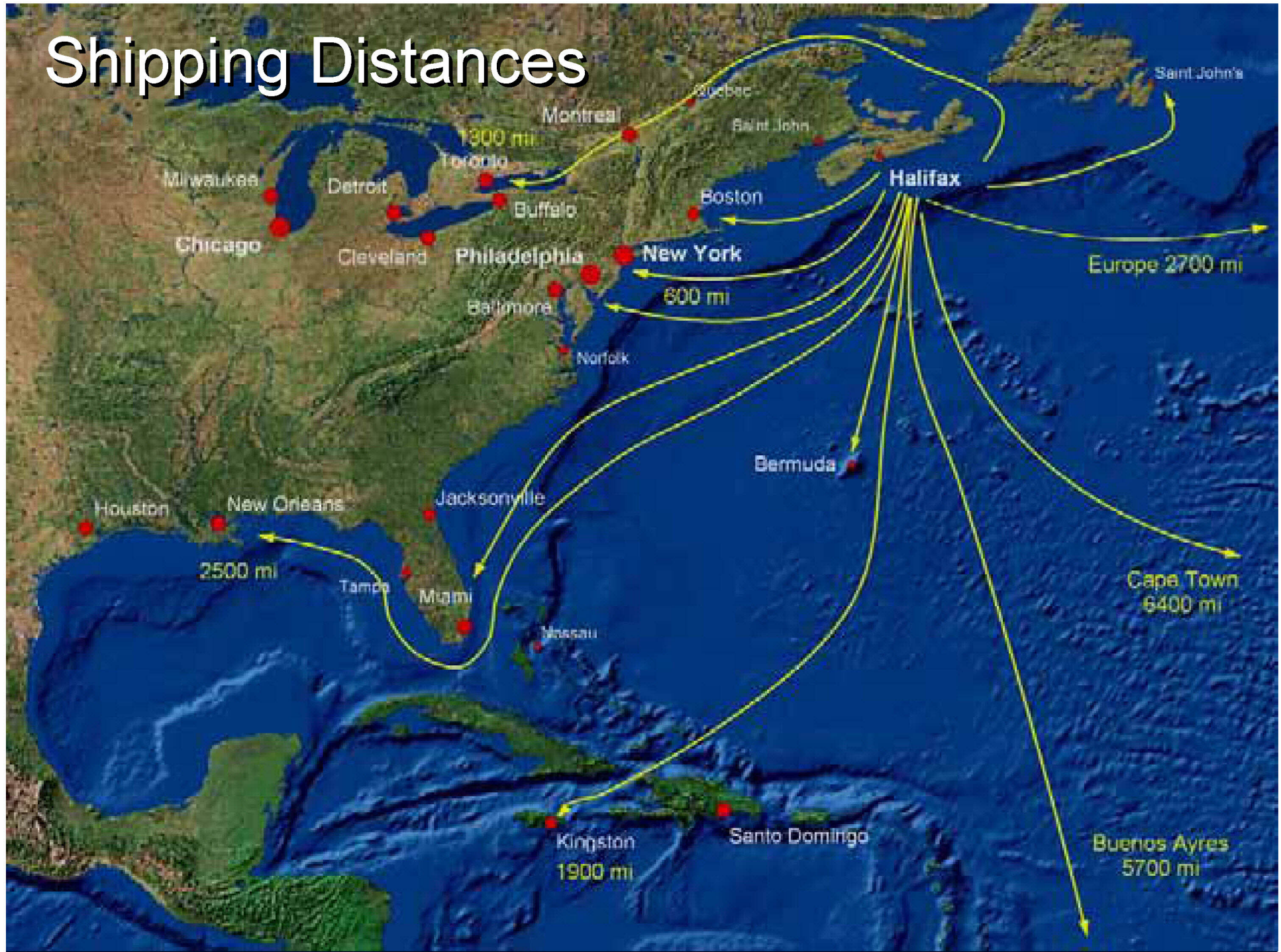
Opportunities to Develop Deep-water Aggregate Quarries

