Banded Iron Formations

1) Be able to explain the process/es which formed your deposit type – what processes are at work and how do those processes operate?

* Oxygen released by cyanobacteria combined with dissolved iron to form insoluble iron oxides
* These principiated out, forming a thin layer on the ocean floor

2) How does this process concentrate certain minerals or elements?

* Pressure at the bottom of the ocean

3) What type of minerals/elements can be concentrated by this process? Why?

* Magnetite and chert

4) In what settings (tectonic, climate, other) does this process occur?

* areas of ancient oceans where seawater with high contents of dissolved iron and silica came into contact with water containing higher amounts of oxygen, which resulted in the precipitation of hematite and chert (microcrystalline quartz).
* Most of the iron and silicon probably came from upwelling iron-rich, deep ocean currents derived from ocean floor volcanic systems.
* wide continental shelves at water depths of over 200 metres.

5) Name 2 mines where this type of deposit is being/has been mined. Be able to locate them on a map.

* Brookman mine, Western Australia
* The Hull Rust Mahoning Mine, Hibbing, Minnesota

<http://library1.ga/_ads/74B3441F36385AB51E41F313D240A18C>

<http://museum.wa.gov.au/research/collections/earth-and-planetary-sciences/rock-collection/banded-iron-formation>

https://www.geologyforinvestors.com/banded-iron-formations-bif/

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