

# Precious Metals Summit Colorado

September, 2015



**FORGING AHEAD**

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- All information of a scientific or technical nature contained in this Presentation has been reviewed and approved by Mike Johnston, President and CEO of Nautilus Minerals Inc. (the "Company" or "Nautilus"), who is a qualified person under National Instrument 43-101.
- This Presentation may contain forward-looking statements within the meaning of the United States Securities Exchange Act of 1934 and forward-looking information within the meaning of applicable Canadian securities law (collectively "forward looking statements").
- Material forward-looking statements include statements or information with respect to the obligations of the Company and its counter parties under various agreements related to the Company's seafloor development; the Company's ability to locate, mine and transport mineralized material from the seafloor; the method of transport of mineralized material from the Company's Solwara and CCZ projects; any estimates of anticipated costs and expenditures; development and production timelines and the cost, timing of delivery and effectiveness of the seafloor production tools, the riser and lifting system and the production support vessel; and plans to upgrade a portion of the resources at the CCZ Project.
- We have made numerous assumptions about the material forward-looking statements contained herein, including assumptions relating to the future price of copper, gold, silver and zinc; that anticipated costs and expenditures will be as planned; that key components of the seafloor production system will be built on schedule and in accordance with Nautilus' specifications; and our ability to achieve our goals. Even though our management believes that the assumptions made and the expectations represented by such statements are reasonable, there can be no assurance that the forward-looking statements will prove to be accurate. Accordingly you should not place undue reliance on forward-looking statements.
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- As discussed in the Company's most recent Annual Information Form, the production decision for the Solwara 1 Project was not based on a feasibility study of mineral reserves demonstrating economic and technical viability. Accordingly, there is increased uncertainty and economic and technical risks of failure associated with this production decision. Production and economic variables may vary considerably due to the absence of a completed and detailed analysis as would be included in a feasibility study. The risks associated with this decision are set forth in the Company's Annual Information Form under the heading "Risk Factors".
- Nautilus requires significant additional funding to advance the Solwara 1 Project towards production. There can be no assurance that the Company will be able to obtain at all or on acceptable terms the remaining financing necessary to fund the completion of the build and the deployment of the Company's seafloor production system.
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- This Presentation does not constitute an offer to sell or a solicitation of an offer to buy any Nautilus securities.
- Notes Regarding Technical Disclosure
  - Resource information for the Solwara project is derived from a technical report titled "Mineral Resource Estimate, Solwara Project, Bismarck Sea, PNG" dated and filed on SEDAR on March 23, 2012, and summarized in a news release dated November 25, 2011. Indicated resources of 74,000 tonnes of copper is based on 1.03 million tonnes at an average grade of 7.2%.
  - Resource information for the CCZ Project is derived from the technical report titled "Updated NI 43-101 Technical Report, Clarion-Clipperton Zone Project, Pacific Ocean" dated March 20, 2013 and filed on SEDAR on March 21, 2013, and summarized in a news release dated September 18, 2012, unless otherwise stated

# Who is Nautilus Minerals?



- TSX listed and trading on OTCQX
- Market capitalisation ~C\$180 million as at September 4, 2015
- Cash on hand ~US\$85 million as at June 30, 2015
- *“The world’s leading company for seafloor mining”*

***Seafloor mining - the next big disruptive technology***

- Named to 2015 OTCQX Best 50
- Advancing projects in PNG and the Pacific

## Major Industry Shareholders



28.14%



METALLOINVEST

20.89%



AngloAmerican

5.99%

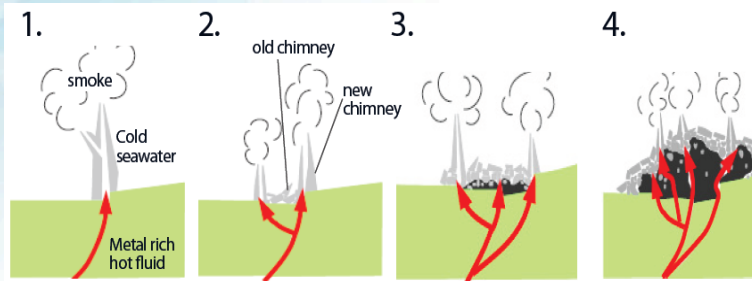
each on a non-diluted basis, excluding loan shares outstanding under the Company's share loan plan

Capitalization	(as at September 4, 2015)
Ticker	NUS (TSX) NUSMF (OTCQX)
Current Share price	C\$0.39
52 Week High/Low	C\$0.52 / C\$0.33
Basic Shares Outstanding	446 million
Shares O/S Fully Diluted	453 million

