Financial Payment System for Deep Sea Mining of Polymetallic Nodules

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Presentation to International Seabed Authority
Open Ended Working Group on Financial Modeling
Kingston, Jamaica
July 10, 2023

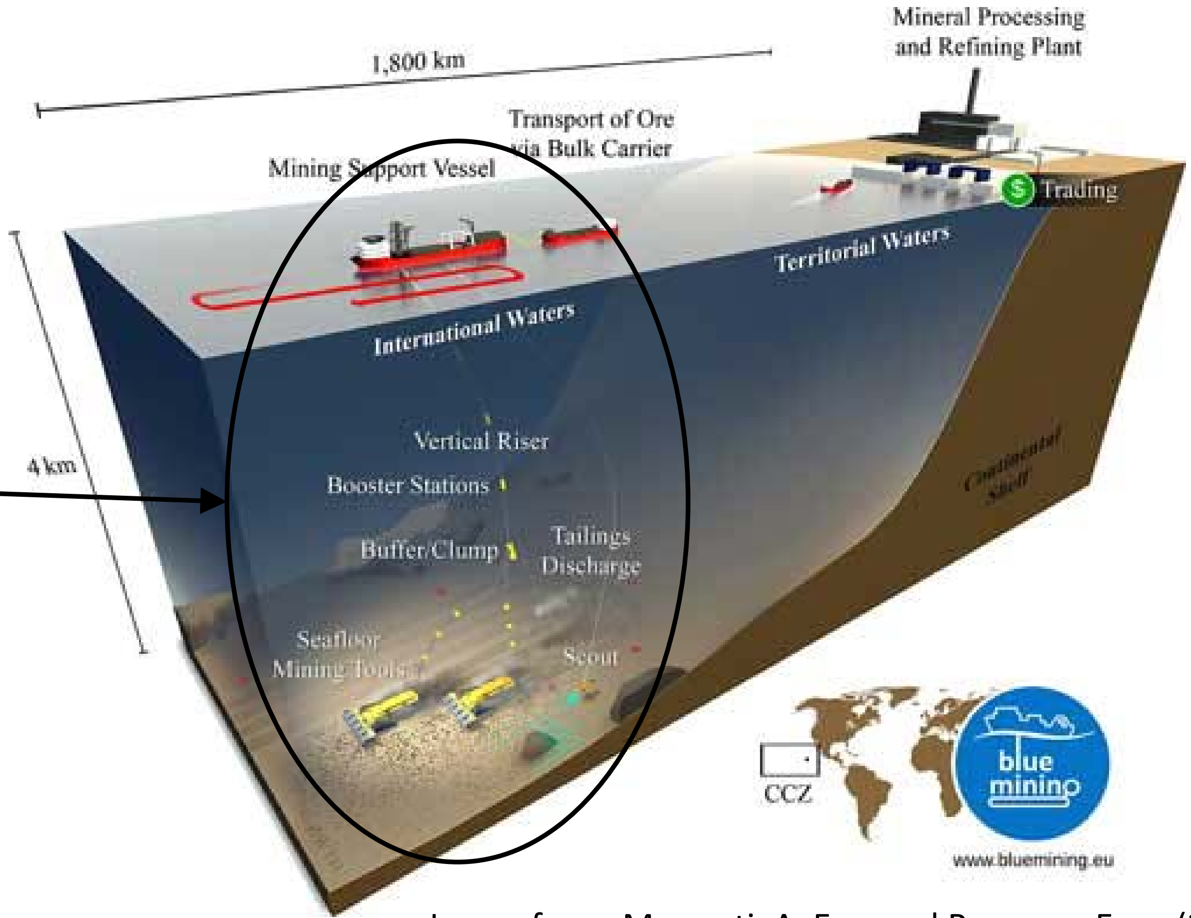
Agenda

- Review of financial payment system options
- Summary of Intersessional Work
- Approaches to “Fairness”
- Updates on Base Rates to Meet Fairness Goals
- Addressing Variation in Corporate Income Tax (CIT) Payments through Equalization Mechanisms
- Equalization Rates & Sensitivity to Cost Assumptions
- Summary & Next Steps