P. Finck

Natural Resources

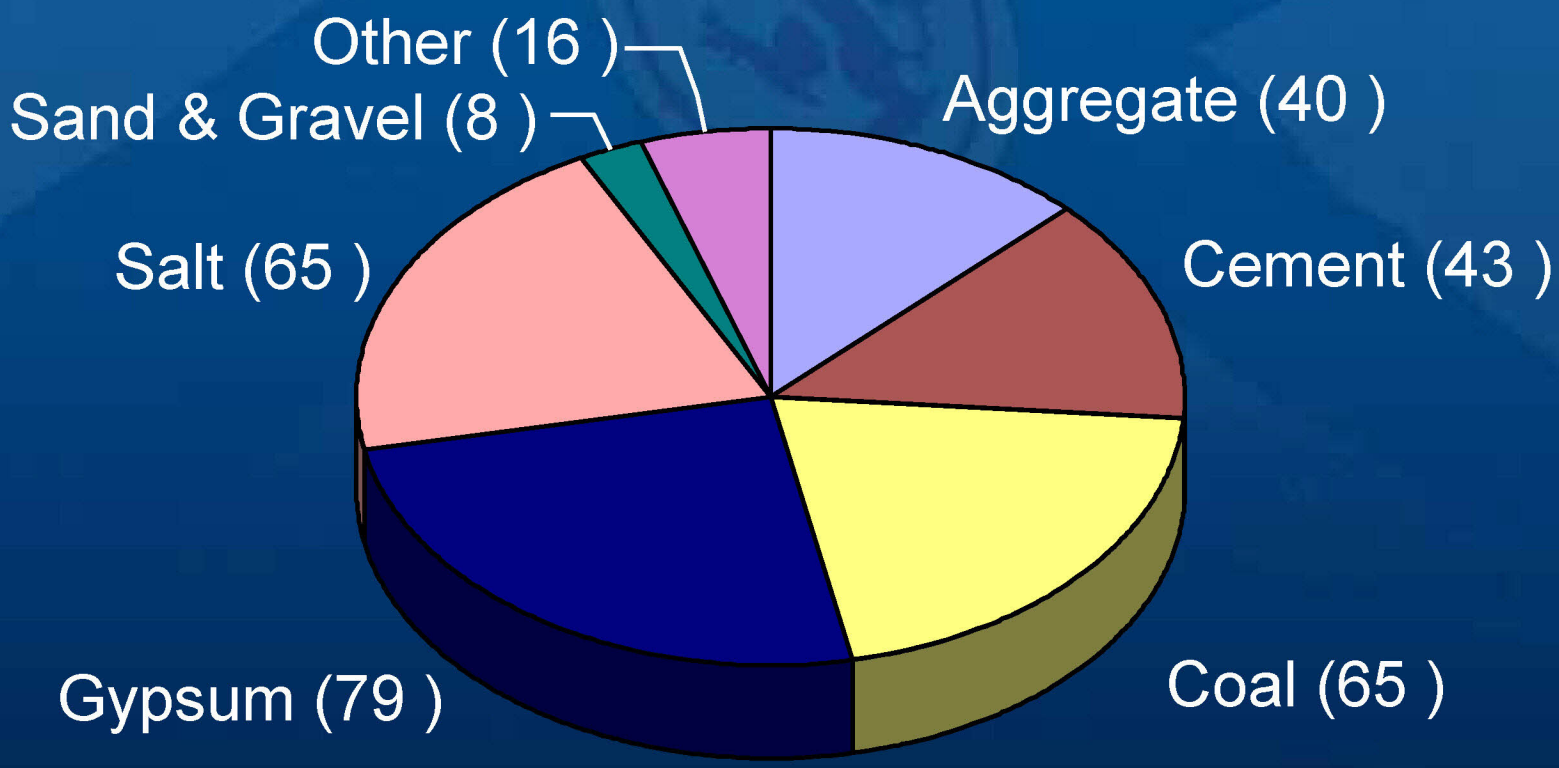


Shipping Distances



Mineral Production by Commodity, 2001

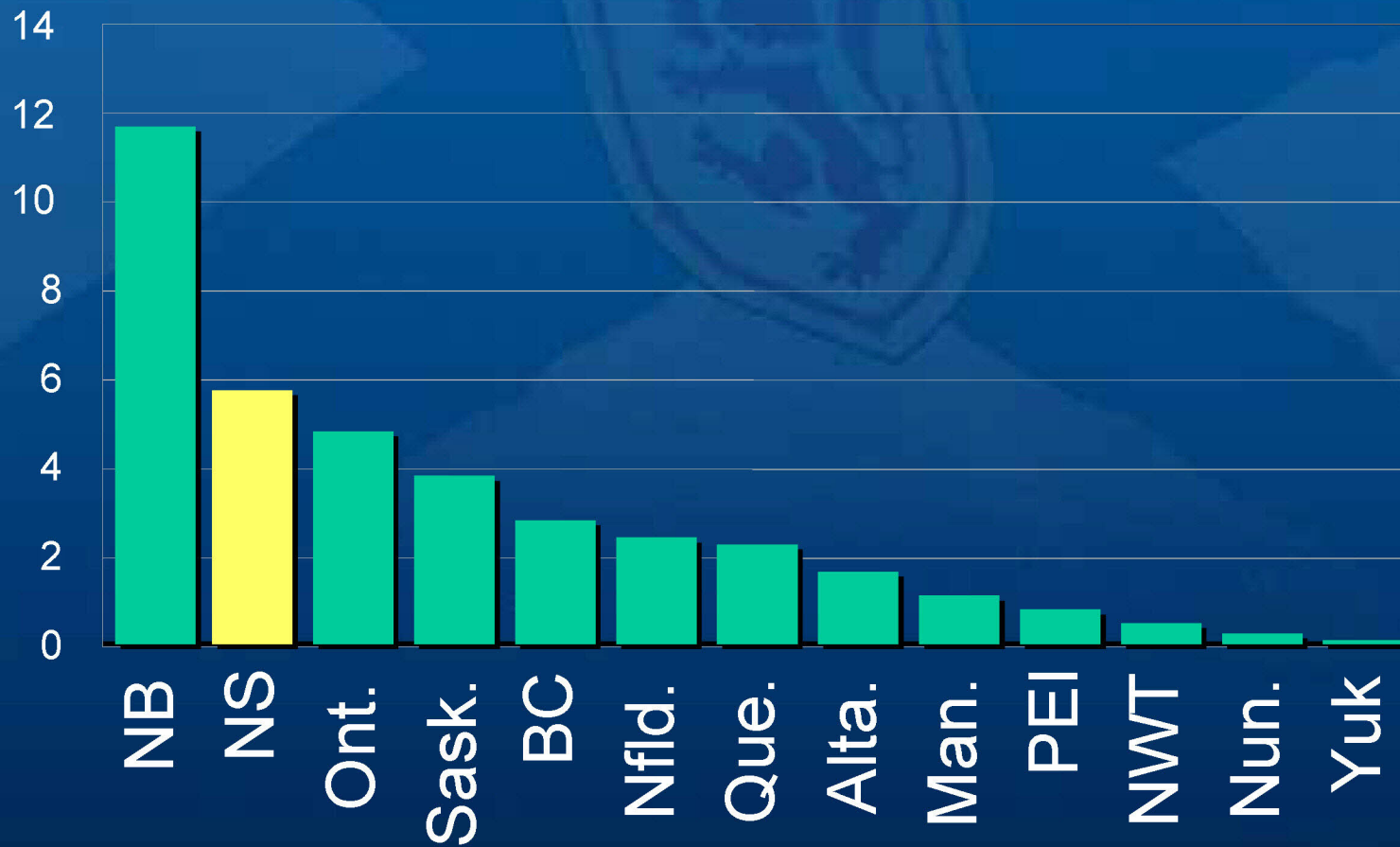
\$316 Million



Natural Resources



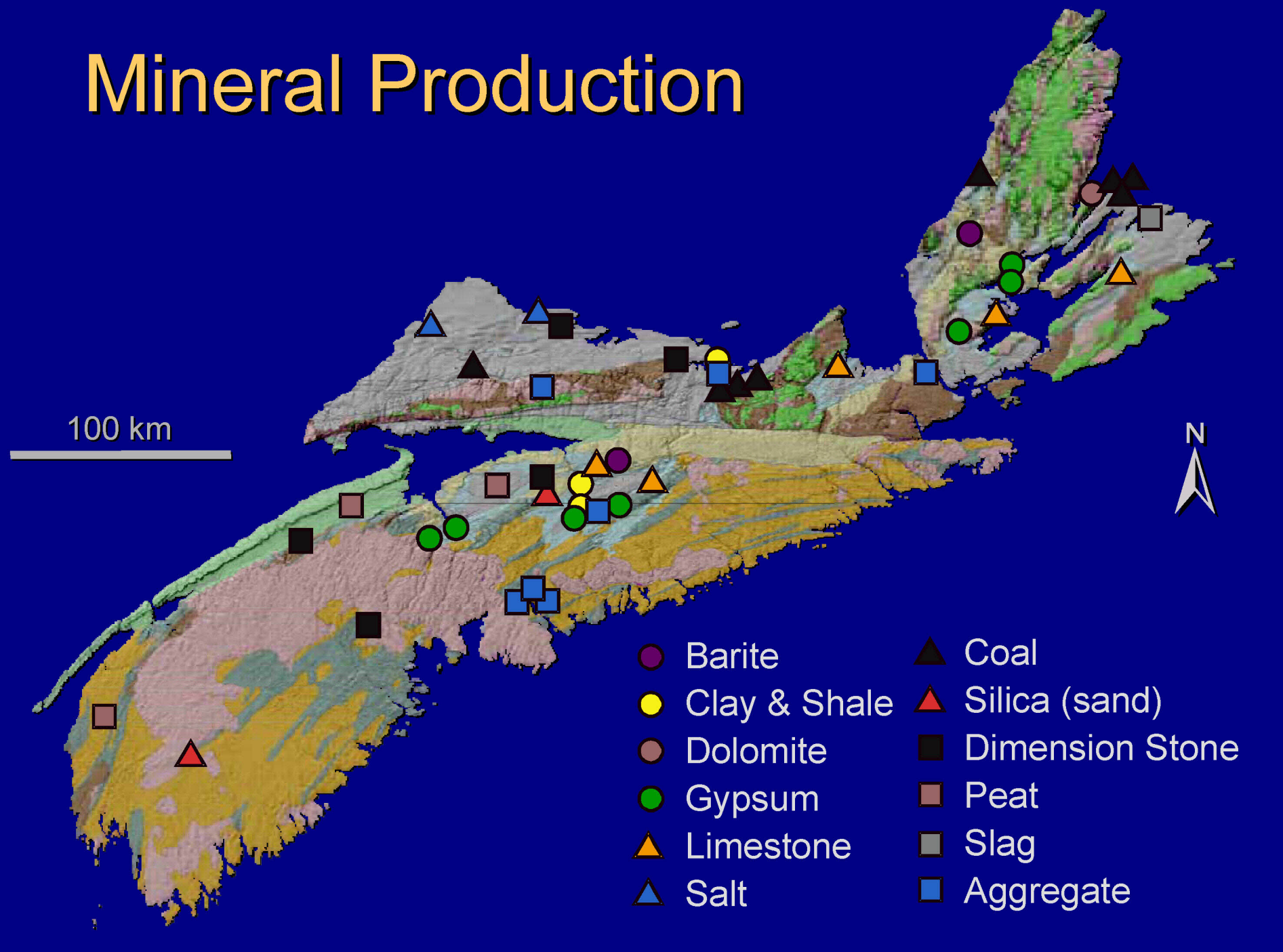
Avg. Value of Mineral Production / km²



Natural Resources



Mineral Production



Nova Scotia Mineral Production

Industrial Minerals	Amount (tonnes)	Value (\$000)
Anhydrite	180,000	
Barite	600	
Gypsum	7,200,000	
Limestone & Dolomite	700,000	
Peat	9,300	
Salt	900,000	
Silica	49,000	
<i>Total</i>		140,000
Structural Materials		
Building - Ornamental Stone	2000	
Clay Products	25,400	
Crushed Stone	7,800,000	
Sand & Gravel	2,750,000	
Cement	331,000	
<i>Total</i>		96,060