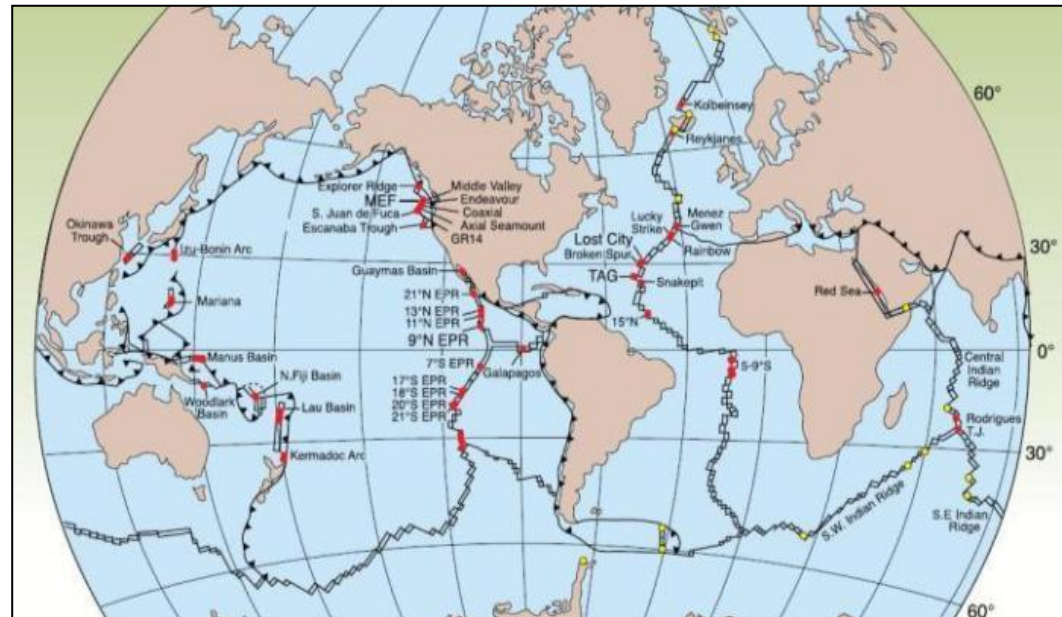


# Seafloor Massive Sulphides

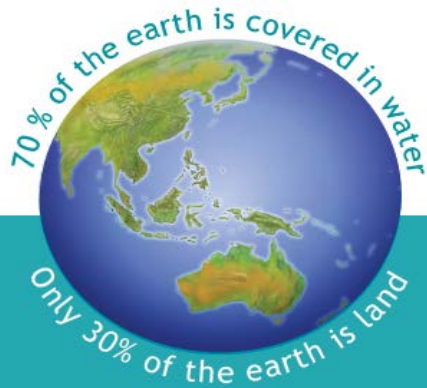
- Seafloor Massive Sulphide ("SMS") deposits form on the ocean floor
- High grades of copper, zinc, gold, silver and other trace metals
- Modern-day equivalents of ancient 'land-based' Volcanogenic Massive Sulphide ("VMS")
- "Cluster" near plate boundaries



1. Initiation of hydrothermal discharge and chimney growth
2. Collapse of old chimney and growth of new chimney
3. Growth of mineral sulphide mound by accumulation of chimney talus and defocusing of hydrothermal discharge
4. Decrease of mound permeability and intra-mound sulphide precipitation, replacement and remobilisation



# Why go to the sea?



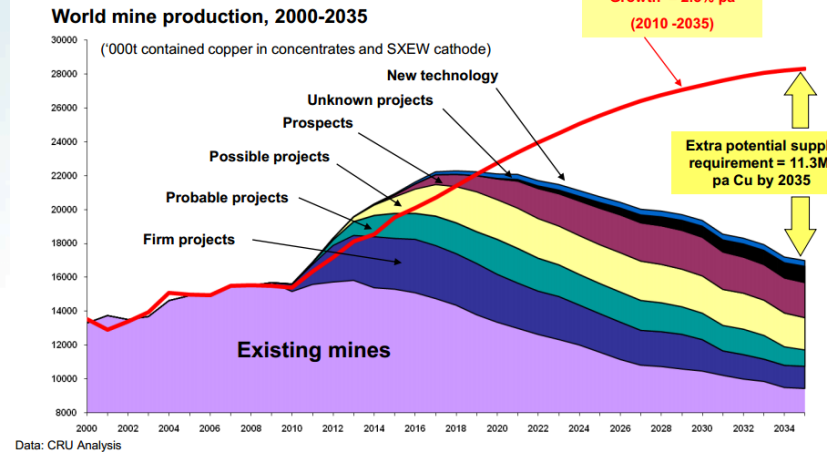
## Land-based mine



## Deep sea production

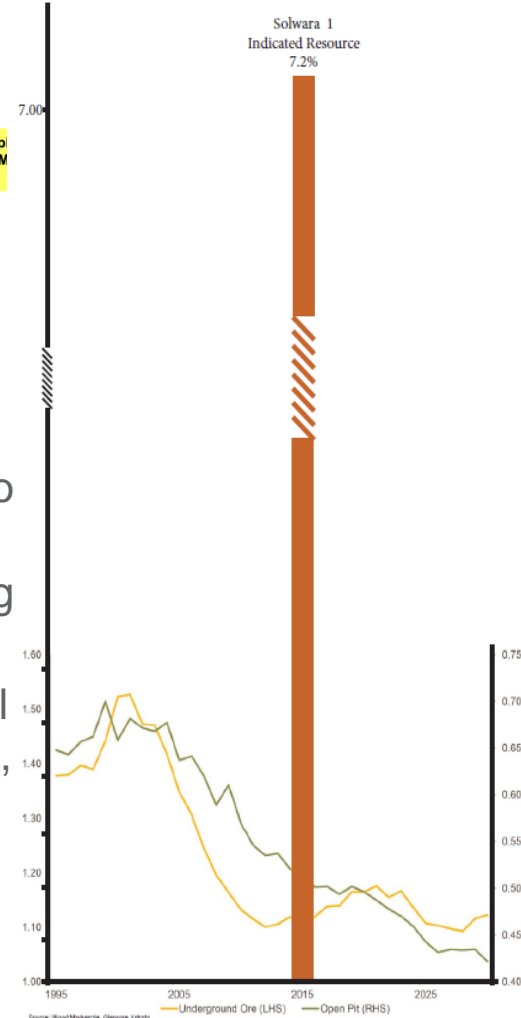


## Substantial potential supply gap will start opening up from 2020 onwards



- ✓ World's demand for metals continues to rise
- ✓ Land resources are stretched; declining grades, more waste, larger footprints
- ✓ Seafloor believed to contain substantial amounts of key metals (Cu, Ni, Co, Mn, Au, Zn)
- ✓ 40+ years of Oil and Gas development and R&D to leverage off
- ✓ **HIGH GRADES**

## Cu Grades are falling on land



# Advantages of seafloor mining



1. High grades
2. Minimal waste
3. Highly scalable
4. Reusable equipment
5. Low capital intensity
6. Competitive OPEX
7. No land clearance or people moved
8. Increased worker safety
9. 40+ years offshore oil & gas investment to leverage off