Review of DSM for Polymetallic Nodules

Only Activities in the AREA are regulated by ISA

However, activities outside the area impact the financial position of activities in the AREA



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Summary of Intersessional Work

1. Advances on plan for tax on transfer of rights
2. Use of Effective Tax Rates as basis for “fairness” and a range of rates typically seen in land based mining
3. Equalization system for ensuring contractors that do not pay full 25% Sponsor State CIT or equivalent, still pay “fair” level of Effective Tax
4. Mechanisms for the periodic review of rates

Review of Financial Payment System Options

Four Options

1. Fixed ad valorem - one stage
2. Fixed ad valorem - two stage
3. Blended Profit – two stage
   (fixed ad valorem 1st stage, blended profit & fixed ad valorem 2nd stage)
4. Variable ad valorem - two stage
   (fixed 1st stage, variable 2nd stage)

One Stage vs Two Stages:

- One stage: same rate in all years
- Two stage: rate changes in 2nd stage

Financial Systems:

- Fixed ad valorem rate
  (in each stage)
- Variable ad valorem rate
  (rate changes with metals prices)
- Blended ad valorem and profit

All systems can be designed to meet a desired goal (e.g., revenue to the ISA, Effective Tax Rate, or any goal)

Rates can be chosen to make any system meet stated goal under baseline conditions

However, each system will react differently to changes in Metals Prices, Costs and other assumptions

Pros & Cons of the Different Systems

Options	Pros	Cons
1. Fixed Ad Valorem	Simple to administer	Does not fully adjust to price & cost changes Misses opportunities for increased overall revenue available by staging
2. Two Stage Fixed Ad Valorem	Simple to administer Opportunity to increase overall revenue through staging	Does not fully adjust to price & cost changes
3. Profit & Ad Valorem	Automatically adjusts to changes in metals prices & costs Provides upside benefits if profits are high (but downside risks if profits low)	Complex to administer requiring a full accounting and monitoring/auditing system for profits
4. Variable Ad Valorem	Relatively simple to administer No accounting system needed	Adjusts well to metal price changes, but not cost changes

How can we measure the effectiveness of the different systems and rates?

Metrics:

Effective Tax Rate

ISA Revenues

Contractor IRR

Others

Behavior Under Different Conditions

Baseline Assumptions

Different Costs

Changes to Future Metal Prices

Fairness as Basis for Selecting Rates

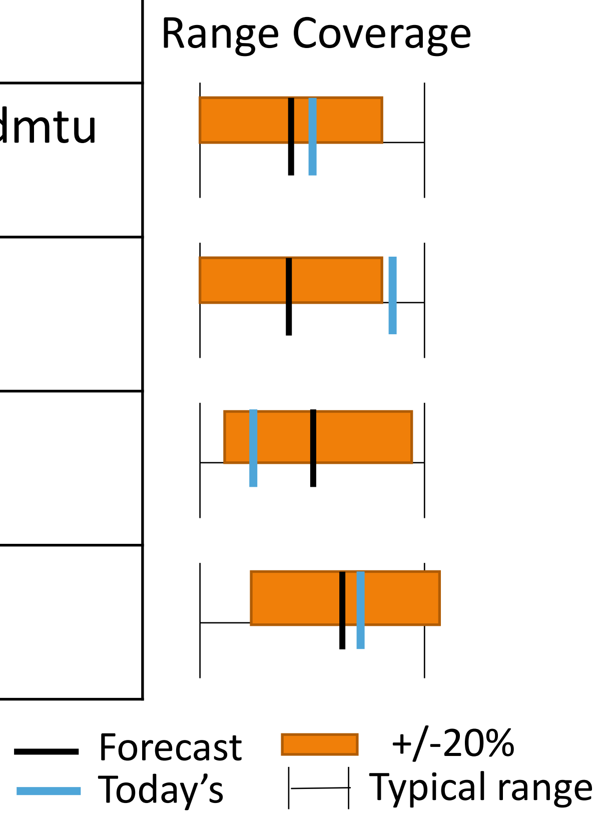
- Financial system neither advantages nor disadvantages DSM vs land based mining
- Contractors should be subject to the same overall tax burden as comparable land based mines (Effective Tax Rate)
- Two studies have looked at the range and average Effective Tax Rates
  - 39.2%, 46.0% (used average of these for baseline analysis, 42.6%)
- Other studies looked at the range of royalty rates
  - 2% to 12%, but depends on the royalty basis
  - Higher rate for ore (lower prices), lower rate for highly processed metals (higher prices)

