



**sherritt**

# Metals for an Electric Future

Bernstein Strategic Decisions Conference

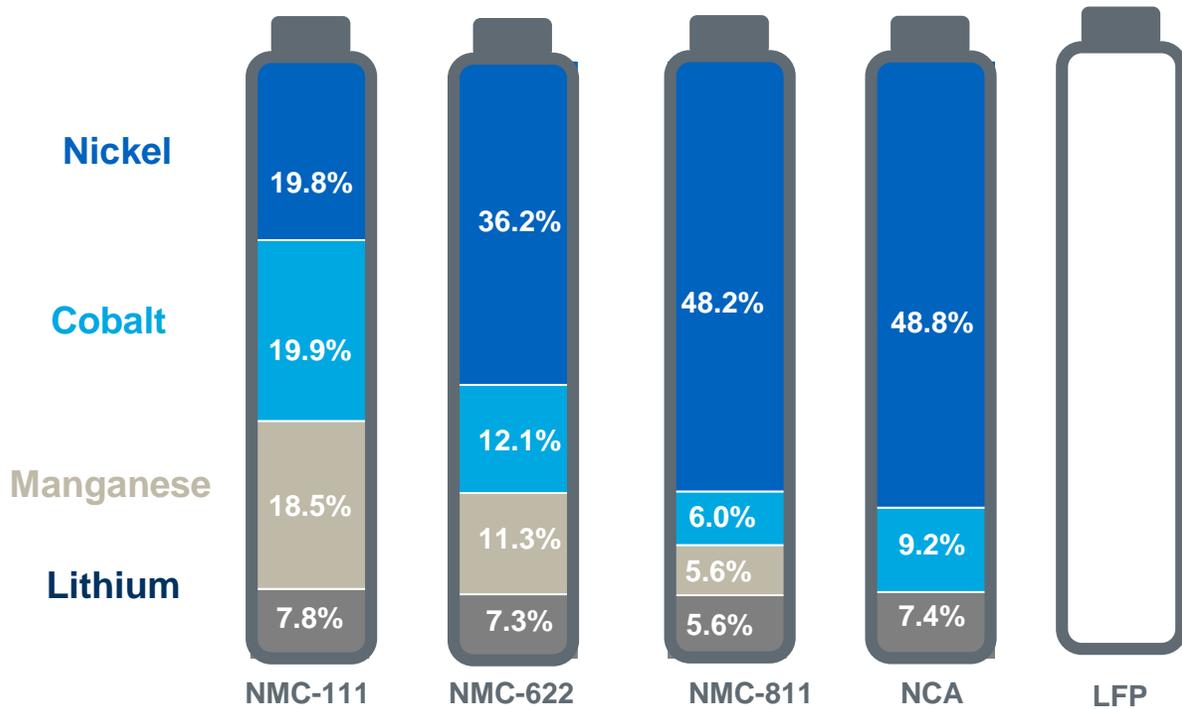
**Leon Binedell**  
President and CEO

**September 23, 2021**

# Electric vehicles start with nickel



# EV battery chemistries dominated by nickel and cobalt



Nickel provides energy density

Cobalt provides stability

EV battery demand is disrupting nickel and cobalt markets

# EV supply chain starts with nickel

Ore processing



HPAL process produces a concentrated intermediate product from raw lateritic ore

Finished nickel



Intermediate product undergoes refining or smelting process to produce high purity finished nickel in briquette or powder form

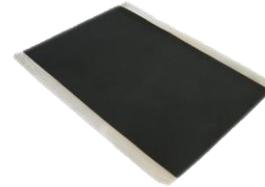
Sherritt operations

Battery precursor



High purity finished nickel is used to produce battery precursors such as nickel sulphate

Cathodes & cells



Nickel sulphate is a key component used to produce battery cathodes assembled into lithium-ion cells and batteries

Battery packs



Batteries are assembled into battery pack with configuration based on multiple factors including energy density, capacity, power and stability