# Earth Economics Report



- Nautilus Minerals commissioned an independent Environmental and Social Benchmarking Analysis by Earth Economics\*
- Goal: to measure the environmental and social impacts of the proposed Solwara 1 Project in comparison with three terrestrial mines
- Result: the environmental and social benchmarking study demonstrates the clear benefits of developing the first deep seabed copper mine

\*based on natural capital accounting



***A Transformational Approach to Copper Mining and the Blue Economy***

# Key findings of the EE Report (May 2015)

- ✓ Seafloor mining can significantly reduce the social and environmental impacts of copper mining
- ✓ More sustainable longer-term versus terrestrial copper mining
- ✓ Proposed Solwara 1 Project has set a high bar for social and environmental management
  - study of the seabed
  - establishment of vent habitat conservation areas
  - collaboration with the scientific community
  - transparency
  - collaboration with unaffected, but nearby communities for development



***A Transformational Approach to Copper Mining and the Blue Economy***

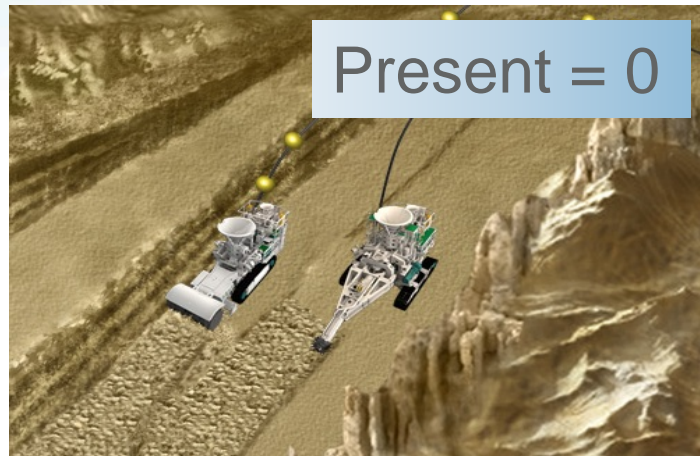
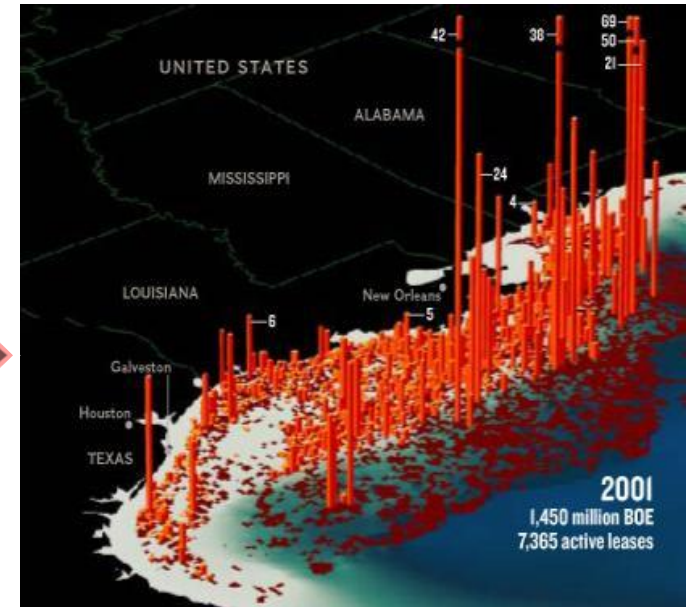


