Appendix IV

Determination of a royalty liability

This appendix sets out the methodology for the calculation of a royalty payable under regulation 64 in respect of the categories of resources. It is indicative and presented for discussion only at this time.

In the present appendix:

Applicable Royalty Rate means the royalty rate shown in the tables below for the applicable Resource category or as determined by a decision of the Council following any review under these regulations.

Average Listed Price means the Average Listed Price for a Relevant Metal, which is a price calculated by averaging the daily prices (in United States dollars)[1] per metric ton listed for the metal in an Official Listing during a royalty return period as specified and published by the Authority.

Average Grade means the average metal content of the Relevant Metal obtained from a range of grades in the Mining Area[2] expressed as the percentage of the metal per ton of the mineral-bearing ore at the Valuation Point and shown under column B in the tables below for the applicable Resource category.

First Period of Commercial Production means a fixed period of [x][3] years following the date of commencement of Commercial Production.

Official Listing means a list of quoted or published prices of metals:

(a) On a recognized international mineral exchange or market;

(b) In a publication recognized for quoting or publishing prices of metals in an international market; or

(c) Where there is no listed price, the Council shall, based on recommendations of the Commission and following consultation with Contractors, determine a formula for the determination of the Average Listed Price for a Relevant Metal.

Relevant Metal means a metal contained in the mineral-bearing ore identified and determined by the Council as relevant for the purposes of calculating the assumed gross value.

Relevant Metal Value(s) means the assumed gross value(s) of a Relevant Metal calculated as the product of its Average Listed Price and Average Grade.

Second Period of Commercial Production means a fixed period of [y][4] years following the end of the First Period of Commercial Production.

Valuation Point is the point of first sale or the first point of transfer of the mineral-bearing ore by delivery onto a vessel transporting the ore from the Contract Area.

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[1] To consider the use of special drawing rights as a unit of account to value the revenue on which a royalty would be based.

[2] An average grade (content) could be determined from resource assessments provided to the Authority in accordance with its resource classification guidelines. A range of acceptable grade parameters could be included in the regulations, with the actual average grade shown in a royalty return, subject where necessary to assay.

[3] To be informed by financial model discussion.

[4] See footnote 3.

Valuation of mineral-bearing ore[5]

1. The value of the mineral-bearing ore shall be an assumed gross value per metric ton at the Valuation Point.

2. The assumed gross value shall reflect the assumed gross value of each Relevant Metal contained in the mineral-bearing ore, calculated under this appendix.

Royalty rate

1. The Applicable Royalty Rate shall be:

   (a) For the First Period of Commercial Production, the percentage(s) shown under column C in the tables below for the applicable Resource category; and

   (b) For the Second Period of Commercial Production, the percentage(s) shown under column D in the tables below for the applicable Resource category.

2. The Applicable Royalty Rate and the manner and basis of its calculation may vary as between a royalty payable in respect of different Relevant Metals and different Resource categories.

Calculation of royalty payable

1. The royalty payable for a royalty return period is the product of the sum of the Relevant Metal Values multiplied by the Applicable Royalty Rate for each Relevant Metal and the quantity (in metric tons) of the mineral-bearing ore sold or transferred at the Valuation Point, thus:

$RP = ((RMV^1 \times ARR^1) + (RMV^2 \times ARR^2) + (RMV^3 \times ARR^3) + \ldots (RMV \times ARR)) \times$ *Total quantity of mineral-bearing ore in metric tons)*

Where:

RP = *Royalty Payable*

RMV^1 = *the first Relevant Metal Value*

ARR^1 = *the Applicable Royalty Rate applicable to the first Relevant Metal*

RMV^2 = *the second Relevant Metal Value*

ARR^2 = *the Applicable Royalty Rate applicable to the second Relevant Metal, and so on*

RMV^3 = *the third Relevant Metal Value*

ARR^3 = *the Applicable Royalty Rate applicable to the third Relevant Metal, and so on*

2. Where the Council, under columns C and/or D in the tables below for the applicable Resource category, has determined that a composite royalty rate[6] shall be applicable to the assumed gross value of the mineral-bearing ore, the

[5] This approach towards determining a reference value for the metals contained in the ore has been discussed in connection with polymetallic nodules only. Whether this approach is appropriate for other mineral resource categories remains open for discussion. That said, the approach uses international reference prices, and to that extent does not present the Authority with potentially burdensome transfer pricing issues.

[6] In connection with polymetallic nodules, discussions to date have focused on a single royalty rate to be applied to a metal basket value. Other than simplicity in calculation, no detailed discussion has taken place in terms of applying different royalty rates to different metals contained in the basket.

royalty payable for a royalty return period is the product of the sum of the Relevant Metal Values and the quantity (in tons) of the mineral-bearing ore sold or transferred at the Valuation Point multiplied by the composite royalty rate, thus:

$RP = (RMV^1 + RMV^2 + RMV^3 + ... RMV)$ x Total quantity of mineral-bearing ore (in tons) x composite royalty rate

The following tables shall be adopted progressively, from time to time:

Table 1
Polymetallic nodules

A	*B*	*C*	*D*
Relevant Metal	*Average grade (percentage)*	*First Period of Commercial Production: Applicable Royalty Rate (percentage)*	*Second period of commercial production: applicable royalty rate (percentage)*
Metal 1	[x.xx]	[x.xx]	[x.xx]
Metal 2	[x.xx]	[x.xx]	[x.xx]
Metal 3	[x.xx]	[x.xx]	[x.xx]
Metal 4	[x.xx]	[x.xx]	[x.xx]
[Other]			

Table 2
Polymetallic sulphides

A	*B*	*C*	*D*
Relevant Metal	*Average grade (percentage)*	*First Period of Commercial Production: Applicable Royalty Rate (percentage)*	*Second Period of Commercial Production: Applicable Royalty Rate (percentage)*
Metal 1	[x.xx]	[x.xx]	[x.xx]
Metal 2	[x.xx]	[x.xx]	[x.xx]
Metal 3	[x.xx]	[x.xx]	[x.xx]
Metal 4	[x.xx]	[x.xx]	[x.xx]
[Other]			

Table 3
Cobalt-rich ferromanganese crusts

A	*B*	*C*	*D*
Relevant Metal	*Average grade (percentage)*	*First Period of Commercial Production: Applicable Royalty Rate (percentage)*	*Second Period of Commercial Production: Applicable Royalty Rate (percentage)*
Metal 1	[x.xx]	[x.xx]	[x.xx]
Metal 2	[x.xx]	[x.xx]	[x.xx]
Metal 3	[x.xx]	[x.xx]	[x.xx]
Metal 4	[x.xx]	[x.xx]	[x.xx]
[Other]			