Total Mineral Production		236,060

Troy Quarry

- total production
10 M tones
- metasediment
& granite



Natural Resources



Conrad Brothers (Dartmouth)

- 7.5 M tonnes (domestic)
- 2.5 M tonnes (export)
- adequate supply



Natural Resources



Offshore Markets

- Martin Marietta
- operating near capacity
- exporting to the Gulf, East Coast & Caribbean



Natural Resources



Sites of Interest

1. Kelly's Mountain

2. Maritime Stone

3. Rhodena Rock

4. Queensport

5. Eastern Shore

6. Port Mouton Island

7. North Mountain

8. Aspotogan



1

2

3

4

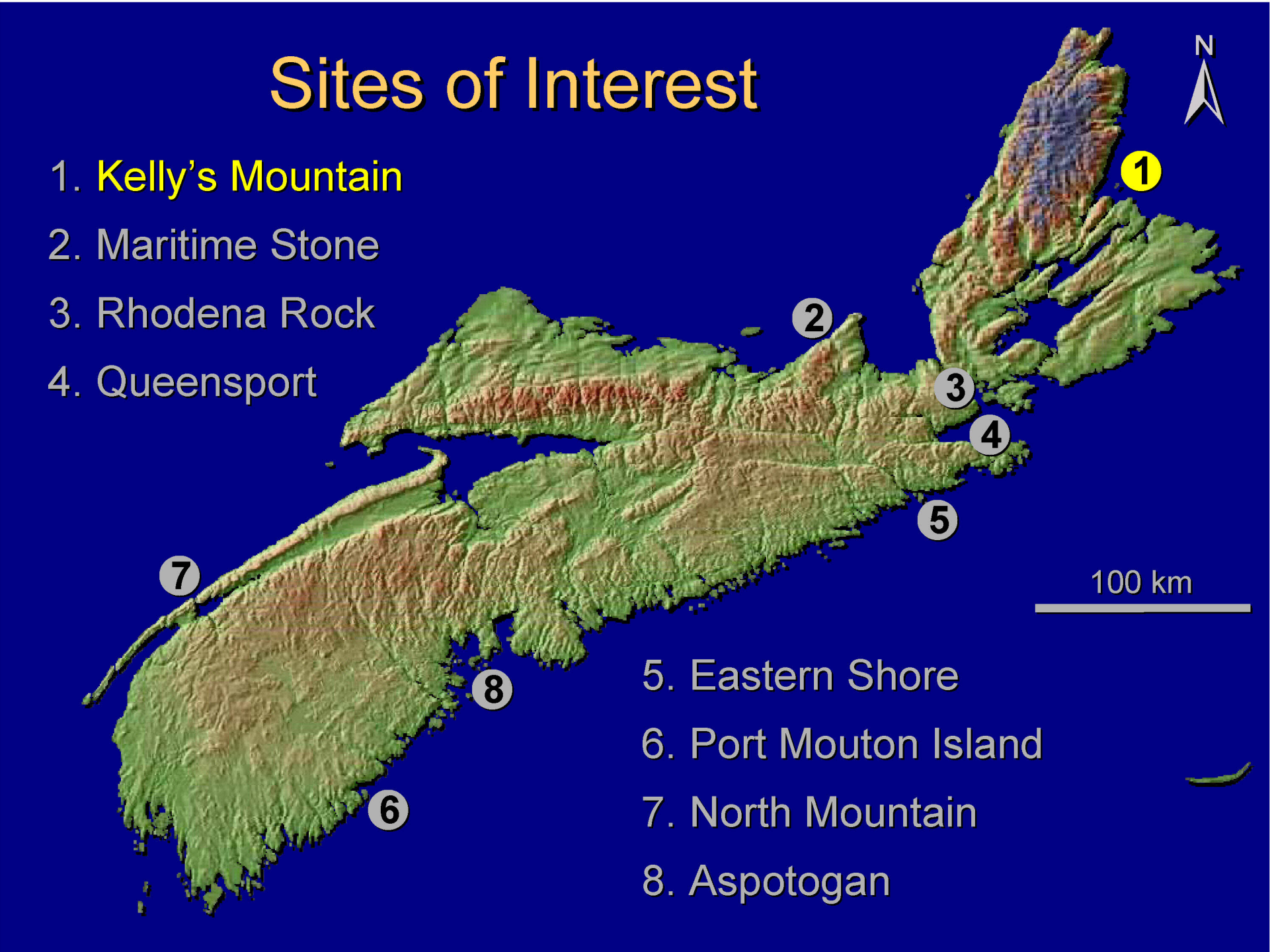
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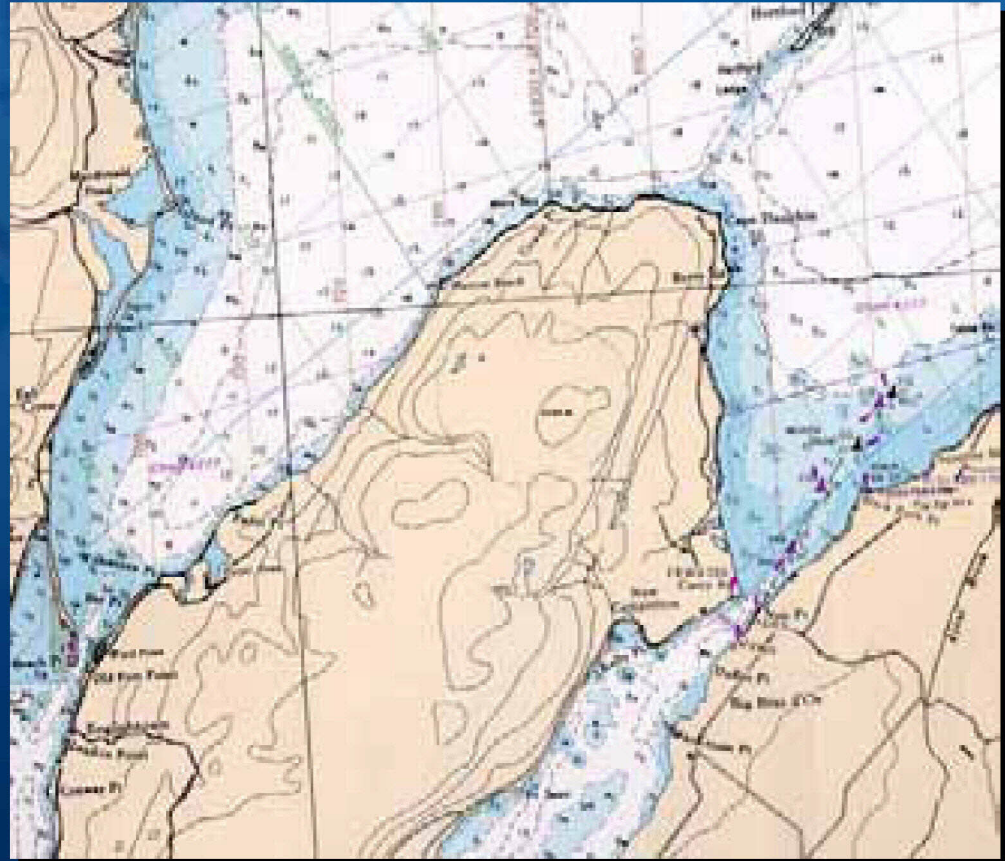
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100 km