# How big could this be?



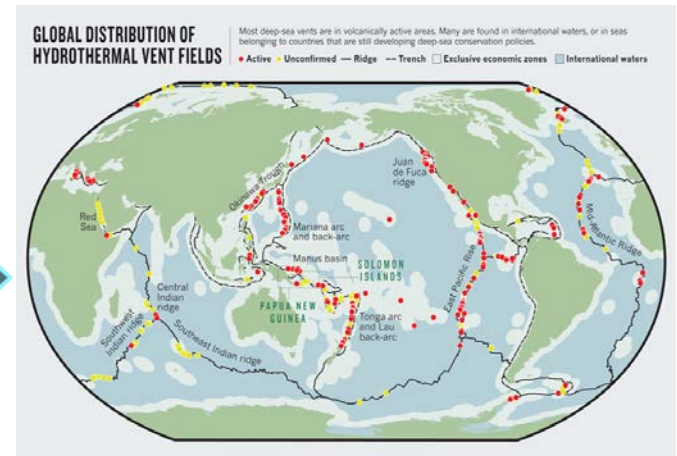
## Offshore Oil and Gas

40 years later

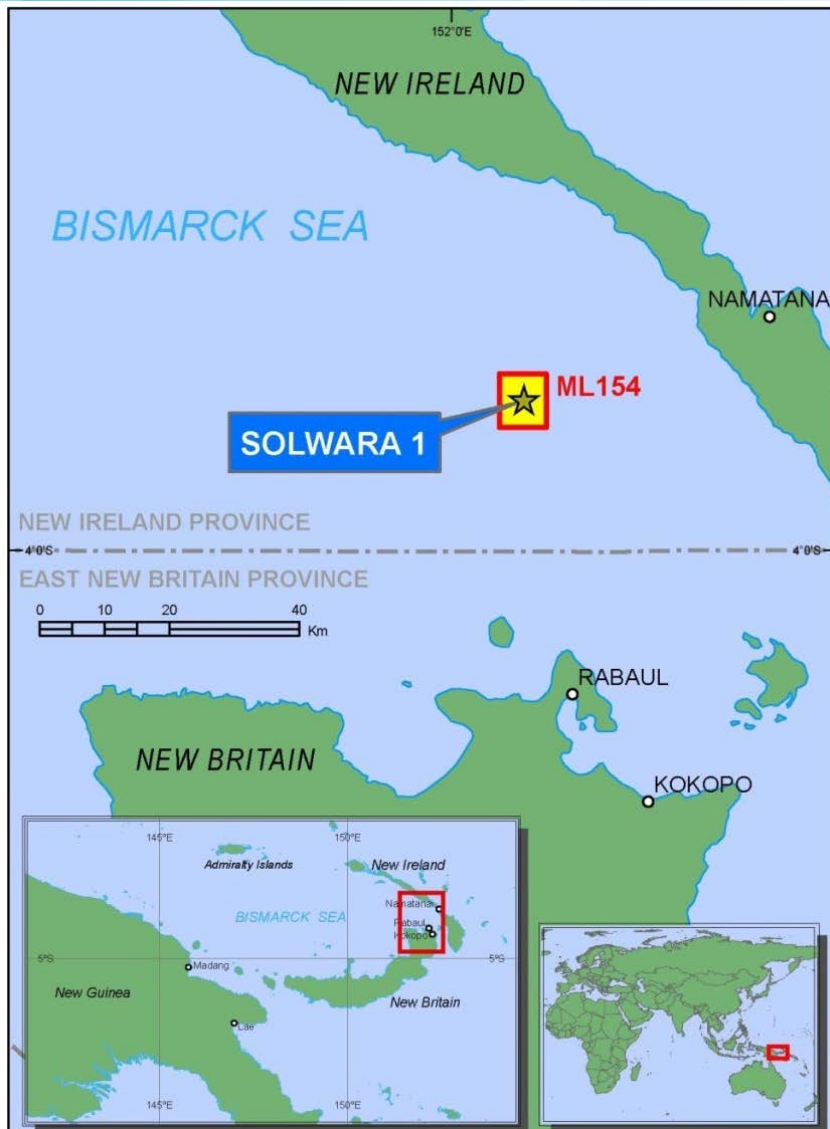


## Seafloor Mining

In 20 years = ???



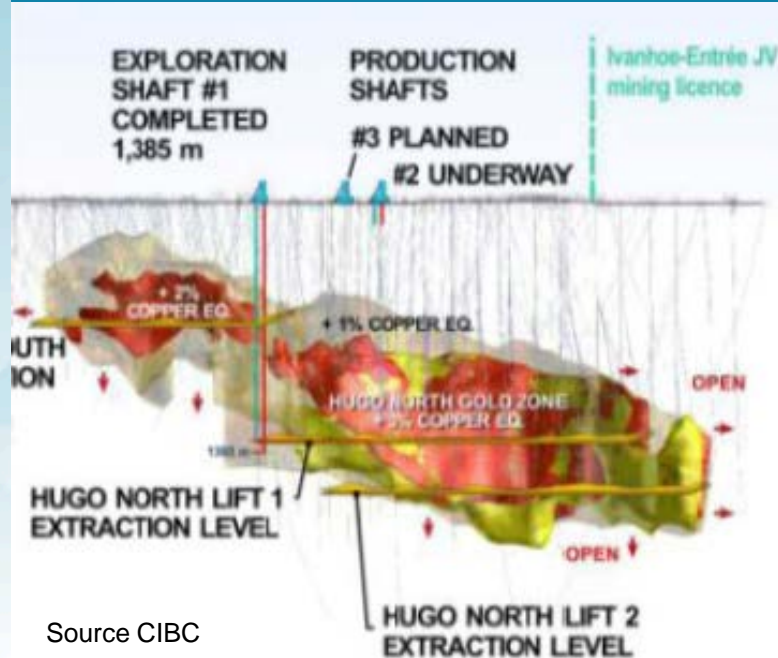
# Solwara 1 Project



- First project Solwara 1
- Bismarck Sea, Papua New Guinea
- 30 km from nearest coast
- **Small extraction area: 0.1 km<sup>2</sup>**
- In partnership with PNG Government
- Fully permitted
- Strong local and national support

# Accessing high grade ore..... but with lower Capital Intensity

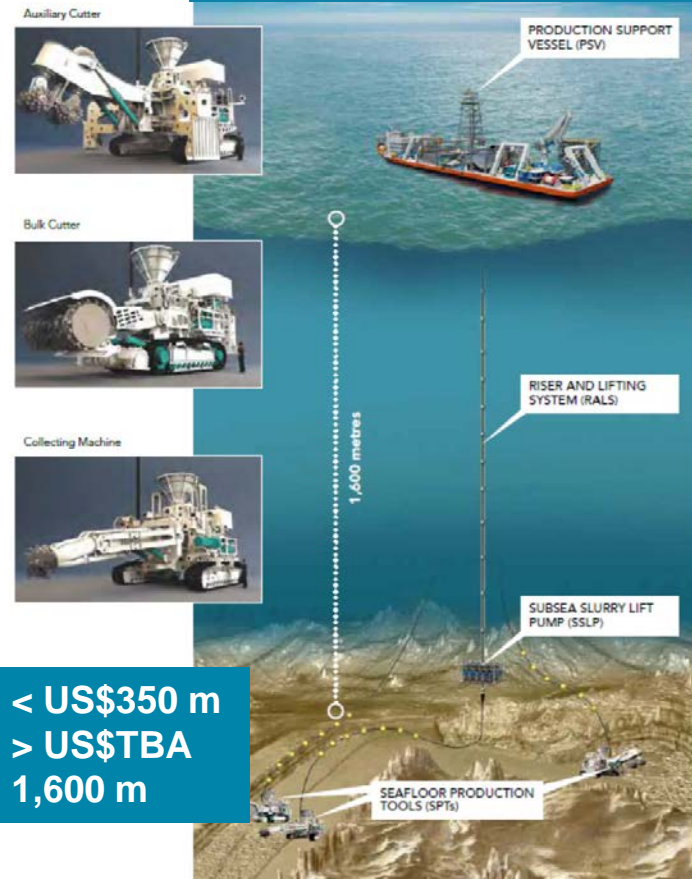
## Oyu Tolgoi – Block Cave



Source CIBC

Sunk capital to date: > US\$6 bn  
Additional capital req: > US\$5 bn  
Extraction depth: 1,400 m