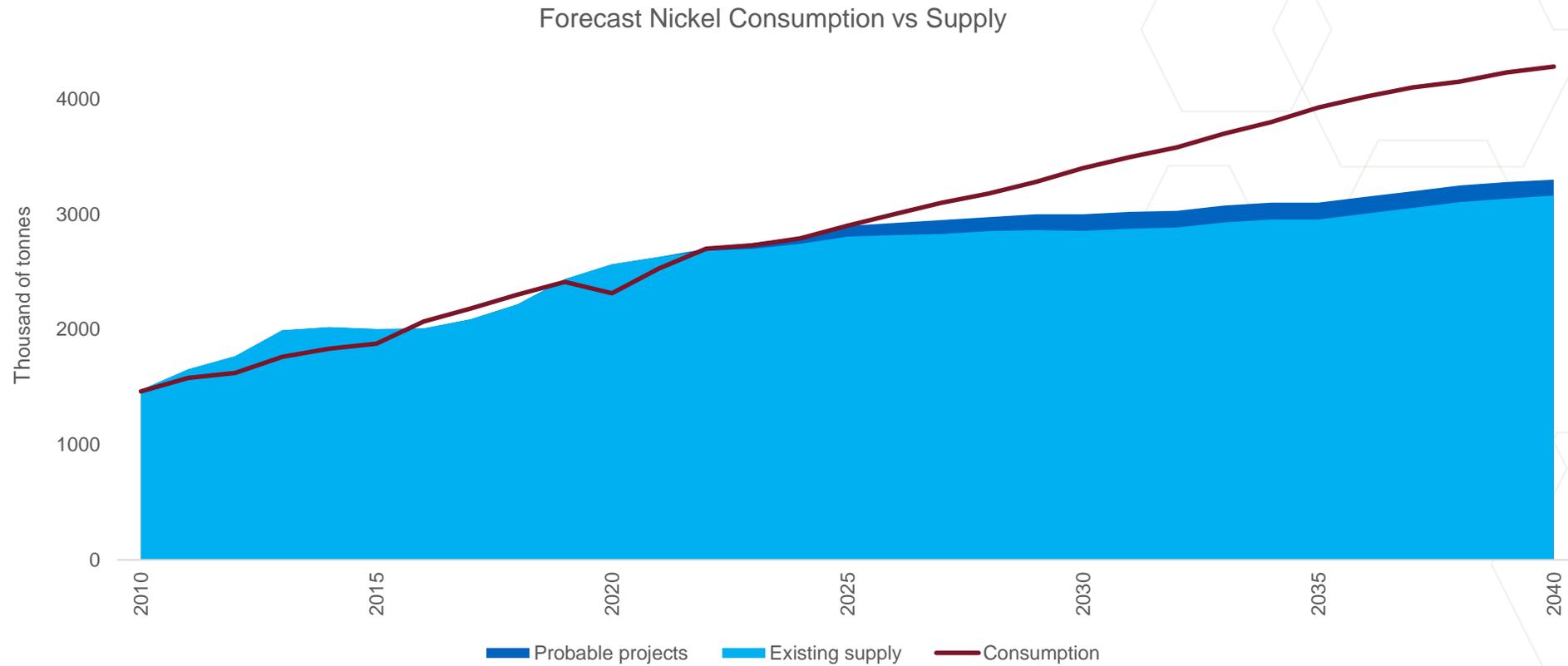
Electric vehicles



End use determined by vehicle range, economics, and other consumer considerations