Reminder of Other Important Model Assumptions

- Metals Price Forecasts
  - Updated for the March 2023 meeting
- Collector Costs
  - Updated for inflation to remain on same basis as metal price forecasts
  - Updated based on new information about technology/learning
- Sponsor State Corporate Income Taxes (CIT)

Updated Metals Price Forecasts & Sensitivity Range

	Today's Price*	20% Lower Forecast	Baseline Forecast	20% Higher Forecast	Typical Range**
Mn Ore	$4.97/dmtu	$3.80/dmtu	$4.75/dmtu	$5.70/dmtu	$3.8-6.1/dmtu
Nickel	$24,815/t	$16,000/t	$20,000/t	$24,000/t	$16,000-28,000/t
Cobalt	$48,874/t	$48,000/t	$60,000/t	$72,000/t	$40,000-80,000/t
Copper	$9,174/t	$7,200/t	$9,000/t	$10,800/t	$6,000-10,000/t



*March 1, 2023 price

**Semi-quantitative assessment of both recent historical and medium-term forecasts.

Updated Baseline Results Using 42.6% ETR
Royalty Basis: Gross Metal Value

Option	1st Stage Rate	2nd Stage Rate	Effective Tax Rate	ISA Revenue	Contractor IRR
2. Two Stage Fixed Ad Valorem	2.5%	7.0%	42.5%	\$3.7 billion	15.9%
3. Profit plus Ad Valorem	2.5%	15%	42.6%	\$3.7 billion	15.9%
4. Two Stage Variable Ad Valorem	2.5%	4.5% @ GMV = \$510/t - 9.5% @ GMV = \$720/t	42.5%	\$3.7 billion	15.9%

Under baseline metal price forecasts, GMV = \$614/t, Option 4 gives same result as Option 2
Assumes contractors pay 25% Corporate Income Tax to their Sponsor State
Gross Metal Value defines as value of contained Copper, Nickel & Cobalt metal plus the reminding Mn-oxide ore

Gross Metal Value as the Royalty Basis

- GMV = sum of the value of Copper, Nickel & Cobalt metals, plus the value of Mn-oxide ore
- Why this approach?
  - Global price indices provide clear arms-length values for these items
- Why Mn-oxide ore and not EMM, Ferromanganese or other forms?
  - Best practice recommends use of the first processed form of a material for which an arms-length price exists
  - Using Mn-oxide ore price satisfies this practice and avoids discussion of further processing plans
- Why not Nodule Transfer Price?
  - No existing market yet → difficult to know arms-length transaction price
  - Could be a great solution in the future once a fully function market forms

Beijing Pioneer Hi-Tech Company recommends using raw ore valuation (Nodule Transfer Price)

- BPC believes the best and legal way for the ISA to receive revenue is through a royalty
  - They believe the fourth payment regime is most reasonable (fixed 1^{st} stage, variable 2^{nd} stage)
- The royalty should be calculated as the following:
- The ore in previous formulas are valued according to the metal or mineral in the ore instead of the raw ore
- Recognize that value of raw ore can be related to value of contained metal through a multipler

Reconcile the Nodule Transfer Price & Gross Metal Value Approaches by Choosing the Correct Rates

- Royalty = Rate * Value
  (either gross metal value or nodule transfer price)

- Nodule Transfer Price = factor * Gross Metal Value
  - Factor incorporates costs of transforming the nodules into the form sold (three metals plus Mn ore)

- Therefore, we can easily transform the rate needed when using Nodule Transfer Price into an equivalent rate needed when using Gross Metal Value
  - Rate needs to be higher if using Nodule Transfer Price since it will be multiplied by a lower value

Can We Address GMV vs NTP Issue?