## Seafloor Production System



< US\$350 m  
> US\$TBA  
1,600 m

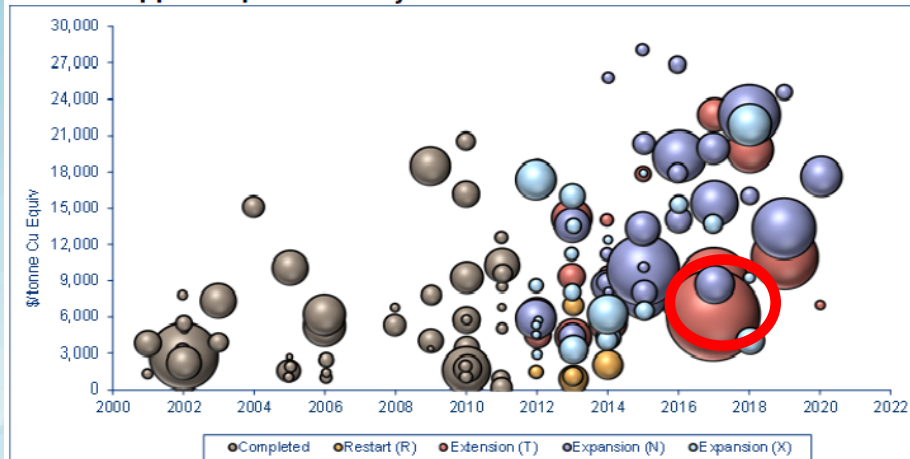
- ✓ Surface mines are capital intensive and fixed
- ✓ Once constructed, the Nautilus capital investment can be redeployed at multiple sites, for minimum additional capital cost



# Industry economics



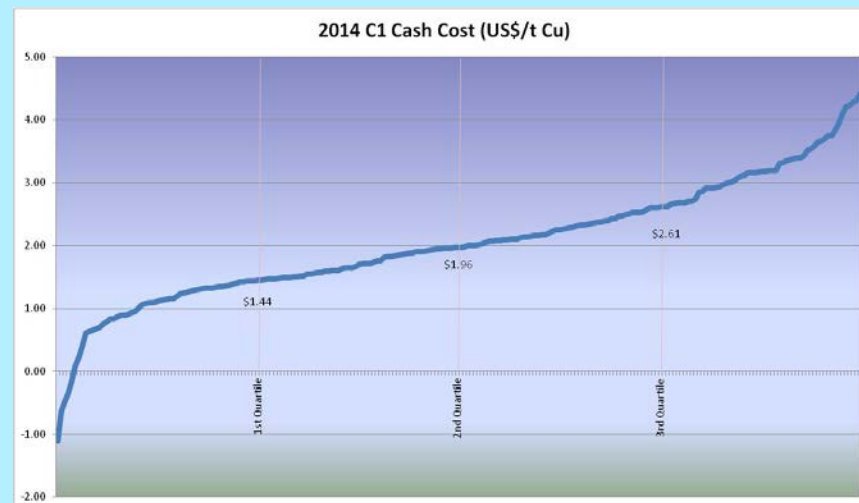
## Global Copper Capex Intensity



Source: Brook Hunt, a Wood Mackenzie Company

- NUS capital investment is re-usable
- Minimal additional capital costs for next deposit
- Ability to commence mining at next deposit within days
- No overburden removal
- No onsite infrastructure or access requirements

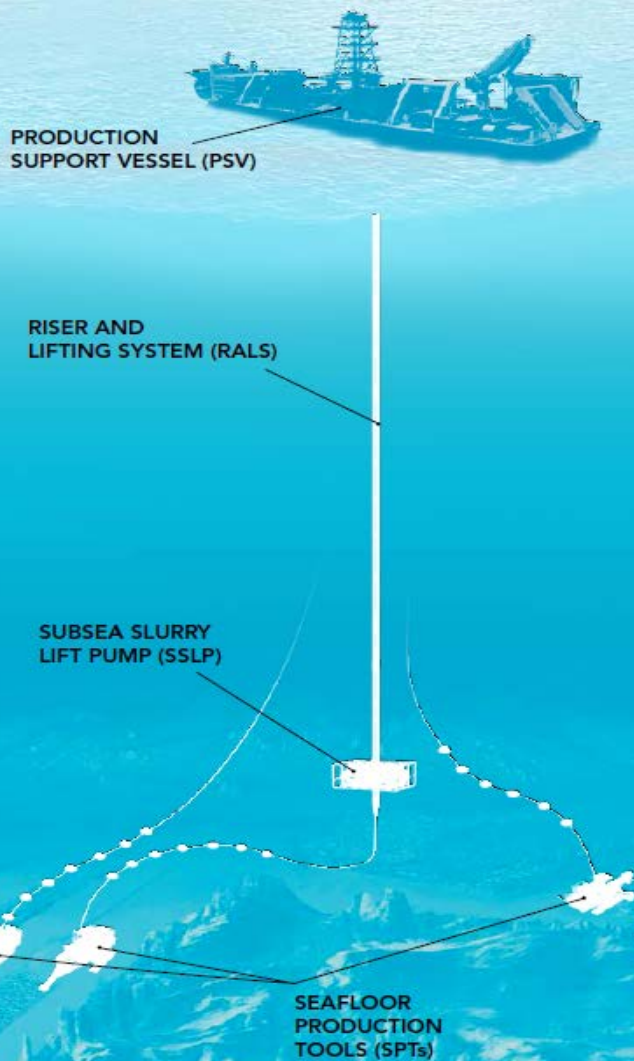
- Very high grade material
- Copper and gold production
- Expected initial production rate 3,000 - 4,000t per day after ramp up
- Design capacity of the mining tools is ~6,000t per day
- Pump ultimately the limiting factor
- Reduction in operating costs through:
  - option to purchase vessel
  - fuel
  - improved maintenance
  - improved inventory management
  - improved equipment utilisation/mine planning



