

QUEENSLAND TREASURY

Royalty calculations

for prescribed and specified minerals

July 2023



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Prescribed and specified minerals are defined in the [public ruling on the determination of royalty for these minerals \(MRA002\)](#) and are listed here.

Prescribed minerals	Specified minerals
Cobalt	Iron ore
Copper	Manganese
Gold	Molybdenum
Lead	Tantalum
Nickel	Tungsten
Silver	
Zinc	

1.0 Content loss deduction

When can I claim a content loss deduction?

The purpose of a content loss deduction is to recognise that, where prescribed or specified mineral is sold by a producer, royalty should not be payable on reasonable losses occurring in the subsequent processing of the mineral for which the producer is not paid.

A content loss deduction may potentially be claimed in relation to the sale of any prescribed or specified mineral, other than where the mineral is sold after it has been processed to its final form (e.g. copper cathode or gold in gold bullion).

How do I determine the amount of the content loss deduction I can claim?

Public ruling MRA002 sets out the basis for calculating the amount of the content loss deduction that can be claimed for a particular sale of prescribed or specified mineral. This is summarised in Attachment 1.

What are ‘contained quantity’ and ‘payable quantity’?

Where a prescribed mineral is sold in concentrate form:

- the contained quantity is the quantity of metal contained in the mineral sold (as determined by assay)
- the payable quantity is the quantity of metal contained in the mineral sold for which payment will be made by the buyer.

Example 1

On 1 September 2021, XYZ Pty Ltd sells 100 dry metric tonnes of copper concentrate containing 28% copper and 5 grams per tonne of gold to ABC Pty Ltd. ABC is not a relevant entity of XYZ.

Under the sale contract, ABC agrees to pay XYZ for 97% of the contained copper, and 80% of the contained gold.

For the copper in the concentrate:

- the contained quantity is 28 tonnes (28% × 100 tonnes)
- the payable quantity is 27.16 tonnes (28% × 100 tonnes × 97%).

For the gold in the concentrate:

- the contained quantity is 500 grams (5 grams per tonne × 100 tonnes)
- the payable quantity is 400 grams (5 grams per tonne × 100 tonnes × 80%).

What is the ‘standard quantity’?

For a particular prescribed mineral contained in a particular concentrate, the standard quantity is the amount shown in the ‘Standard’ column of the following table, multiplied by the number of units of concentrate.

Concentrate	Prescribed mineral	Standard
Copper	Copper (x% contained)	The lower of: <ul style="list-style-type: none"> • $x - 1\%$ or <ul style="list-style-type: none"> • $x \times 0.965$
	Silver (x grams per tonne)	$(x - 30 \text{ grams}) \times 0.9$
	Gold (x grams per tonne)	$(x - 1 \text{ gram}) \times 0.9$
Lead	Lead (x% contained)	The lower of: <ul style="list-style-type: none"> • $x - 3\%$ or <ul style="list-style-type: none"> • $x \times 0.95$
	Silver (x grams per tonne)	$(x - 100 \text{ grams}) \times 0.95$
	Gold	No deduction
Zinc	Zinc (x% contained)	The lower of: <ul style="list-style-type: none"> • $x - 8\%$ or <ul style="list-style-type: none"> • $x \times 0.85$
	Silver (x grams per tonne)	$(x - 100 \text{ grams}) \times 0.6$
Lead, zinc, silver (bulk concentrate)	Lead (x% contained)	The lower of: <ul style="list-style-type: none"> • $x - 3\%$

Concentrate	Prescribed mineral	Standard
		or • $x \times 0.95$
	Zinc ($x\%$ contained)	The lower of: • $x - 7\%$ or • $x \times 0.8$
	Silver (x grams per tonne)	$(x - 100 \text{ grams}) \times 0.9$

Example 2

Same facts as Example 1.

For the copper in the concentrate, the amount in the 'Standard' column will be 27%, being the lower of 27% ($28\% - 1\%$) and 27.02% ($28\% \times 0.965$). The standard quantity will therefore be 27 tonnes ($27\% \times 100$ tonnes).

For the gold in the concentrate, the amount in the 'Standard' column will be 3.6 grams per tonne, being $((5 \text{ grams} - 1 \text{ gram}) \times 0.9)$. The standard quantity will therefore be 360 grams (3.6 grams per tonne \times 100 tonnes).