Kellys Mountain Area

- water depth
 - > 45 feet north side
 - < 30 K south channel
- elevation up to 300 m
- unlimited tonnage



Natural Resources



Kellys Mountain Area

- Crown Land Areas (North side)
- Scotia Limestone mining lease (south side)
- red granite, LA abrasion of 22
- unlimited tonnages

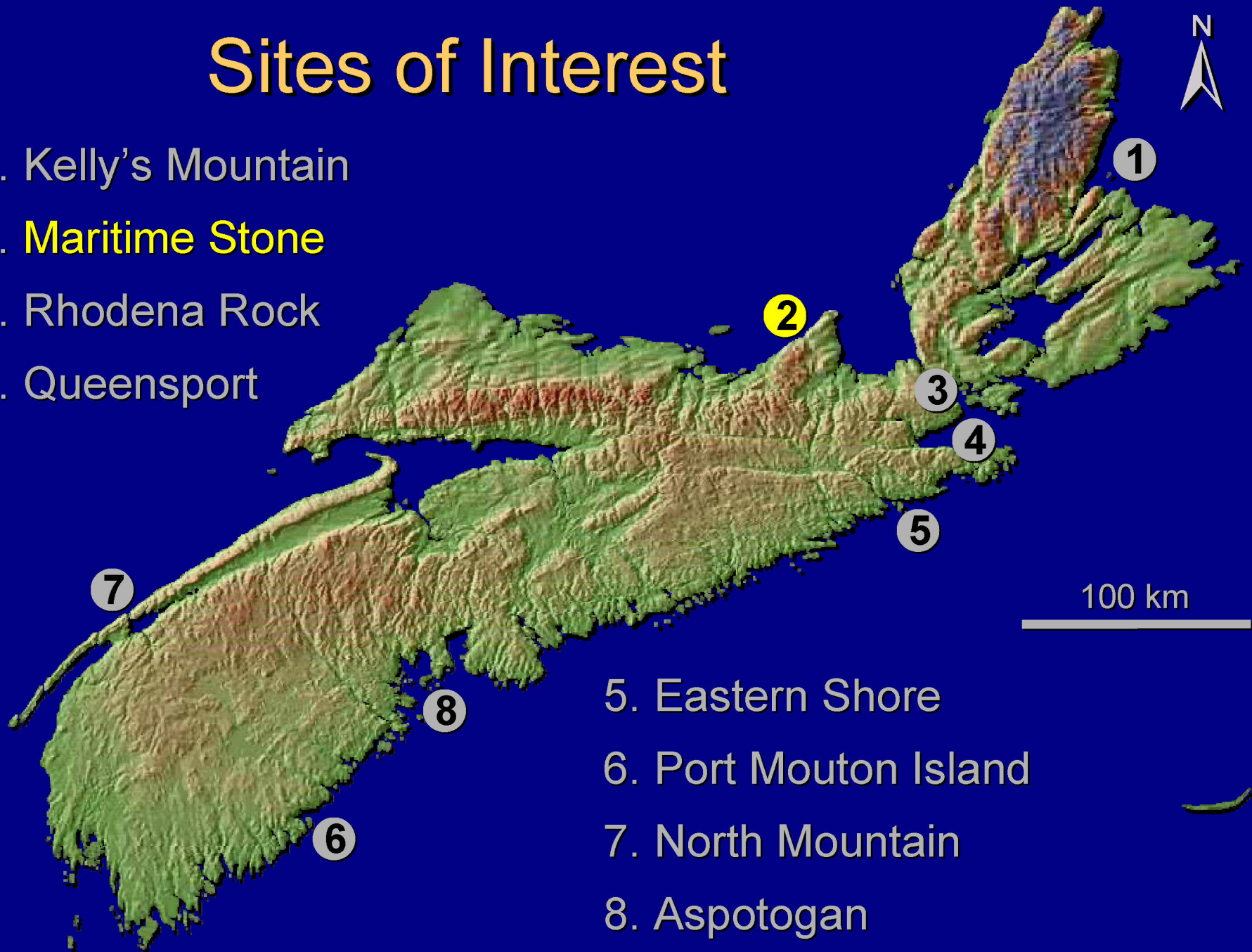


Natural Resources



Sites of Interest

1. Kelly's Mountain
2. **Maritime Stone**
3. Rhodena Rock
4. Queensport



5. Eastern Shore
6. Port Mouton Island
7. North Mountain
8. Aspotogan

Maritime Rock Quarry

- access to deep water
- ice free mid-March to January
- relatively isolated



Natural Resources



Shipping

- 30 K tonne through Canso Causeway
- north around Cape Breton Island