- Financial model uses Gross Metal Value
  - Because there are currently price indices for the 3 metals plus Mn ore
  - No price index for nodules
- Model also computes an effective Nodule Transfer Price
  - Using the information about metals processing costs and conditions
  - Factor relating Gross Metal Value and Nodule Transfer Price can be estimated
- Baseline Conditions
  - Gross Metal Value = $614/t
  - Nodule Transfer Price = $365/t
  - Factor (NTP/GMV) = 0.59

- If Nodule Transfer Price basis is preferred, it can be estimated by multiplying GMV by 0.59
- However, with this smaller value basis, royalty rates should be multiplied by (1/0.59)=1.7
- This would yield identical results and meet all targets

What happens if contractors don't pay full 25% CIT or equivalent to their Sponsor State?

Option	1st Stage Rate	2nd Stage Rate	ETR no CIT	ETR full 25% CIT
2. Two Stage Fixed Ad Valorem	2.5%	7.0%	24.9%	42.5%
3. Profit plus Ad Valorem	2.5%	15%	23.8%	42.6%
4. Two Stage Variable Ad Valorem	2.5%	4.5% @ GMV = $510/t - 9.5% @ GMV = $720/t	24.8%	42.5%

Financial system is no longer fair for contractors not paying full 25% CIT

Can We Define an Equalization System to Remedy this Issue?

- Equalization System Requirements
  - Brings all contractors, regardless of Sponsor State CIT payments up to fair level of ETR
  - Doesn’t penalize contractors already paying the full 25% Sponsor State CIT assumed when rates were analyzed
  - Simple to administer
  - Satisfies all requirements under a variety of conditions
    - Different future metals prices
    - Different future contract costs

Three Proposed Approaches to CIT Equalization

1. Additional Fixed Rate Royalty
   Ad valorem rate applied in same manner as base royalty
   CIT and related payments to sponsor state deducted

2. Additional Profit Share
   Tax rate applied to positive cash flows (additional details)
   CIT and related payments to sponsor state deducted

3. Top-up Profit Share
   Use newly developed GloBe3 to determine contractor CIT payment rate
   Additional payment assessed if rate is below 25%

Equalization System #1: Additional Fixed Rate Royalty

Contractors will pay an additional royalty to the ISA against which CIT is creditable

- **Key Details:**
  - Additional and separate from existing royalty
  - Rate set from the 5th year of production
  - Contractors that did pay 25% CIT should have no additional tax burden
  - Only actual and verified sponsored state cash payments are creditable against the royalty
  - Cost uplift can be used when setting rate to eliminate risks of overpayment if costs increase

Pro:

- Simple to implement compared to other approaches
  - Uses existing Ad Valorem framework
    No additional accounting system needed

Con:

- Imperfect equalization
- In some years, contractors already paying full 25% CIT may not have enough to fully offset additional payment
- If costs are higher than anticipated in model, contractors may always end up paying additional royalty even when paying full 25% CIT

Equalization System #2: Additional Profit Share

Contractors will pay additional profit share to the ISA to which CIT is creditable

Key Details:

- Additional and separate from existing royalty
- Based on both positive profits and cumulative profits
  - Only kicks in after cumulative profits are positive
- "Profits" calculated on a cash flow basis
  - Simplifies need to consider capital depreciation
- Rate can be chosen so that contractors paying no Sponsor State CIT will meet overall Effective Tax Rate target
- Contractors that did pay 25% CIT should have no additional tax burden

Pro:

- Automatically adjusts additional payment if contractor cost and therefore profits vary
- Simpler profit calculation by eliminating need for depreciation calculations
- Provides better equalization than pure Ad Valorem system

Con:

- More complex to develop & administer
- All cash flows must be monitored and audited to determine payment
- Imperfect equalization

Equalization System #3:
Top Up Profit Share

Contractors make additional payment to bring Global CIT to 25%

Key Details:

- The additional payment is directly calculated as the amount needed to bring all contractors to a combined payment (CIT plus additional payment to ISA) equal to 25% CIT
- This mechanism will be based on the OECD Model GloBE Rules with adjustments for ISA-specific requirements (25% requirement)
  - The goal of the GloBE model is to prevent tax avoidance and tax base erosion by multi-national companies
  - Simple ETR calculations that can be compared across jurisdictions
  - Adopted by over 140 countries
- Independent auditors exists, compliance can be outsourced
- Rules updated by OECD as needed to close loopholes

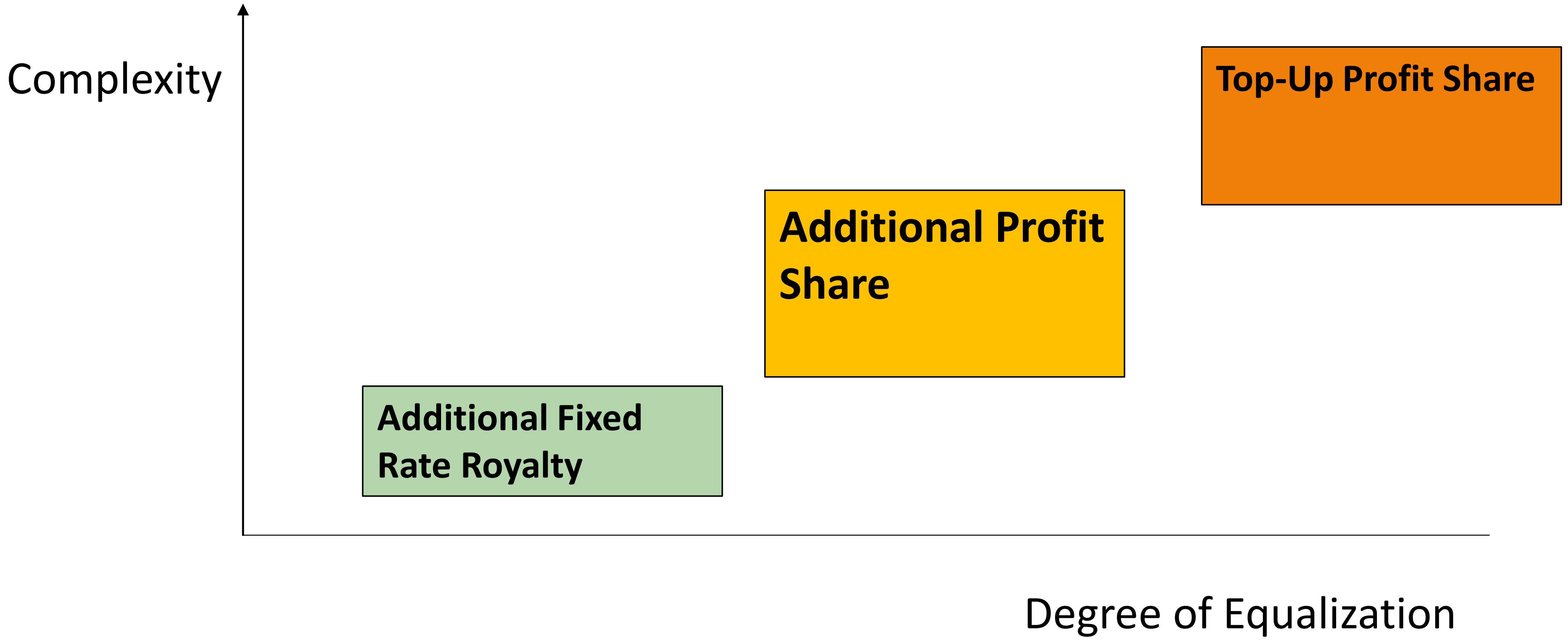
Pro:

- Avoids distortions; Perfect equalization
- Auditing can be outsourced to independent accounting firms using OECD GloBe system

Con:

- Complex mechanism
- Need to collect all needed accounting data

Pros & Cons of Systems:
Tradeoff between Complexity & Full Equalization



Complexity and Equalization Issues

	Costs	Revenues	Accounting System	Deductions	Equalization issues
Additional Fixed Rate Royalty	Not needed	Based on metals prices, already required for base royalty payment	Not needed	CIT Payment Other expenses?	No single rate can bring those not paying CIT up to the base ETR without also incurring an additional cost
Additional Profit Share	All costs need to be tracked	All revenues need to be tracked	Simplified accounting system without depreciation needed	CIT Payment Other expenses?	Because cash flow and profits are not the same calculations, the equalization is close but imperfect
Top-Up Profit Share	All costs need to be tracked	All revenues need to be tracked	Use GloBe 2 accounting system being developed by OECD	No deduction needed	Perfect Equalization

Base Case Results for Each Equalization System Option #4: Variable Rate Ad Valorem 2.5%→4.5/9.5%

		Effective Tax Rate	
Equalization System	Rate	CIT = 0%	CIT = 0% No add'l payment
Additional Fixed Rate Royalty	7%	42.6%	24.8%
Additional Profit Share	19.25%	42.7%	24.8%
Top-Up Profit Share	Up to 25%	42.6%	24.8%

What happens if costs are 20% higher than anticipated? Option #4: Variable Rate Ad Valorem 2.5%→4.5/9.5%

		Effective Tax Rate		Additional Payments	
Equalization System	Rate	CIT = 0%	CIT = 25% With add'l payment	CIT = 0%	CIT = 25%
Additional Fixed Rate Royalty	7%	48.9%	50.4%	$3,480 million	$856 million
Additional Profit Share	19.25%	46.7%	48.1%	$3,003 million	$450 million
Top-Up Profit Share	Up to 25%	45.8%	45.8%	$2,937 million	$0

Note: As expected, effective Tax Rates have gone up because at higher costs, profits have decreased.
However, some systems inadequately address the impact of rising costs resulting in high unwarranted add'l payments

One solution is to apply a cost up-lift when determining equalization system rates. +10% Cost Up-Lift

Equalization System	Sponsor State Tax CIT = 25%	Rate Needed to Make Up CIT with uplift	Rate Needed to Make Up CIT without uplift
Additional Fixed Rate Royalty	$3,282 million	4%	7%
Additional Profit Share	$3,282 million	12.5%	19.25%
Top-Up Profit Share	$3,282 million	Up to 25%	Up to 25%

Rates needed in equalization system are lower when cost assumptions are higher
However, these rates will be less effective at fully equalizing the system if costs aren't in fact higher5

Lower rates → Add'l payment nearly 0 if CIT = 25% However, systems no longer equalize if CIT = 0%

		Effective Tax Rate		Additional Payments	
Equalization System	Rate	CIT = 0%	CIT = 25% With add'l payment	CIT = 0%	CIT = 25%
Additional Fixed Rate Royalty	4%	35.3%	42.5%	$1,988 million	$2 million
Additional Profit Share	12.5%	36.3%	42.5%	$2,195 million	$2 million
Top-Up Profit Share	Up to 25%	42.5%	42.5%	$3,622 million	$0

First two systems do not equalize and do not satisfy fairness criteria, ETR = 42.6% for contractors paying no CIT

Summary: Decisions to be made

1. Select a financial payment system for base royalty
   Options 1, 2, 3, 4
   Leaning towards Option 4/Two stage variable ad valorem system

2. Choose valuation basis:
   Gross Metal Value: 3 metals plus Mn-ore
   consideration given to using Nodule Transfer Price in future

3. Set Effective Tax Rate target that represents "fair" system
   42.6% proposed as average of values from two studies (39.2% & 46.0%)

4. Select a system for CIT Tax Equalization
   - Additional Fixed Rate Royalty
   - Additional Profit Share
   - Top-Up Profit Share

What needs to happen after these decisions are made?

- Determine the rates to be used for the base financial system and the equalization system

- Draft full legal text around chosen approach including the details around monitoring and accounting for the systems