What are 'contractual metal difference' and 'standard metal difference'?

The contractual metal difference is the difference (measured in units of metal) between the contained quantity and the payable quantity. Where a standard quantity exists, the standard metal difference is the difference (measured in units of metal) between the contained quantity and the standard quantity.

Example 3

Same facts as Example 1.

For the copper in the concentrate:

- the contractual metal difference is 0.84 tonnes (28 tonnes – 27.16 tonnes)
- the standard metal difference is 1 tonne (28 tonnes – 27 tonnes).

For the gold in the concentrate:

- the contractual metal difference is 100 grams (500 grams – 400 grams)
- the standard metal difference is 140 grams (500 grams – 360 grams).

How does the payable quantity affect the amount of the content loss deduction?

If the payable quantity is less than the standard quantity, this affects the amount of the content loss deduction.

Example 4

Same facts as Example 1, except that under the sale contract, ABC agrees to pay XYZ for:

- 97% of the contained copper, on the basis of a London Metal Exchange price of US\$9,100 per tonne
- 80% of the contained gold, on the basis of a London Bullion Market price of US\$1,920 per troy ounce (US\$61.73 per gram).

The exchange rate on 1 September 2021 and at the time of payment by ABC is A\$1.00 = US\$0.70.

For the copper in the concentrate:

- the payable quantity has not been determined with regard to any amount payable by ABC to XYZ
- a standard quantity exists
- the payable quantity (27.16 tonnes) is greater than the standard quantity (27 tonnes).

So the content loss deduction is A\$10,920, being the contractual metal difference (0.84 tonnes) multiplied by the gross value per unit of contained copper (A\$13,000 per tonne, i.e. US\$9,100 per tonne converted into Australian dollars at the exchange rate prevailing at the time of payment).

For the gold in the concentrate:

- the payable quantity has not been determined with regard to any amount payable by ABC to XYZ
- a standard quantity exists
- the payable quantity (400 grams) is greater than the standard quantity (360 grams).

So the content loss deduction is A\$8,818, being the contractual metal difference (100 grams) multiplied by the gross value per unit of contained gold (A\$88.19 per gram, i.e. US\$61.73 per gram converted into Australian dollars at the exchange rate prevailing at the time of payment).

Example 5

Same facts as Example 4, except under the sale contract, ABC agrees to pay XYZ for 60% of the contained gold.

For the gold in the concentrate:

- the payable quantity has not been determined with regard to any amount payable by ABC to XYZ
- a standard quantity exists
- the payable quantity (300 grams) is less than the standard quantity (360 grams)
- ABC is not a relevant entity of XYZ
- the payable quantity is 83.33% of the standard quantity (i.e. less than 90% of the standard quantity).

The content loss deduction is limited to A\$12,345.20, being the standard metal difference (140 grams) multiplied by the gross value per unit of contained gold (A\$88.19 per gram, i.e. US\$61.73 per gram converted into Australian dollars at the exchange rate prevailing at the time of payment). XYZ may apply to the Commissioner of State Revenue for a content loss determination if XYZ considers that a greater content loss deduction should be available.

Do I need to apply for a content loss determination?

If you sell a prescribed mineral in concentrate form and either the sale is to a relevant entity or the payable quantity for the mineral is less than 90% of the standard quantity for the mineral, you may apply for a content loss determination if you consider that a greater content loss deduction should be available in the particular circumstances than is otherwise allowed.

You must apply for a content loss determination if you sell:

- a prescribed mineral in other than concentrate or final form
- a prescribed mineral if the payable quantity has been determined having regard to any amount payable by the producer to the buyer (e.g. refining or treatment charges)
- a prescribed mineral for which there is no standard quantity
- a specified mineral.

How do I apply for a content loss determination?

An application for a content loss determination must be made in writing, and be lodged by email or post:

- Email (preferred): royalty@treasury.qld.gov.au
- Post: Royalty Team
Queensland Revenue Office
GPO Box 5806 BRISBANE QLD 4001

What do I need to include in an application for a content loss determination?

An application for a content loss determination should include the following information:

- the transaction or class of transactions for which the application is being sought
- for each of those transactions:
 - the contained quantity for the mineral
 - the payable quantity for the mineral
 - the nature of the relationship between you and the buyer
 - the content loss deduction that is considered appropriate
 - whether the payable quantity been determined with regard to any amount payable by the producer to the buyer (e.g. refining or treatment charges)
- the period for which the determination is being sought.