Natural Resources



Resource

- mafic granite
- LA abrasion of 17
- existing 4 hectare permit

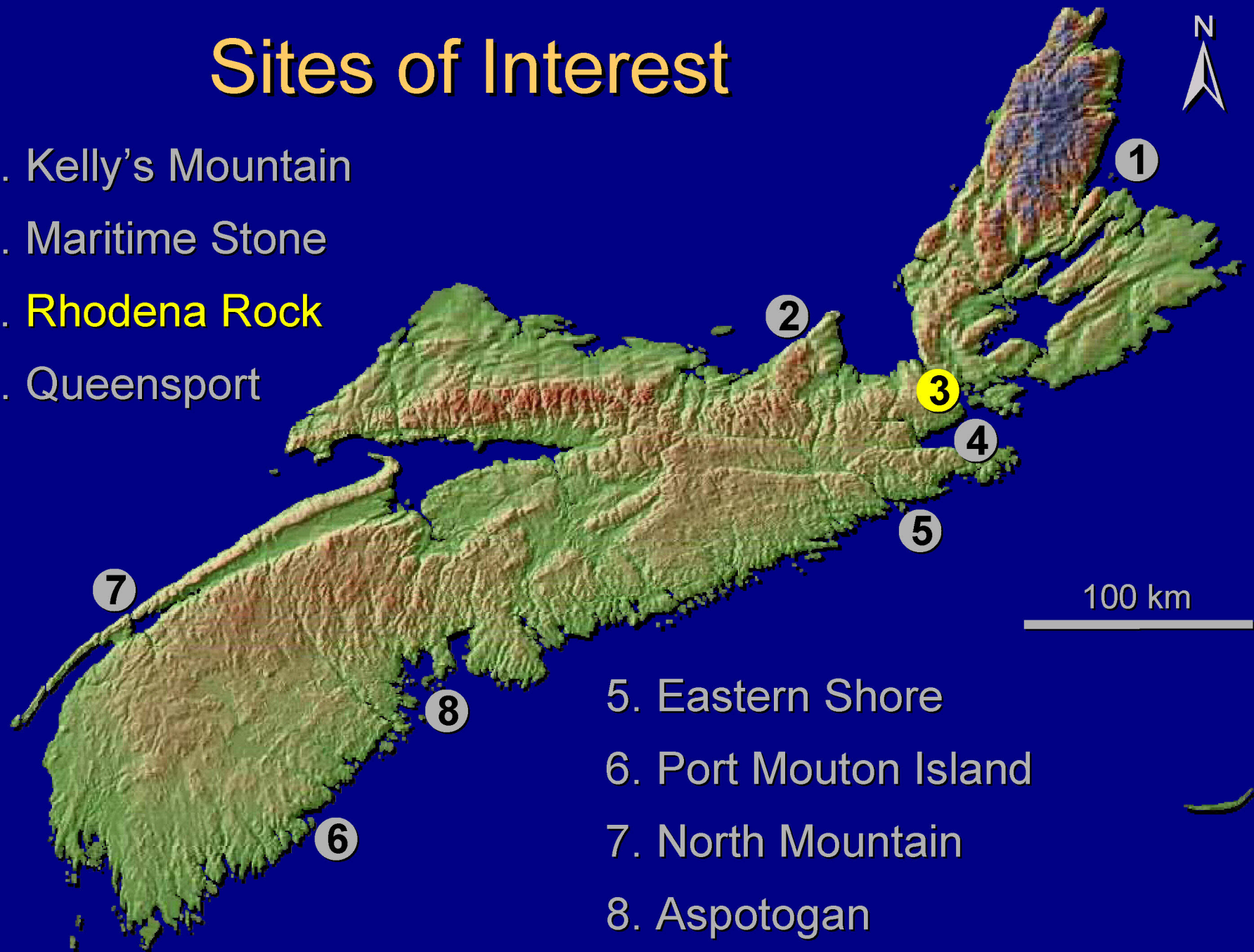


Natural Resources



Sites of Interest

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Rhodena Rock



Located beside Martin Marietta's operation at Canso

Rhodena Rock

- mixed volcanics & granites
- deep water access by conveyor
- truck to Mulgrave
- high quality stone
- optioned by Lafarge
- tonnage?

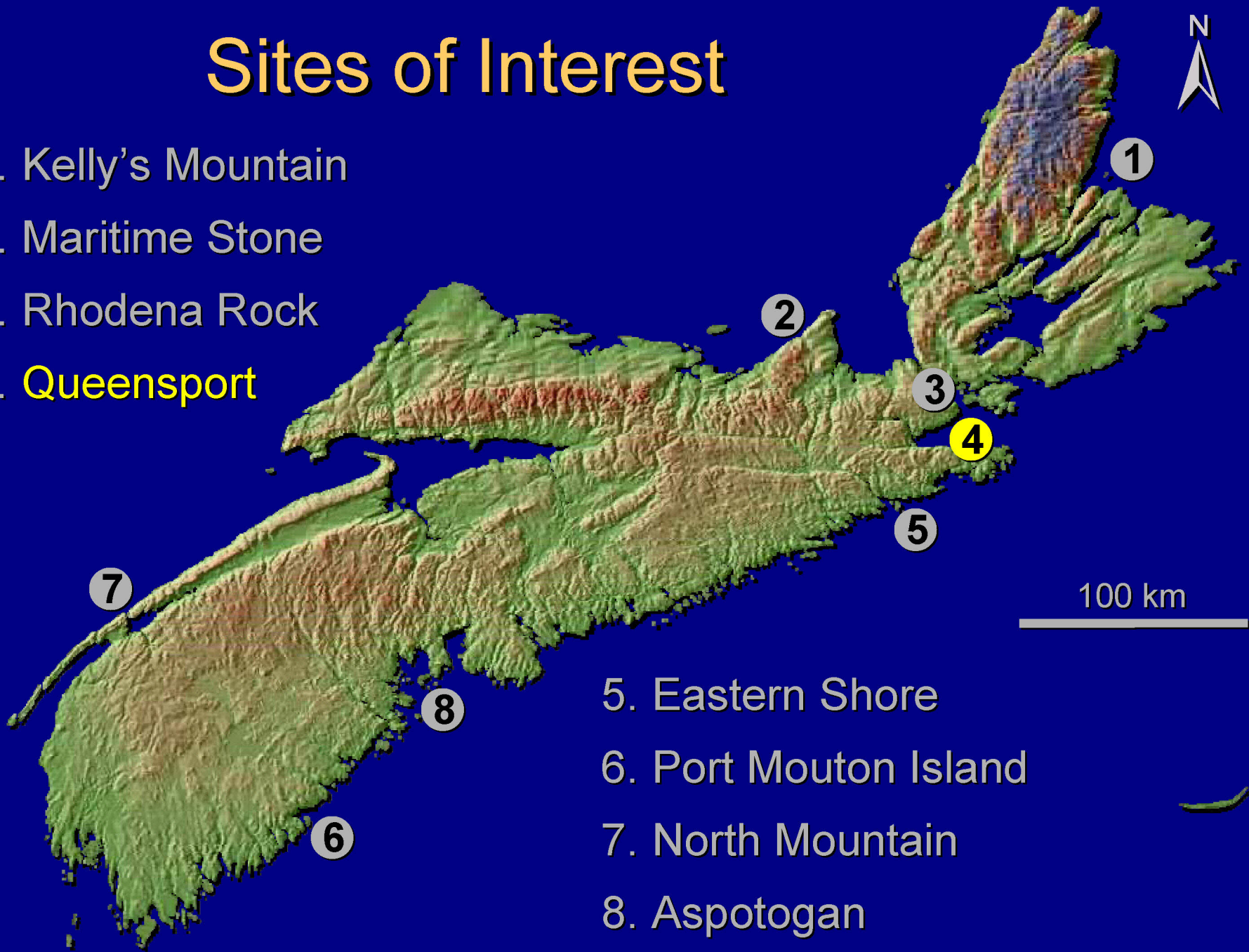


Natural Resources



Sites of Interest

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Queensport Shore (*South of Martin Marietta*)

- deep water
- no overburden
- unlimited tonnage
- grey granite, LA abrasion in low 20's
- very strong local support

