

## **An overview of the economic geology of the Sudbury Impact Structure, Canada: Cu-Ni Sulfides and platinum group element deposit development**

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### **Summary**

The Sudbury impact structure is host to a variety of economic deposits that have been mined for over a century. The structure was formed by an asteroid at 1.85 Ga, which collided with Early Proterozoic and Achean rocks of the Canadian Shield. These rocks were variably transformed via melting, solid state shock, brecciation and faulting. These processes are examined in the light of the accumulation of metal rich (Cu-, Ni-, Co-rich sulfides) and platinum group elements. The role of impact-related melting and faulting, and associated thermal effects are discussed.