What will be contained in a content loss determination?

The Commissioner's determination may provide for any or all of the following:

- a content loss deduction, or a method or formula for determining the deduction
- different content loss deductions for the mineral for different periods within the period for which the decision applies
- the application of the determination for an earlier return period for the mineral
- the application of the determination for a particular transaction or class of transaction.

Do I need to apply for a new content loss determination each return period?

No. The Commissioner may make a content loss determination that applies to a number of periods (including prior periods).

What happens if I don't apply for a content loss determination?

If a Commissioner determination does not apply, no content loss deduction will be available for the sale of:

- a specified mineral
- a prescribed mineral not sold in concentrate form or final form (e.g. blister copper)
- a prescribed mineral that is sold in concentrate form, but for which a standard quantity does not exist.

Where do I get more information?

See public ruling MRA002 for more information, including a comprehensive worked example.

2.0 Accounting for royalty

How do I account for royalty where I don't know the gross value when I lodge my return?

Public ruling MRA002 and the Mineral Resources Regulation 2013 set out the rules for determining how to account for royalty for a particular sale of prescribed or specified mineral.

Where a prescribed or specified mineral is sold during a return period (the sale period), the calculation of royalty for the sale period depends on whether:

- the sale proceeds have been received in full by the end of the sale period
- the gross value of that mineral (the actual gross value) can be determined under the terms of the contract of sale by the time the royalty return for the sale period is lodged.

Those rules are summarised in Attachment 2.

How do I account for royalty where the actual gross value can be determined, but payment is not made?

Where the actual gross value can be determined by the time the royalty return for the sale period is lodged, the royalty for the sale period must be calculated (and paid) based on the actual gross value. This is the case whether or not:

- you receive any part of the sale price in a subsequent return period
- multiple invoices are issued.

Example 6

Same facts as Example 1.

On 1 September 2021, XYZ issues an invoice to ABC. That invoice requires ABC to pay the sale price in full on or before 30 September 2021. Full payment is received on 29 September 2021.

In XYZ's royalty return for the September 2021 quarter, royalty on the sale of the concentrate is calculated with reference to the entire sale price.

Example 7

Same facts as Example 6, except payment is not received until 2 October 2022.

In XYZ's royalty return for the September 2021 quarter, which is lodged on 30 October 2021, royalty on the sale of the concentrate is calculated with reference to the entire sale price. This is the case even though the sale proceeds were not received until the following royalty return period.

Example 8

Same facts as Example 6, except the invoice requires ABC to pay 80% of the sale price on or before 30 September 2021, with the balance of 20% payable on 1 November 2021.

In XYZ's royalty return for the September 2021 quarter, royalty on the sale of the concentrate is calculated with reference to the entire sale price. This is the case even though 20% of the sale price will not be received until the following royalty return period.

How does the adjustment method work?

If, under the terms of the contract of sale, the gross value of mineral cannot be finally worked out before the royalty return for the period is required to be lodged, then royalty must be accounted for on the following basis.

- In the royalty return for the sale period, the royalty payable (the provisional royalty) must be calculated based on:
 - the gross value of the mineral, determined by reference to the information available at the time the return is lodged (the assumed gross value)
 - the applicable royalty rate for the mineral for the sale period
- In the royalty return for the period in which the actual gross value is determined (the reconciliation period):
 - the royalty payable in relation to the mineral (the actual royalty) must be calculated based on:
 - the actual gross value of the mineral
 - the applicable royalty rate for the mineral for the sale period
 - the difference between the actual royalty and the provisional royalty must be stated and any additional royalty must be paid.

Example 9

Same facts as Example 1.

Under the terms of the sale contract, XYZ is entitled to issue a provisional invoice on the date of sale, with a final invoice to be raised within 90 days following assay.

On 1 September 2021, XYZ issues a provisional invoice reflecting:

- a copper price (on the basis of the London Metal Exchange price) of US\$9,100 per tonne
- a gold price (on the basis of the London Bullion Market price) of US\$1,920 per troy ounce (US\$61.73 per gram).

Payment of the provisional invoice of 90% is made by ABC on 28 September 2021.