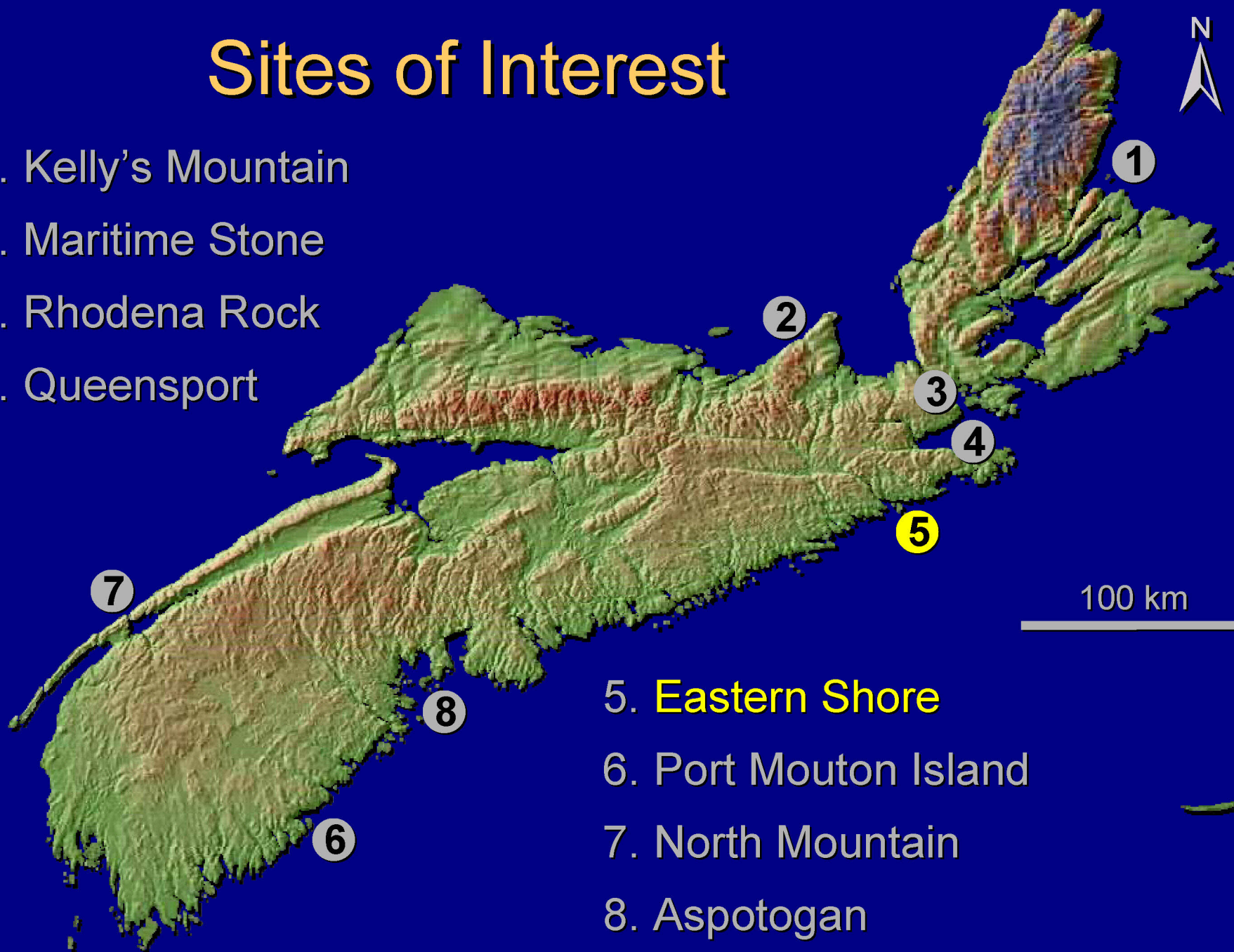


Natural Resources



Sites of Interest

1. Kelly's Mountain
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5. Eastern Shore
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Eastern Shore

- grey metasediment
- variety of locations with deep water
- LA abrasion 17 - 20
- alkali reactivity