**EV supply chain is complex and reliant on access to strategic metals**

# Nickel supply deficit is looming\*



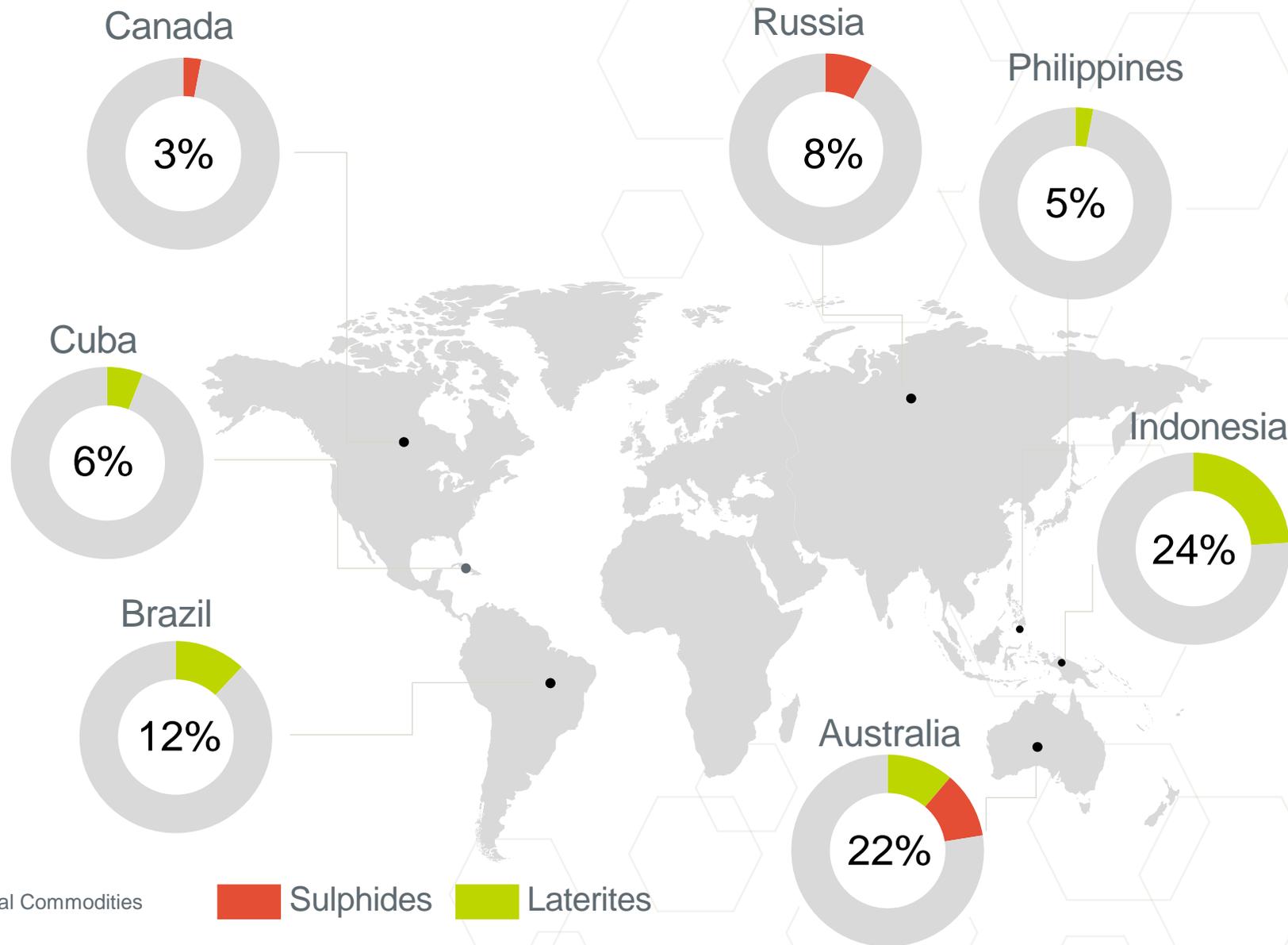
**Growing EV battery demand for nickel will cause a deficit of supply by 2025**

# Global nickel reserves are concentrated within lateritic deposits

# 89M

Tonnes of global nickel reserves\*

- Bulk is contained in low-grade lateritic deposits
- Typically rich in iron
- Amenable for EV battery production only through HPAL process
- China is the primary export market for nickel production