# Seafloor Production System – how it works



Seafloor Production System



Using existing technology from the offshore oil and gas sector, combined with rock cutting and materials handling technologies used in land-based operations

- Production Support Vessel
  - Operational base. Power supply and dewatering plant, ore storage and control centre
- Riser and Lifting System
  - Lifts material to the surface
- Seafloor Production Tools
  - Three remotely operated machines, cutting and collecting material



**Highly Scalable**



**Mobile Capital**



# The Seafloor Production Tools

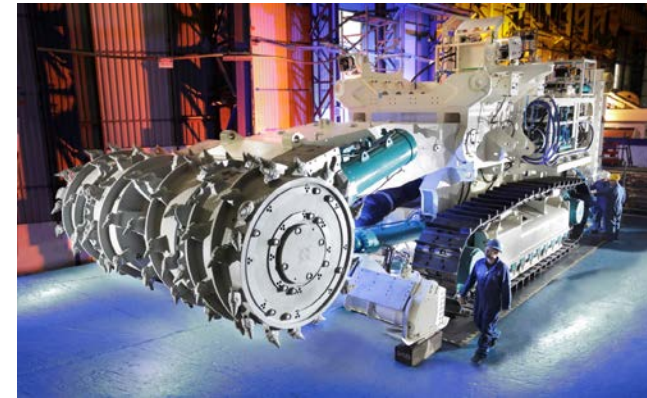
- Combining technologies used in offshore oil and gas and coal industry
  - Offshore oil and gas has been using trenchers to lay cables for over 20 years at depths of 4500 - 6500m below sea level
  - Coal industry has been using road headers (continuous miner) for decades in underground mines
  - We are combining these technologies to create our Seafloor Production Tools



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# Seafloor Production Tools (all being commissioned)



## Auxiliary Cutter

Length:	15.8 m
Width:	6.0 m
Height:	7.6 m
Boom swing:	11.6 m
Boom cutting:	+4 -1.0 m
Weight:	250 Te



## Bulk Cutter

Length:	14.2 m
Width:	4.2 m
Height:	6.8 m
Cutter Width:	4.2 m
Cutting Height:	+4 -0.5 m
Weight:	310 Te



## Collecting Machine

Length:	16.5 m
Width:	6.0 m
Height:	7.6 m
Collection Range – height:	-2 m +5 m
Collection Range – Width:	± 4 m
Weight:	200 Te



# Current status of Seafloor Production Tools

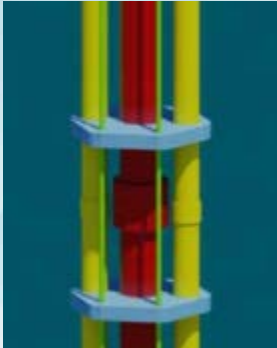
- Seafloor Production Tools (SPTs)
  - BC, CM and AC undergoing commissioning
  - Delivery expected Q4 2015
  - Wet testing planned H1 2016
- Umbilical winches for the 3 SPTs
  - FAT completed
  - Installation of the umbilical cable currently underway
  - Dispatch to the shipyard by Q4 2015 for integration into the vessel





# Pump and Pipe: standard oil and gas equipment

- Pump is being used in the oil and gas industry
- Pipes are standard riser pipes



Riser Pipe



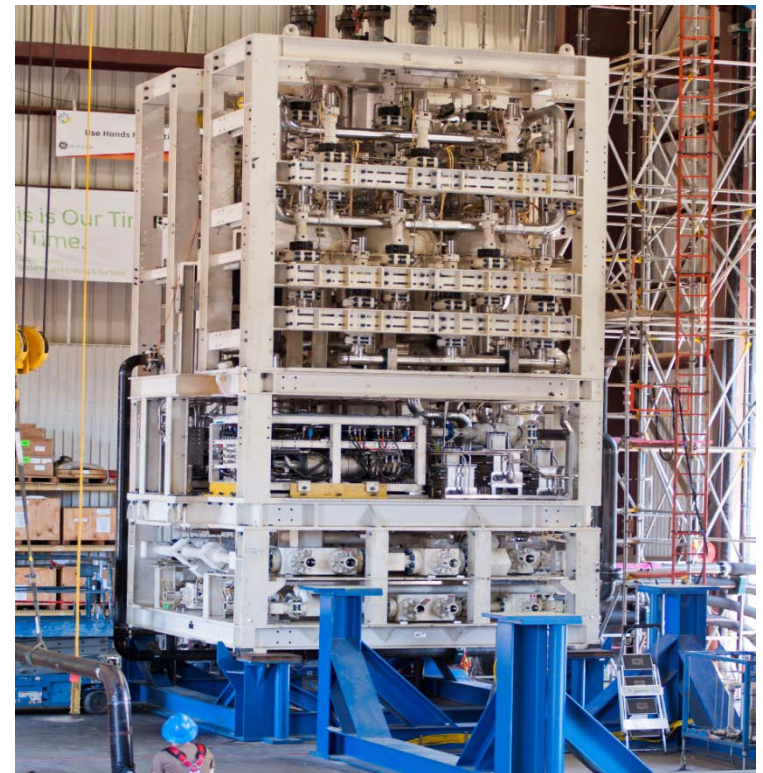
Main riser welding



Main riser TIG welding



GE Oil & Gas Slurry Lift Pump  
*Image courtesy of GE Oil & Gas*



Mud Lift Pump built by GE Oil and Gas for Chevron for deep water drilling applications (similar to the unit being built for Nautilus Minerals).