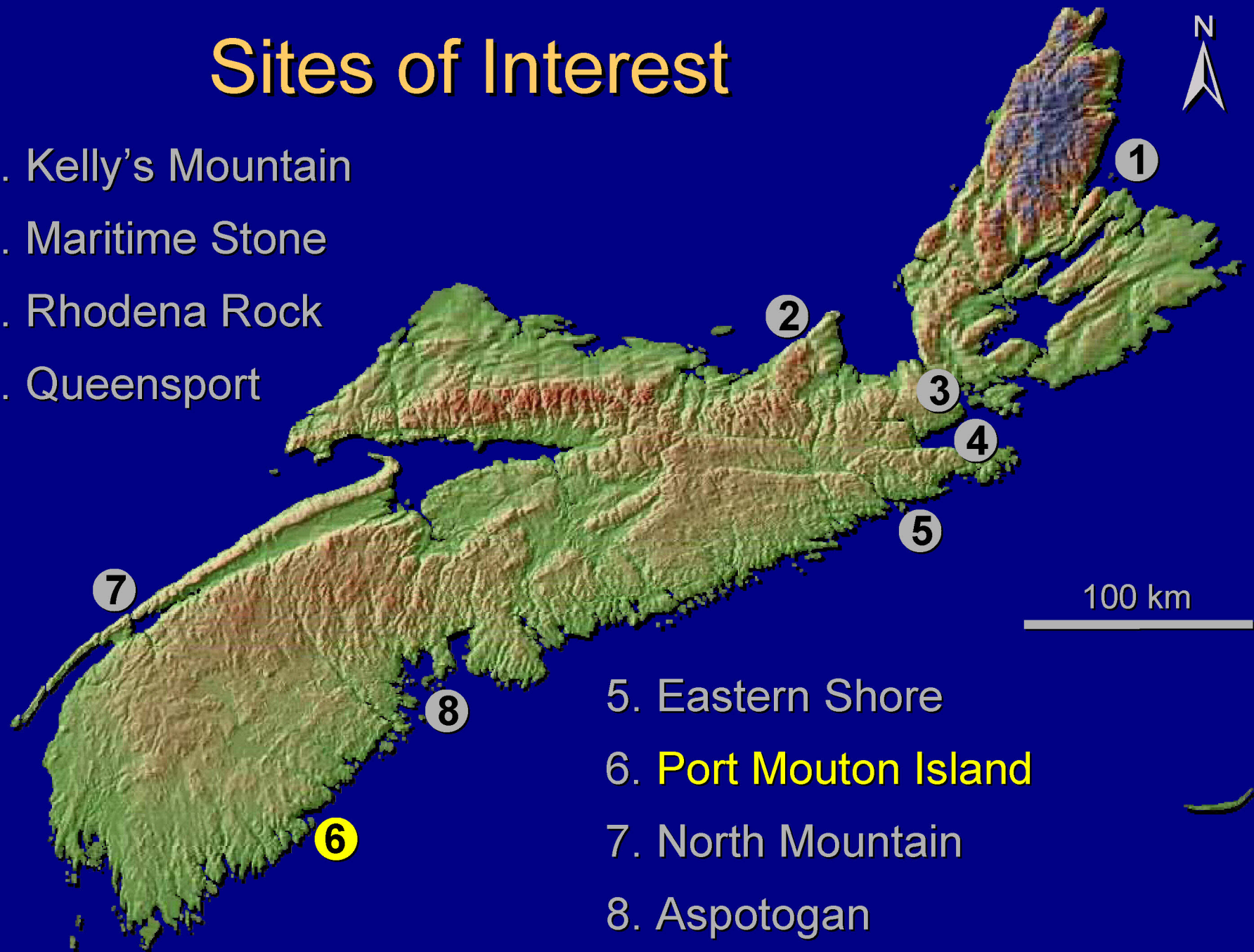


Natural Resources



Sites of Interest

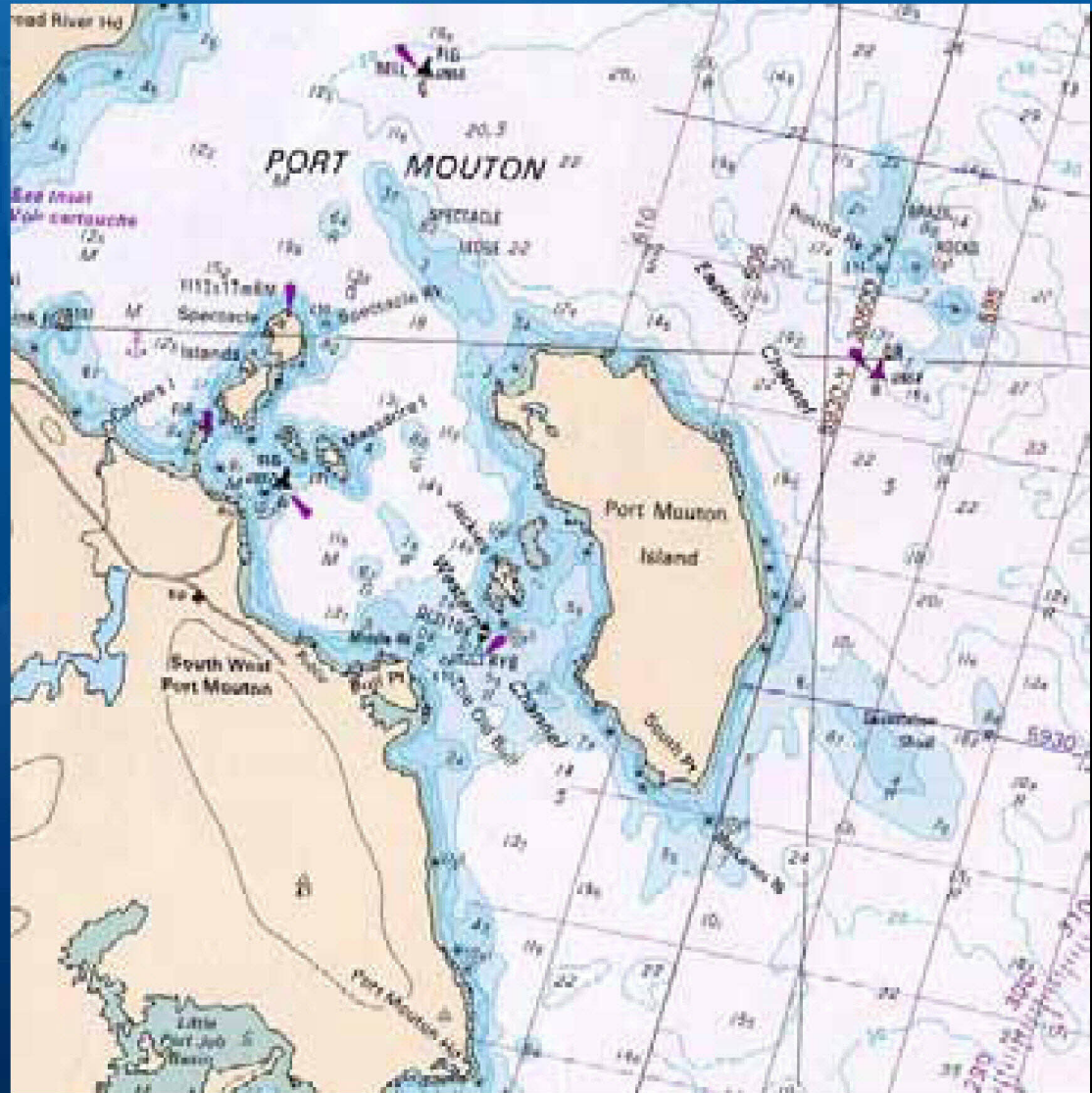
- 1. Kelly's Mountain
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- 5. Eastern Shore
- 6. **Port Mouton Island**
- 7. North Mountain
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Port Mouton Island

- reasonably deep water



Natural Resources



Port Mouton Island

- elevation up to 50 m
- fine grained grey granite
- LA abrasion in mid-20's



Natural Resources



Port Mouton Island

- 100% Swiss owned
- available
- an island?
- beside a Federal Park
- require a different way of thinking



Natural Resources



Port Mouton Island

- closer to US than other sites
- make it a park?