Following assay (which confirms that the concentrate contained 28% copper and 5 grams per tonne of gold), on 1 November 2021 XYZ issues a final invoice, reflecting:

- a copper price (on the basis of the London Metal Exchange price) of US\$9,450 per tonne
- a gold price (on the basis of the London Bullion Market price) of US\$1,800 per troy ounce (US\$57.87 per gram).

The exchange rate on all relevant dates is A\$1.00 = US\$0.70.

The royalty rates for the September 2021 quarter are 5% for copper, and 5% for gold.

Copper

As the actual gross value of the copper cannot be worked out before 30 October 2021 (i.e. the day that the return for the September 2021 quarter is required to be lodged), the royalty for the September 2021 return period must be calculated using the assumed gross value (as reflected in the provisional invoice). In doing so, the fact that only 90% of the provisional invoice has been paid when the return is lodged is disregarded.

The royalty payable for the September 2021 quarter is therefore calculated as follows:

Assumed gross value (based on 28 tonnes @ US\$9,100 (A\$13,000) per tonne)	\$364,000.00
Less assumed content loss deduction (contractual metal difference of 0.84 tonnes × assumed gross value of A\$13,000 per tonne)	\$10,920.00
Value	\$353,080.00
Royalty rate for September 2021 quarter	5.00%
Provisional royalty (payable in September 2021 quarter return)	\$17,654.00

The royalty payable for the December 2021 quarter is calculated as follows:

Actual gross value (based on 28 tonnes @ US\$9,450 (A\$13,500) per tonne)	\$378,000.00
Less content loss deduction (contractual metal difference of 0.84 tonnes × actual gross value of A\$13,500 per tonne)	\$11,340.00
Value	\$366,660.00
Royalty rate for September 2021 quarter	5.00%
Actual royalty	\$18,333.00
Less provisional royalty	\$17,654.00
Additional royalty (payable in December 2021 quarter return)	\$679.00

How are foreign exchange gains and losses taken into account?

In working out the value of a prescribed or specified mineral, the gross value must be adjusted for exchange rate changes between the date the mineral is sold and the date that payment is received. Attachment 1 of MRA002 has a detailed worked example of how the adjustment method works, including how exchange rate gains and losses are taken into account.

What if the actual gross value is more than the assumed gross value?

The difference between the actual royalty and the provisional royalty must be paid by the due date of the royalty return for the reconciliation period.

What if the actual gross value is less than the assumed gross value?

The difference between the provisional royalty and the actual royalty must be offset against any other royalty payable for the reconciliation period, unless otherwise determined by the Commissioner.

What do I need to take into account when calculating the provisional royalty and the actual royalty?

Any applicable content loss deduction or processing discount must be taken into account in both calculations, using the information available to you at the time of calculation.

How do I complete my royalty return?

We have redesigned the mineral royalty return (Form R01.6) and QRO Online to capture information about the provisional royalty and actual royalty calculations.

Details of all sales during the sale period should be entered in the 'Gross value' section of the return for the sale period (see Figures 1 and 2). For sales to which the adjustment method applies, the assumed gross value should be entered in the 'Based on assumed gross value' field. The gross value of all other sales should be entered in the 'Not based on assumed gross value' field.

Figure 1: 'Gross value' section of Form R01.6

Prescribed minerals (royalty)—mineral sold, disposed of or used in current return period						
Mineral		Cobalt	Copper	Lead	Nickel	Zinc
Royalty rate (Schedule 3, s.2 MRR) (%)	A					
Quantity sold, disposed of or used during return period (tonnes)						
Gross value						
Based on assumed gross value* (\$)	B					
Not based on assumed gross value* (\$)	C					
Total gross value	B + C = D					
Deductions						
Marketing costs (\$)	E					

Figure 2: 'Gross value' section in QRO Online

Quantity
*Sold, disposed of or used
Tonnes

Gross Value
*Based on assumed gross value \$ *Not based on assumed gross value \$ Total gross value \$

In the royalty return for the reconciliation period, the 'Finalisation of sales from prior return periods' section of the return must be completed (see Figures 3 and 4). A separate schedule must be completed for each sale period for which sales are finalised in the reconciliation period.

Figure 3: 'Finalisation of sales from prior return periods' section of Form R01.6

Prescribed minerals (royalty)—finalisation of sales from prior return periods
If sales from more than one prior return period are finalised in the current return period, attach a separate schedule for each additional period.