# Current status of Riser and Lifting System

- Riser and Ancillary Equipment
  - >50% complete
  - Welding of riser joints commenced January 2015 - ~35% complete
  - Delivery expected Q4 2015
  - Buoyancy and striker in storage
- Subsea Slurry and Lift Pump
  - > 50% complete
  - GE Oil and GAS has advised they have recommenced assembly of the SSLP (July 2015)
  - Delivery scheduled for mid 2016



# Production Support Vessel

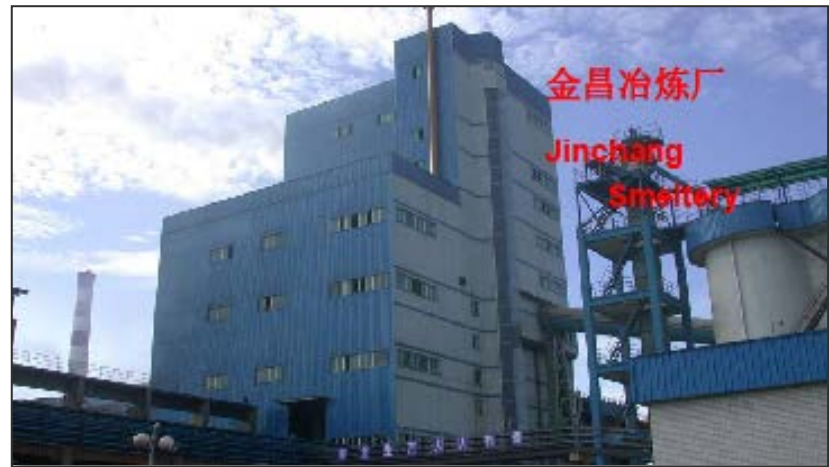
- Vessel Charter signed
  - **Low NUS capital** requirement (\$18m Charters Guarantee only)
  - 5 year charter **@US\$200K/day**
  - **Option** to extend the charter or **acquire** the vessel (less a portion of the charter fees paid)
  - Vessel to be built by **experienced yard** in China
  - **Delivery** of vessel by **end 2017**
- Mid section basic design completed with preliminary ABS^ approval
- Vessel is designed for use in offshore construction and seafloor mining
- Sufficient storage capacity for 7-10 days production
- Much of the Seafloor Production Equipment will be installed during vessel construction



^ American Bureau of Shipping

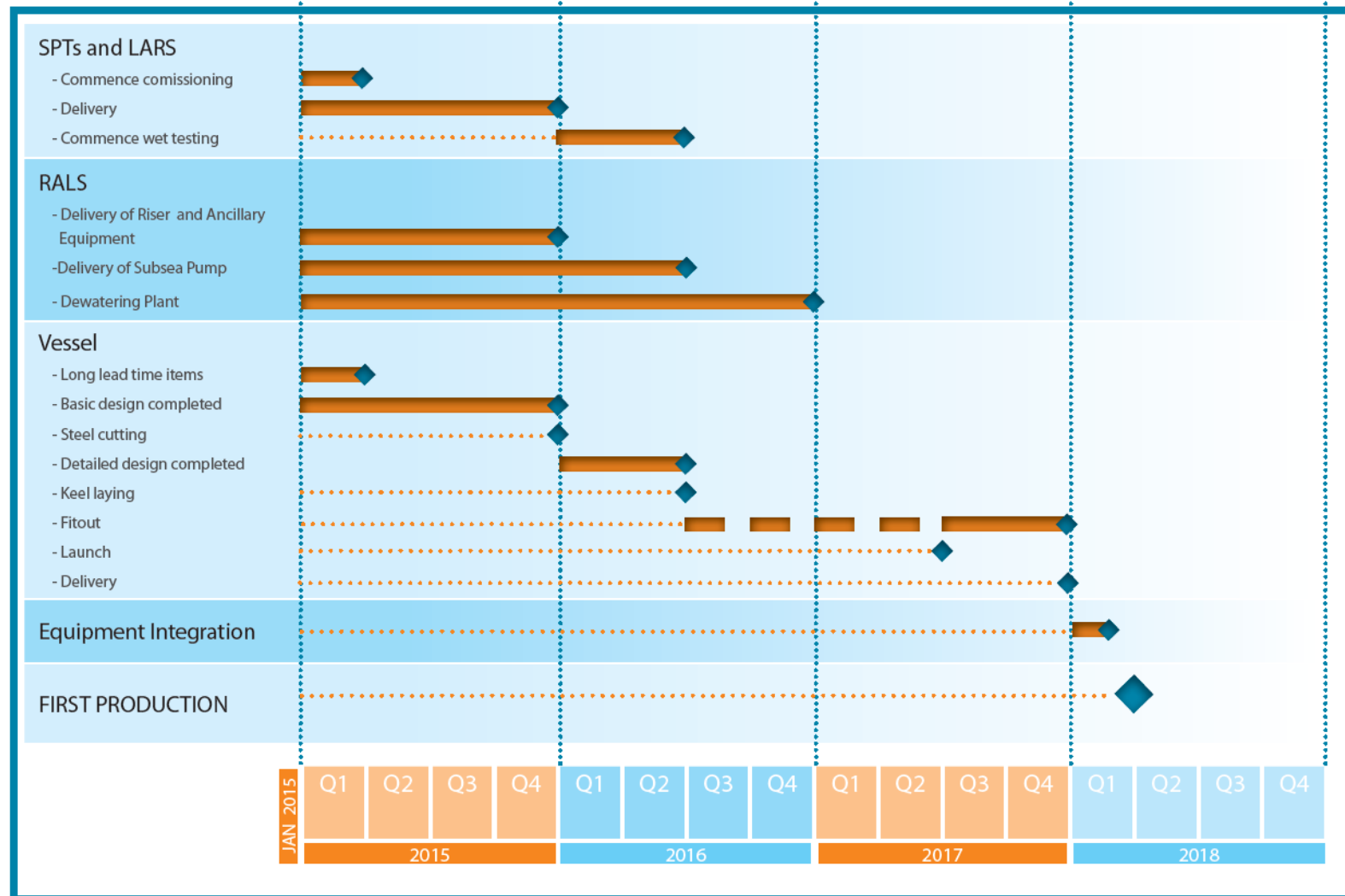
# Ore sales agreement Tongling

- Largest importer of copper concentrates into China
- Binding ore sales Heads of Agreement - remains in place
  - 1.1mtpa (+- 20%) for 3 years
  - Nested copper concentrate and SMS-tolling - pricing arrangement
  - Prompt payment - 90% provisional payment on loading in PNG
  - International benchmark terms
  - 20% copper grade concentrate – maximise gold recovery – TC/RC premium
  - Gold value in pyrite value shared equally
- **No tailings** for Solwara 1– maximum utilization of resource, no waste

