The Labrador Trough of western Labrador and adjoining Quebec is host to world-class deposits of Proterozoic iron ore that have been mined for more than half a century. This 1,100 km-long belt contains several major open pit deposits which together have produced in excess of 2 billion tonnes of iron ore. Existing reserves and resources suggest the region could see production for many decades to come.

Strong demand for iron in recent years has spurred new developments in the region and plans for expansion at existing operations. Substantial resources have been defined and there is ample room for new investment.

**ADVANCED PROJECTS WITH RESOURCE ESTIMATES**

<table>
<thead>
<tr>
<th>Owner/Optionee/Contact</th>
<th>Project</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Reserves: 1,489 Mt @ 38% Fe*</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
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<td>Schefferville DSO (P)</td>
<td>59.5 Mt Measured and Indicated @ 56.7% Fe</td>
</tr>
<tr>
<td>Tacora Resources Inc.</td>
<td>Scully Mine (P)</td>
<td>Reserves: 214 million long tons @ 35% Fe**</td>
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**Quebec**

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<td>ArcelorMittal Mines Canada</td>
<td>Mont-Wright (P)</td>
<td>Total resource &gt;1,000 Mt @ 30% Fe</td>
</tr>
<tr>
<td>Champion Iron Limited</td>
<td>Bloom Lake (P)</td>
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**KEY:** P= Producers  PP= Past Producers  *IOC, year end, 2010  **Wabush Mines, year end, 2009
Iron in Labrador

The accompanying geological map shows the large number of iron showings, prospects and deposits that occur within the region. The largest of the deposits are summarized in the table, overleaf. The opportunities and potential for future mineral development in this portion of the Labrador Trough are very significant.

The producing and past-producing deposits are primarily oxide-facies Superior-type iron formation, formed as a chemical sediment in a shallow marine environment. In the Labrador City mining camp, Proterozoic iron formation was refolded and metamorphosed during the Grenvillian orogeny. The resultant metamorphic grades, which are higher than that elsewhere in the Labrador Trough to the north, allow for easier beneficiation because of coarser grain size. The development of major deposits, such as the Iron Ore Company of Canada’s Kami Project, is the result of part of hinge-thinning in syncline cores and repetition by folds.

Detailed descriptions of the ores, their origin and their setting are given in Gross, 1972 (GSC Economic Geology Report 22) and reviewed in Neil, 2000 (Exploration and Mining Geology, volume 9) and Conilffe et al., 2012 (Geological Survey, Mineral Commodity Series #7). Another useful summary is that prepared by Hatch and Associates (1980) for the Government of Newfoundland and Labrador.

In general, three types of iron ores are known: high-grade ores (hematite, goethite, limonite) locally with supergene enrichment (Schefferville); weakly metamorphosed magnetite iron formation or taconite (LabMag, KeMag), and metamorphosed coarse-grained (speculatively-magnetite) iron formation (Carol Lake-Wabush).

In the southern part of the Labrador Trough, two major iron ore mines lie in close proximity to the Labrador-Quebec border: Iron Ore Company of Canada (IOC) and ArConIronMin Minas Mines Canada. Two other mines in this area recently started operations (Scully Mine and Bloom Lake). The IOC deposits alone have produced in excess of 1.3 billion tonnes of iron ore.

Farther north in the Menihek area, there are two additional operations: Labrador Iron Mines (care and maintenance) and Tata Steel Minerals Canada. Two other mines in this area are significant.

In the Labrador City-Wabush area, Alderon Iron Ore has partnered with Hebei Iron and Steel Group to develop its Kami Project. Also, the Government of Newfoundland and Labrador currently controls the rights to the Julienn Lake iron ore deposit.
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Farther north in the Menihek area, there are two additional operations: Labrador Iron Mines (care and maintenance) and Tata Steel Minerals Canada. Each has several deposits of direct shipping ores (DSO) in the area, some of which were explored and previously mined by IOC.

Also near Menihek, New Millennium/Tata Steel Minerals have outlined two very large deposits - LabMag and KeMag - of magnetite iron ore (taconite) in Labrador and Quebec, respectively. Other deposits are shown on the map.

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  - Carol Lake (P) Reserves: 1,489 Mt @ 38% Fe*
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  - Schefferville DSO (P) 85.1 Mt Measured and Indicated @ 59.2% Fe

- Labrador Iron Mines Holdings Ltd.
  - (care and maintenance)

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**Quebec**
- ArcelorMittal Mines Canada
  - Mont-Wright (P) Total resource >1,000 Mt @ 30% Fe

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**CURRENT AND PAST PRODUCERS**

- **Labrador**
  - Rio Tinto IOC
  - Champion Iron Limited

- **Quebec**
  - ArcelorMittal Mines Canada
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**Owner/Optionee/Contact**

**Project**

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