Mineral		Cobalt	Copper	Lead	Nickel	Zinc
Prior return period (e.g. June 2020 quarter)						
Royalty rate in prior return period (%)	A					
Quantity declared in prior return period						
Mineral sold, disposed of or used (tonnes)	B					
Value declared in prior return period						
Royalty discount	C	20%	20%	20%	20%	35%
Mineral subject to discount (\$)	D					
Mineral not subject to discount (\$)	E					
Provisional royalty paid in prior return period (\$)	$(A \times D \times (1 - C)) + (A \times E) = F$					
Final quantity						
Mineral sold, disposed of or used (tonnes)	G					
Mineral quantity difference (tonnes)	$B - G = H$					
Final value						
Mineral subject to discount (\$)	I					
Mineral not subject to discount (\$)	J					
Royalty on final value (\$)	$(A \times I \times (1 - C)) + (A \times J) = K$					
Royalty difference (\$)	$K - F = L$					
Change - private royalty quantity (tonnes)						
Change - private royalty payable (\$)	M					
Change - royalty payable to state (\$)	$L - M = N$					
Total change in private royalty payable (\$)		Total of M for each mineral				
Total change in royalty payable to state (\$)		Total of N for each mineral				

Figure 4: 'Finalisation of sales from prior return periods' section of QRO Online

Finalisation of sales

*Prior return period

▼ Jan - Mar 2020

*Mineral Type

Royalty rate in prior period

Quantity declared in prior return period
 *Mineral sold, disposed of or used
 Tonnes

Value declared in prior return period
 *Mineral subject to discount
 \$

*Mineral not subject to discount
 \$

Provisional royalty paid in prior return period
 \$

Final quantity
 *Mineral sold, disposed of or used
 Tonnes

Mineral quantity difference
 Tonnes

Change – private royalty quantity
 Tonnes

Final value
 *Mineral subject to discount
 \$

*Mineral not subject to discount
 \$

Royalty on final value
 \$

Royalty difference
 \$

Change - private royalty payable
 \$

Change - royalty payable to State
 \$

Total - Change in Royalty payable to State for Prescribed minerals
 \$

Total royalty payable to State for Prescribed minerals
 \$

In the list below, 'finalised mineral' refers to adjustment mineral sold in the particular sale period and for which the actual gross value was determined in the reconciliation period.

Each field in the 'Finalisation of sales from prior return periods' section should be completed as follows.

- **Prior return period.** Enter the details of the sale period (Form R01.6) or select the sale period from the drop-down list (QRO Online).
- **Mineral type.** (QRO Online only) This will be automatically completed.
- **Royalty rate in prior return period.** Enter the royalty rate that applied in the sale period. (This will be automatically completed in QRO Online once you click 'Calculate'.)
- **Quantity declared in prior return period—mineral sold, disposed of or used.** Enter the quantity of finalised mineral as recorded in the 'Quantity sold, disposed of or used during return period' field (Form R01.6) or 'Sold, disposed of or used' field (QRO Online) in the royalty return for the sale period.
- **Value declared in prior return period.** Enter the assumed gross value of the finalised mineral (as recorded in the 'Based on assumed gross value' field in the royalty return for the sale period), separately identifying the extent to which the processing discount was claimed for that mineral in the sale period.
- **Provisional royalty paid in prior return period.** Using the formula, calculate the provisional royalty that was paid during the sale period for the finalised mineral. (This will be automatically calculated in QRO Online.)
- **Final quantity—mineral sold, disposed of or used.** Enter the quantity of finalised mineral, as determined through the process by which the actual gross value was determined.

- **Mineral quantity difference.** Enter the difference between the 'Quantity declared in prior return period—mineral sold, disposed of or used' and the 'Final quantity—mineral sold, disposed of or used'. (This will be automatically calculated in QRO Online.)
- **Final value.** Enter the actual gross value of the finalised mineral, separately identifying the extent to which the mineral is subject to the processing discount.
- **Royalty on final value.** Using the formula, calculate the actual royalty for the mineral. (This will be automatically calculated in QRO Online.)
- **Royalty difference.** Using the formula, calculate the difference between the provisional royalty and the actual royalty. (This will be automatically calculated in QRO Online.)
- **Change—private royalty quantity.** For finalised mineral subject to private royalty, enter the difference between the quantity recorded in the 'Private royalty quantity' field in the royalty return for the sale period and the quantity as determined through the process by which the actual gross value was determined.
- **Change—private royalty payable.** Enter the amount of the royalty difference that is payable to (or recoverable from) an entity with private royalty rights in relation to the finalised mineral.
- **Change—royalty payable to state.** Using the formula, calculate the change in the royalty payable to the state on account of the finalisation of the sale and the determination of the actual gross value. (This will be automatically calculated in QRO Online.)

