Developing a Financial Model for Other Deep Sea Minerals

Current model and analysis is targeted to the case of Polymetallic Nodules **Payment System** with Rates Cost Technical Model **Cash Flow CAPEX** ISA **Factors** Model & OPEX Revenues **Production Levels** Revenues & Composition Price Forecast: Price Forecast: Cobalt **Nickel Price Forecast: Price Forecast:** Copper Manganese

Constructing Cost Model for Another Mineral

- How will collection process operate?
 - Estimates of physical requirements?
 - Vessels, collection equipment, monitoring equipment, transport, etc
 - How much investment will these require?
 - What operating costs?
 - What production rates?
- Will ore by sold directly to existing processors or will new processing plants be needed?
- If new plants, estimates of costs for metal processing
 - Needed to assess an ore transfer price

Price Forecasts

- Which metals (or other) will be sold?
- Currently have forecasts for Co, Ni, Cu & Mn
- Other metals will require additional forecasts
- Designation of price index for each of these metals

- Metals composition and recovery rates
 - Ore grades for each metal including uncertainty or variation
 - Metallurgical approach to extraction
 - Metals recovery rates including uncertainty