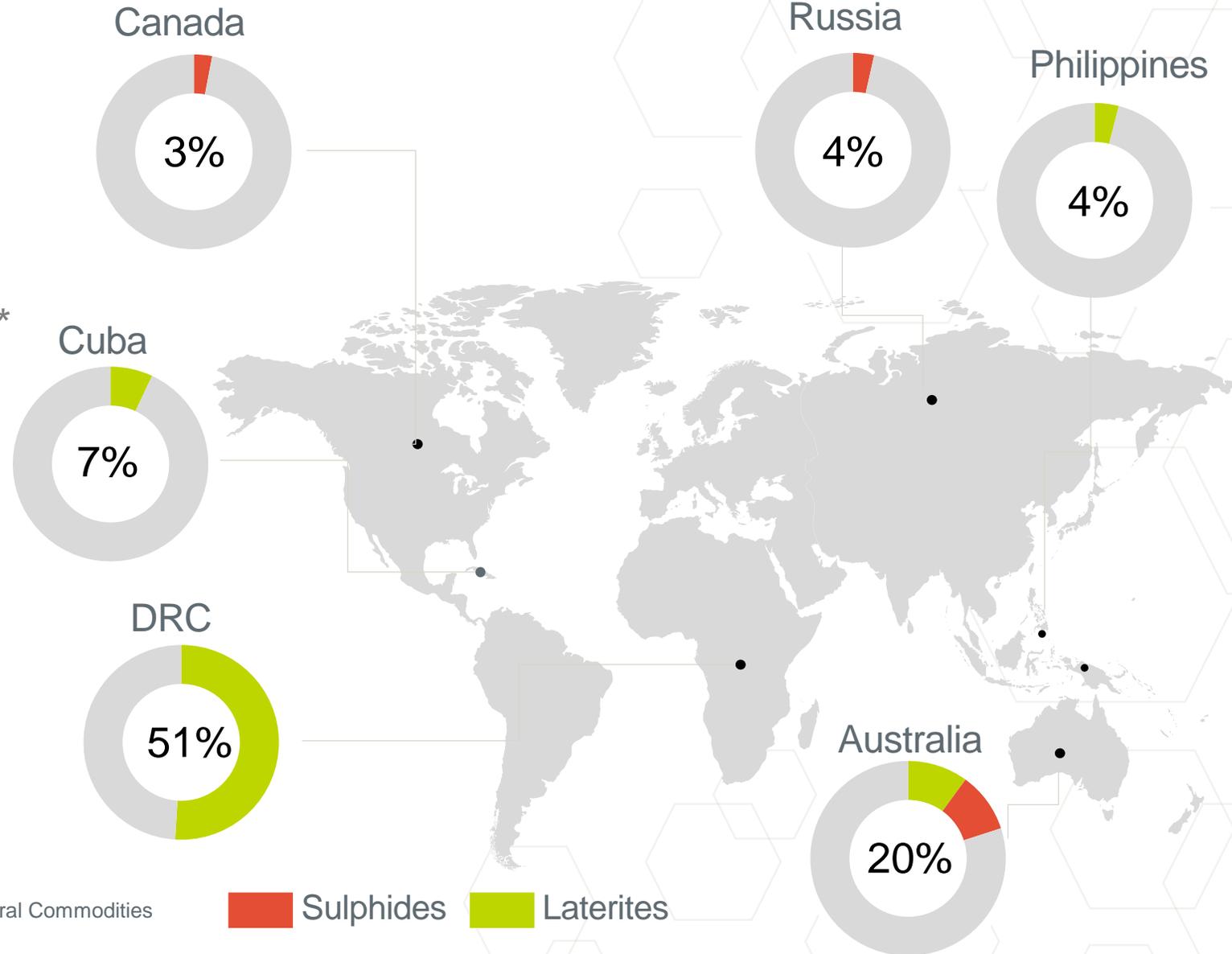


# Global cobalt reserves are concentrated in Africa

# 7.1M

Tonnes of global cobalt reserves\*

- Bulk is contained in the Democratic Republic of Congo
- Produced as a by-product to copper and nickel
- Industry challenged by artisanal mining and child labour
- China is the primary export market



# Sherritt investment summary

1. Favourable nickel and cobalt market outlook due to growing EV demand
2. Sherritt well positioned with access to nickel and cobalt reserves and embedded brownfield opportunities
3. Multi-pronged strategy to grow cash flow and increase production
4. Technologies group is a key point of differentiation



**Sherritt is at an inflection point**



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