Are there any restrictions on using the adjustment method?

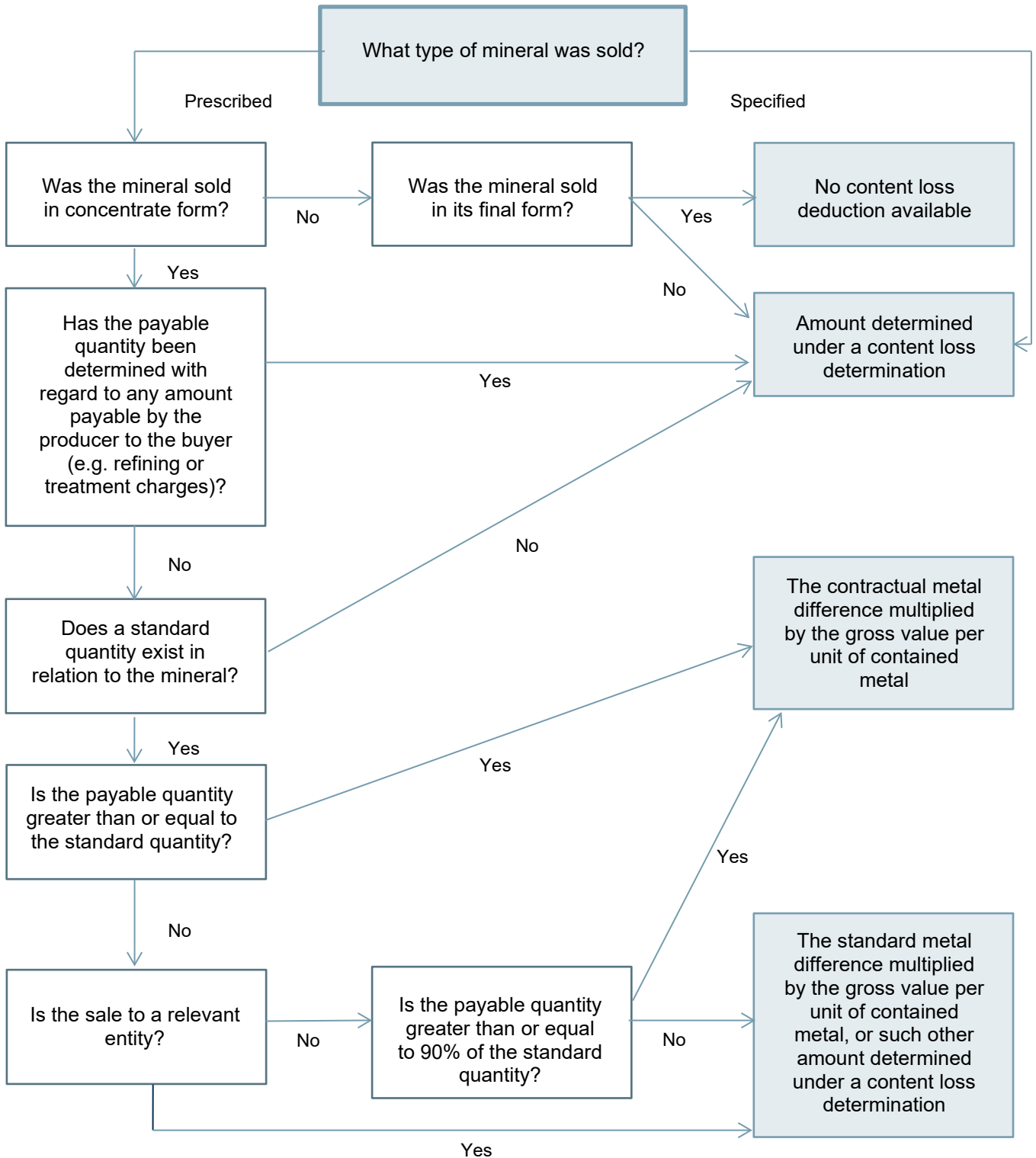
The Commissioner may give you notice advising that the adjustment method does not apply for a particular sale of mineral. In this case, you will be given information about how royalty should be calculated.

