



STRENGTHENING EXTRACTIVE SECTOR  
MANAGEMENT IN MONGOLIA

**Base Erosion Profit Shifting (B.E.P.S)  
- an Overview**

Daniel Dumas  
Strategic Revenue Management  
17 -18 Janvier 2018



Global Affairs Canada  
Affaires mondiales Canada



SESMIM  
PROJECT

Selected Topics

1. Excessive interest deductions
2. Abusive transfer pricing
3. **Undervaluation of mineral exports**
4. Indirect transfer of mining asset
5. Inadequate ring-fencing



Global Affairs Canada  
Affaires mondiales Canada





**SESMIM**  
P R O J E C T

## Three main areas

- Controls on Quantities
- Controls on Qualities
- Controls on prices



Global Affairs Canada  
Affaires mondiales Canada

Paradoxum©



**SESMIM**  
P R O J E C T

## Undervaluation of Mineral Exports

- A feature of transfer mispricing specific to mining: companies may sell mineral products to a related entity at prices below market rates, thereby moving sales revenue and profits offshore, to take advantage of lower tax rates.
- Major concern for many mineral exporting countries.
- Profit shifting via the pricing of mineral products sold to related parties.
- Lack the mineral-testing facilities required to verify the grade and quality of mineral exports,
- Detailed sector-specific knowledge of the mining transformation process and mineral product pricing.



Global Affairs Canada  
Affaires mondiales Canada

Paradoxum©





**SESMIM**  
P R O J E C T

## Various ways of Undervaluation

- under-quoting prices,
- mis-specifying reference prices
- excessive deductions or price adjustments, handling or other fees
- Mis-representing of the level of concentration
- not declaring the presence of valuable by-products (e.g. gold and silver in a copper concentrate).
- Inflating the presence and level of impurities
- Underestimating the qualities of the commodity (ex: calorific value for coal)
- Etc.



Global Affairs Canada  
Affaires mondiales Canada

Paradoxum©



**SESMIM**  
P R O J E C T

## Example: Copper Concentrate


- The example below shows a hypothetical situation in which an exporter of a mineral product – in this case a concentrate – could underprice the true value of their shipment to revenue authorities.
- As the table below demonstrates, the revenue impact of under-priced shipments can add up quickly.



Global Affairs Canada  
Affaires mondiales Canada

Paradoxum©








## Example: Copper Concentrate


Copper Concentrate Shipment	Market Price	10% Under-priced Copper	Copper under-priced, no gold declared
	\$m	\$m	\$m
Gross Value of Cargo FOB [A]	39.5	35.1	32.7
Production Costs [B]	22.5	22.5	22.5
Royalty [C]	1.7	1.5	1.4
CIT Base [A-B-C]	15.4	11.1	8.8
Company Tax Payable [D]	4.6	3.3	2.6
Total Revenue per shipment [C+D]	6.3	4.8	4.0
<b>Potential Revenue Loss Per Shipment</b>		<b>-1.4</b>	<b>-2.2</b>
<b>Potential Annual Revenue Loss</b>		<b>-71.4</b>	<b>-112.3</b>

Source: OECD calculations based on price data from World Bank Group (Pink Sheets), Cost data from Thompson Reuters. Notes: All figures in USD. Assumes the functions, assets and risks of the parties in each case are comparable. The cargo is a 20,000 metric tonne shipment of copper concentrate exported from a developing country, 50 shipments per year. Each shipment contains 31% copper by weight and 4 grams of gold per tonne. Adjustments to the gross value of cargo are made for losses during smelting (1 percentage point of copper, 1 gram of gold). Production cost is assumed to be \$1.70 per pound of copper – an approximate mid-point of copper producers. Royalty rates: copper – 3.5% of copper value; gold – 5% of gold value. CIT rate: 30%.



Global Affairs Canada / Affaires mondiales Canada




## Mineral Sales Challenges


NETBACK VALUE = \$/ton

← \$/ton      \$/ton      \$/ton      \$/ton

Transport      Smelting Concentration      Transport      Evaluation on mineral markets



Global Affairs Canada / Affaires mondiales Canada





**SESMIM**  
P R O J E C T

## Mineral Sales Challenges

### More difficult to establish mineral value at mine mouth than oil value at wellhead

- Not generally sold at mine gate/mine mouth
- Big variations in quality – between minerals, mines, possibly even shipments from same mine – and in amount/type of processing required
- Ore may contain different minerals with different values
- May be several processing stages at different points (some even within the mine)



Global Affairs Canada  
Affaires mondiales Canada

Paradoxum©



**SESMIM**  
P R O J E C T

## Mineral Sales Challenges

- Minerals may be sold at different stages e.g. ore, concentrate, mill output, smelter output
- Minerals from different sources may be blended during processing
- Processing/transport costs charged by associates – TP issues
- Processing costs may take long time to establish

**So netback calculation of mine mouth value difficult**



Global Affairs Canada  
Affaires mondiales Canada

Paradoxum©





**SESMIM**  
PROJECT

## Not as easy as it seems

Platts (publicly available) spot CFR China fines price for 58% Fe ('low grade' ore) per DMT (Dry Metric Ton). Apply calendar month average of Platts 58% Fe CFR China price for month prior to Bill of Lading date of each shipment.

LESS ocean freight for the relevant ship size to China per DMT. This is always based on the ore source back to the China CFR price.