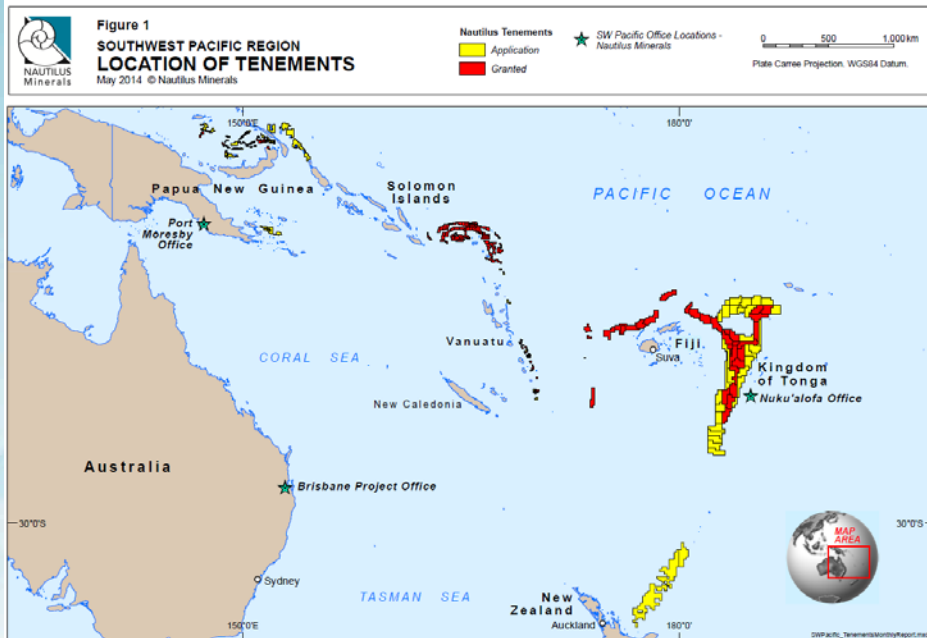




# Timeline to Production



# Prospectivity - South West Pacific focus



(1) Total tenements include those which have been granted and those under application. Includes 75,000 km<sup>2</sup> in Clarion-Clipperton Zone in Eastern Pacific

- Total of ~ 420,000 km<sup>2</sup> of tenements in multiple jurisdictions <sup>(1)</sup>
- Looking beyond Solwara 1
- Completed exploration on our Solomon Island tenements
  - generate targets using hull mounted multibeam echo sounder and plume hunting techniques

# Polymetallic Nodules - massive resource

## - *significant hidden value*



1. Sponsored by Tongan Government
2. Nautilus has an NI 43-101 resource

**410 million tonnes @ 1.2% Ni, 1.1% Cu, 0.24% Co, and 26.9% Mn\***
3. ISA data (unpublished) indicates potential 670 million tonnes @ 1% Cu #
4. ISA working towards establishing regulations for exploitation by 2016
5. Nautilus has been undertaking concept studies in the areas of gathering, hoisting, and metallurgy.



- >16 other countries are interested in nodules
- Significant money invested in nodules over the years (today's figures around US\$3 billion)
- Largest Cu/Ni/Co resource in the world
- China Minmetals has just applied for its own licence (sponsored by Chinese Government)

\*Resource estimates prepared by Mr Matthew Nimmo, Principal Geologist, Golder Associates Pty Ltd, Milton, Queensland, Australia. Mr Nimmo is a Member of the Australian Institute of Geoscientists, a full time employee of Golder, and fulfils the requirements to be a "qualified person" for the purposes of NI 43-101. For further details please refer to the technical report dated March 20, 2013 entitled "Updated NI 43-101 Technical Report, Clarion-Clipperton Zone Project, Pacific Ocean", prepared by Golder Associates Pty Ltd. and the Company's news release dated March 19, 2014.

# ISA, A geological model of polymetallic nodule deposits in the CCZ, Technical Study No 6, The potential quantity and grade of all amounts in excess of the NI 43-101 resource noted above are conceptual in nature. There has been insufficient exploration to define a mineral resource in respect of such amounts, and it is uncertain if further exploration will result in the target being delineated as a mineral resource.



# Seafloor Mining

## – the next big disruptive technology for mining



- ✓ **HIGH GRADES** – SMS > 7% copper and 6g/t gold<sup>1</sup>
  - Nodules: >4% Cu eq<sup>2</sup>
- ✓ **UPSIDE** – 38 systems identified to date along 5-10% of prospective geological strike
  - 410mt nodule resource > 4% Cu eq<sup>2</sup>, with massive upside

### **Huge resource potential on the seafloor**

- ✓ **FIRST FOLLOWER** – using proven technologies
- ✓ **AGGREGATED** – mobile production vessels provide platform for longer term production potential; highly scalable
- ✓ **SOCIALLY AND ENVIRONMENTALLY RESPONSIBLE** – small environmental footprint; minimal community impact; no tailings at site, minimal waste
- ✓ **BUILDING LONG TERM VALUE FOR STAKEHOLDERS** – highly scalable; environmentally friendly; high grades

<sup>1</sup> See Solwara technical report referred to in slide 2

<sup>2</sup> \$ price per lb - Cu@\$2.75, Ni@\$6.50 and Co@\$10.00 - Applicable grades are 1.2% Ni, 0.24% Co and 1.1% Cu. Abundance cut-off of 6 wet kg/m<sup>2</sup>. See CCZ technical report referred to in slide 2



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