Where do I get more information?

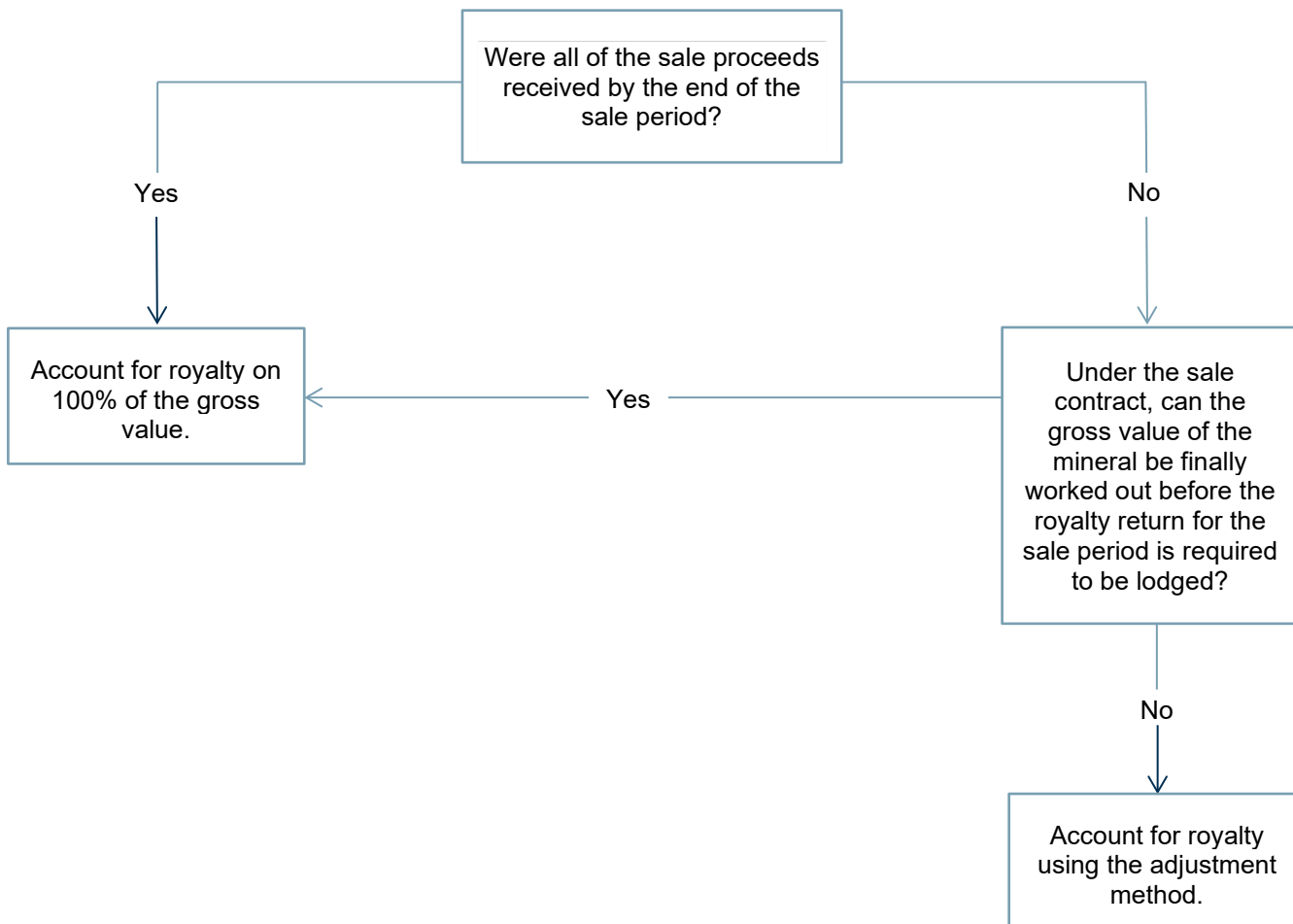
See public ruling MRA002 for more information, including a comprehensive worked example.

Attachments

Attachment A: Content loss deduction flowchart



Attachment B: Accounting for royalty





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