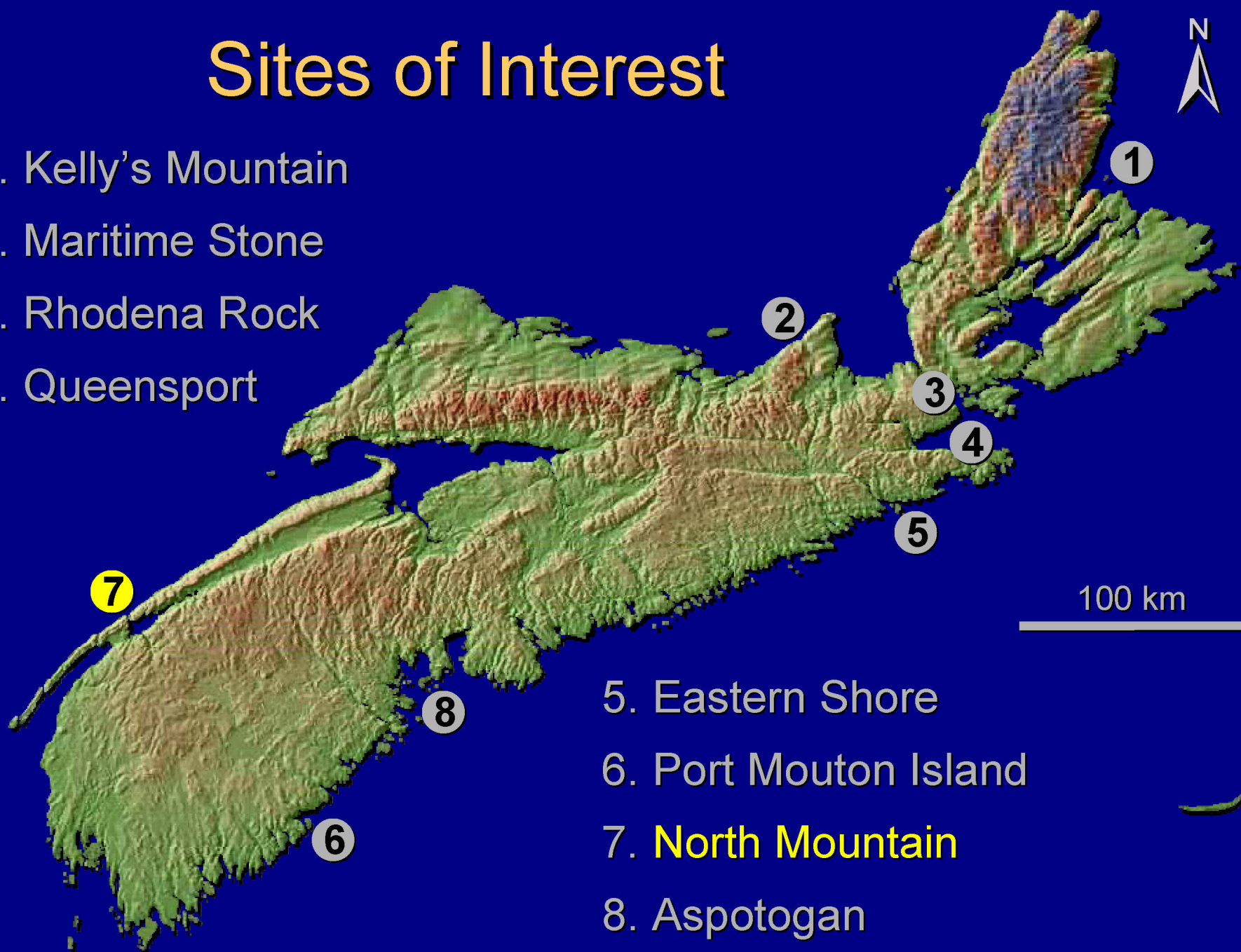


Natural Resources



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North Mountain - Digby Area

- unlimited amounts of trap rock

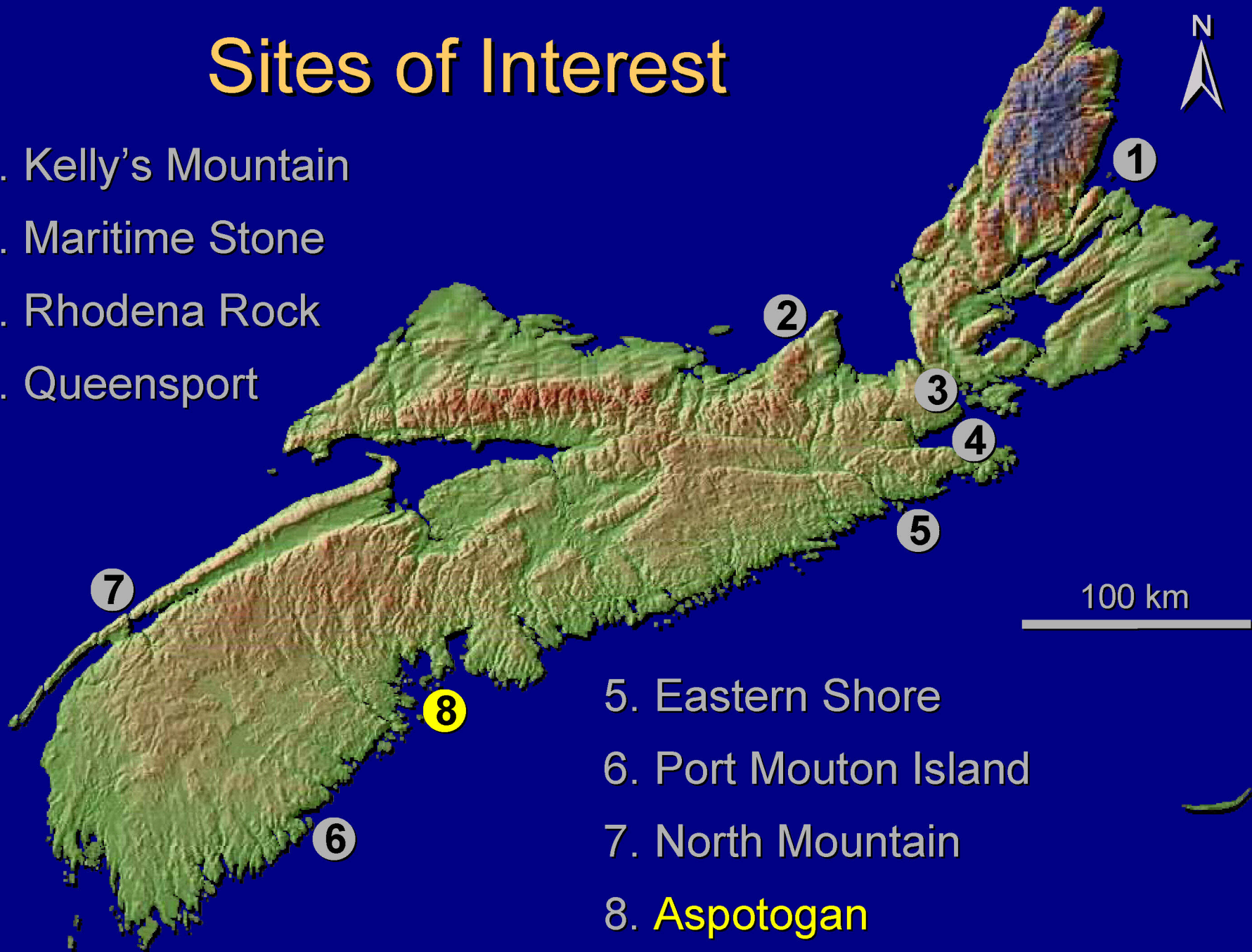


Natural Resources



Sites of Interest

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8. **Aspotogan**

Aspotogan - The Lodge

- grey - buff granite
- deep water
- LA abrasion in low 20's
- impossible to permit



Natural Resources



Can you permit a quarry in Nova Scotia?



Black Bull Resources

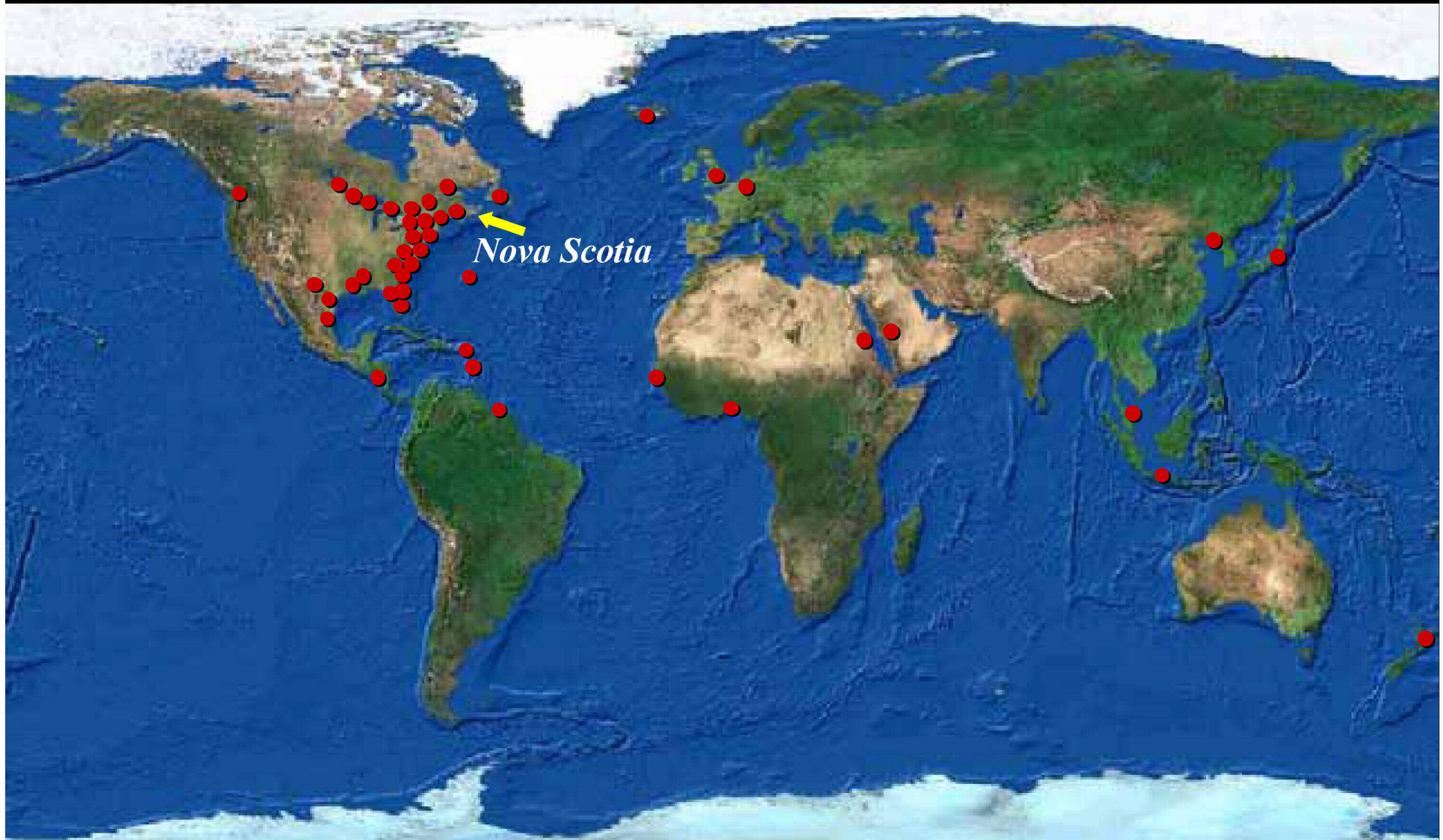
- Silica mine
- 100 m wide zone
- bounded by kaolinized granite
- mining to within 5 m of protected area
- permitted 27 Apr/04



Natural Resources



Destinations for Nova Scotia Mineral Products



Deep, Ice-free harbors provide Nova Scotia's mineral products with window on the world.

Nova Scotia Geology