PLUS Fe adjustment for this Liberia DSO product. This adjustment is a percentage adjustment to the price of the DSO that is dependent on the quality of the Fe content above 58%.

LESS a gangue/impurities discount for the difference of AML Silica at 11-12% compared with the 5% maximum set for 58% Fe products in Platts.

LESS trial allowance/discount to compensate/encourage target customers to trial this new ore which is common in the international iron ore trade for new mines/products. We will seek to review this trial allowance after completion of plant trials at various global customers. The aim is to secure major customer acceptance as soon as possible. After the trial phase is satisfactorily completed, ArcelorMittal's international sales organisation will negotiate to purchase 100% of the DSO product under long term contract and carry the cost and responsibility of developing the markets and selling the entire production.

LESS selling cost to compensate the international sales organisation for the cost of: selling, negotiating, taking risks of payment, insurance, disport quality claims etcetera.

LESS the Royalty price which would come into effect after the successful trials have been completed with global customers and converted into long term agreements with the concessionaire.



**SESMIM**  
PROJECT

## Establishing AL Price

Harder to establish AL prices for unrefined minerals than unrefined oil:

- Lack of reliable quoted benchmark prices for unfinished mineral products
- Quoted benchmark prices not available for rarer finished minerals
- No clear method to adjust value to reflect quality differences
- Harder to monitor quantity and quality of output
- Transport cost adjustments may be more difficult

So more difficult to establish C.U.P.\*

\*CUP – comparable uncontrolled price



Global Affairs Canada  
Affaires mondiales Canada

Paradoxum©





**SESMIM**  
P R O J E C T

## Mineral Sales – Example

Ore contains 2% metal. Exported in various forms – crushed ore, concentrate, refined metal. Royalty is 2%.

	Cost	Cumulative
• Value of 50 tons ore at mine mouth	300	300
• + value added to produce crushed, screened ore	50	350
• + value added to produce concentrate	100	450
• + value added from domestic transport	50	500
• + value added from smelting/refining	350	850
• + value added from foreign transport/ins.	100	950
• + value added from other inputs	50	1000
		(LME*price)



Global Affairs Canada  
Affaires mondiales Canada



**SESMIM**  
P R O J E C T

## Mineral Sales – Main Options

1. a) Netback from point of first AL sale to establish value at mine mouth. Royalty is 6.  
b) Netback from final price to establish value at mine mouth. Royalty is 6.
2. Value at first point of sale in country or, if none, at FOB export price. Royalty ranges from 6 to 20 depending on sale point.
3. Value mineral content at benchmark (e.g. LME) price. Royalty is \$20, whichever valuation point is used. (Can reduce royalty rate to compensate.)

Many variations possible and found in practice.



Global Affairs Canada  
Affaires mondiales Canada

Paradoxum©





SESMIM  
PROJECT

## Main Option Drawbacks

1. Netback (e.g. Australia RRT)
  - Potentially complex
  - Lots of TP issues
  - Timing problems if royalty charged before netback costs known
2. Value at point of sale or export (e.g. Zambia royalty)
  - Taxes value added by processing
  - Inconsistent
  - Hard to establish AL export value (netback - see problems above)
3. Value mineral content at LME prices (e.g. Mongolia royalty)
  - Same royalty for ores of different quality/value
  - No relation of royalty value to actual value (so has to be a general valuation rule)
  - Doesn't work for CIT (double tax, treaty problems) or RRT



Global Affairs Canada  
Affaires mondiales Canada

Paradoxum©



SESMIM  
PROJECT

## Choice of valuation rule

- Choice of valuation rule may reflect several factors
  - Normal method of sale and sale point
  - Extent of processing before sale
  - Availability of benchmark prices for intermediate products
  - Size/importance of operation
  - Extent of NAL sales
  - Administrative capacity level
- May need different rules for different minerals/mines
- Aim should be published objective predictable method for calculating a reasonable equivalence to AL prices for NAL sales, consistent for different taxes
- But large variety of circumstances may require use of APAs




Global Affairs Canada  
Affaires mondiales Canada

Paradoxum©










## Conclusion: Qualities & Quantities


---

- Importance of physical audit. Needs
  - Technical expertise
  - Risk-based strategy for monitoring measurement of quantity and quality
  - If done by Customs/NR department effective exchange of information with tax department
  - Laboratories



Global Affairs Canada    Affaires mondiales Canada









## Conclusion: TP Risk Assessment

---

- Coherent risk-based approach
- Obtain/maintain data on
  - Production volumes, AL sales prices, benchmark prices (sales, freight costs, etc.)
- Returns design
  - NAL transactions to be disclosed
  - Data support risk assessment (e.g. management charges)
- Identify/assess risk factors
  - e.g. compliance history, Q x P calculation, nature/amount of cost, cost comparisons (other periods, other taxpayers), use of tax havens, etc.
- Detailed records audit of high risk transactions



Global Affairs Canada    Affaires mondiales Canada



SESMIM  
P R O J E C T

## Conclusion

- Policy – clear, objective, even-handed rules to produce
  - Reasonable approximation of AL prices
  - Reflecting upstream production value
- Onus on taxpayer to apply rules and show they have been applied
- Clearly published benchmark prices to be used (if applicable)
- Data collection to support coherent risk-based audit strategy



Global Affairs Canada  
Affaires mondiales Canada

