



Payable Metal and Revenue Issues in Relation to Royalty applying to Prescribed and Particular Minerals

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This policy applies to sales transactions for prescribed and particular minerals that occur after 31 December 2010

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Version history

Version	Date	Comments
1	04 January 2011	Policy approved to be implemented for sales occurring after 31 December 2010.
1.1	24 June 2011	Inclusion of specified reference prices for royalty purposes.

Purpose | Scope

The purpose of this policy is to provide guidance in the calculation of royalties for prescribed and particular minerals. In particular it clarifies components of the calculation relating to the loss of metal content when these minerals are processed, and how the revenue base subject to royalty should be calculated. In addition, it also provides a detailed table of metal prices and rates for prescribed minerals that shows how the variable royalty rate changes depending on the average price of the metal.

The policy aims to simplify the calculation of the revenue base that is subject to royalty, and will therefore assist companies, individuals and partnerships in relation to compliance with mineral royalty obligations to the State.

Policy

Definitions

“**Contained Metal**” means the quantity of metal contained within the mineral product sold in the form of a concentrate or metallic form which has been determined by assay.

“**Payable Metal**” means the quantity of metal contained within the concentrate for which payment will be made by the purchaser.

“**Payable Metal Deduction**” means the quantitative difference, measured in terms of unit of metal, between contained metal and payable metal.

“**Payable Metal Revenue**” means the revenue base subject to royalty but prior to other deductions such as ocean freight. Essentially, it is calculated by multiplying payable metal by the US\$ price for the mineral with the resultant value then being translated into A\$.

“**Particular Minerals**” means iron ore, manganese, molybdenum, tantalum and tungsten.

“**Prescribed Minerals**” means cobalt, copper, gold, lead, nickel, silver and zinc.

Payable Metal Quantity

This policy applies to all sales of the following minerals that are sold in a concentrate form after 31 December 2010.

- Prescribed minerals - cobalt, copper, gold, lead, nickel, silver and zinc
- Particular minerals - iron ore, manganese, molybdenum, tantalum and tungsten

Section 42(1)(c)(ii) of the Mineral Resources Regulation 2003 provides that in the case of Prescribed Minerals certain deductions are allowed against the gross value of the mineral. These deductions are based on “the amount the Minister has decided, on reasonable grounds, is the amount that should be subtracted from the gross value to allow for the loss of metal content in the processing of the particular prescribed mineral.”

The purpose of this clause is to recognise that royalty should not be assessed on reasonable losses occurring in the smelting and refining of mineral for which the producer is not paid. Sales contracts with smelters and refiners would typically specify the quantum of this adjustment, which results in the amount of metal being paid for being less than the metal contained in the concentrate.

Section 42(1)(c)(iii) of the Mineral Resources Regulation 2003 provides that in the case of other minerals, which would include Particular Minerals, certain deductions are allowed against the gross value of the mineral. These deductions are based on “any other cost the Minister has decided, on reasonable grounds, is a type of cost that should be subtracted from the gross value.”

This clause can be applied for the same purpose, that is, to recognise typical metal losses in processing, for Particular Minerals.

For the purposes of determining payable metal revenue, the deduction from gross value envisaged pursuant to section 42(1)(c)(ii) and (iii) will, subject to the deduction being reasonable, be determined as the payable metal deduction. Effectively, this means that the deduction will equate to what is provided for in the contractual terms between the producer and the customer.

For the purposes of determining what the Minister may consider reasonable the following table provides a guide for the metals copper, gold, lead, silver and zinc sold in concentrate form. Provided that the actual payable metal deduction is proximate to the figures in the table, no adjustment will be made to the payable metal deduction for royalty purposes. The table incorporates adjustments that applied for the purposes of calculating royalty for shipments prior to 1 January 2011.

For sales of concentrate containing copper, gold, lead, silver and zinc that occur prior to 1 January 2011, Policy No. 164 "Payable Metal and Revenue Issues in Relation to Royalty applying to Certain Prescribed Minerals" continues to apply, notwithstanding that finalisation of the sale may occur after 31 December 2010.

Guideline to reasonable variations between contained and payable metal						
Concentrate	Prescribed Mineral	Deduction from Contained Metal	% applied after deduction	% of Assay	Whichever is the lower	Notes
Copper	Copper	1%		96.5%	Yes	
	Silver	30 grams	90%			
	Gold	1 gram	90%			1, 2
Lead	Lead	3%		95.0%	Yes	
	Silver	100 grams	95%			
	Gold	0 grams	100%			1, 2
Zinc	Zinc	8 %		85.0%	Yes	
	Silver	100 grams	60%			
Lead/Zinc/Silver (bulk concentrate)	Lead	3%		95.0%	Yes	
	Zinc	7%		80.0%	Yes	
	Silver	100 grams	90%			

Notes:

1. This only applies if the gold is sold as part of the concentrate shipment.
2. A concentrate may not contain all the metals listed above, eg. lead with silver only.
3. It is possible that other concentrate combinations may occur (eg copper-zinc concentrate). In these instances please contact the Department for further clarification.

The following examples illustrate how particular shipments would be treated for royalty purposes

Example 1: copper concentrate shipment

Dry metric tonnes of concentrate	10,000
Copper contained metal assay	28%
Gold contained metal assay	5 grams/tonne
Payable copper	97% of contained copper
Payable gold	80% of contained gold

In the above example, the mineral that is being paid for is reasonably proximate to the adjustments noted in the above table. For example, the 97% payable quantity for copper would result in payable copper of 27.16% of the contained metal. This is very close to the 27% which would have applied for royalty purposes

prior to 1 January 2011. Similarly, for gold, the payable quantity is 4 grams per tonne of concentrate, as compared with the calculation as per the table of 3.6 grams, and no adjustment would be warranted.

It should be noted that in the above example the acceptance of the actual payable metal figures yields a slightly higher quantity. It may be the case that there are instances where the reverse is applicable. The key issue is that the calculation of payable metal does not result in the revenue base for royalty being adversely prejudiced. In this regard, the actual payable metal should be determined with reference to the likely and reasonable losses of physical metal occurring in the smelting and refining processes of the concentrate, and not as a means of effectively charging for such treatment costs, which are not deductible for royalty purposes.

Example 2: copper concentrate shipment

Dry metric tonnes of concentrate	10,000
Copper contained metal assay	28%
Gold contained metal assay	5 grams/tonne
Payable copper	80% of contained copper
Payable gold	50% of contained gold

In this instance, payable copper is effectively 22.4% of the concentrate shipped whilst payable gold is 2.5 grams per tonne, both of which would not be regarded as being proximate to what might be broadly regarded as industry norms. Accordingly, the Minister may adjust the payable metal deduction for the purposes of calculating the payable metal revenue subject to royalty.

Minerals sold in their final form, for example, copper cathode, gold in gold bullion etc. are not subject to any adjustments for payable metal.

Revenue Base and Accounting

The revenue base comprises the quantity of payable metal, (as adjusted, where necessary, if the Minister considers the payable metal deduction to be unreasonable) determined according to the above principles, multiplied by the US\$ metal price stipulated on the company's invoice and translated into A\$ on the date of cash receipt. Recognition must also be given to the proportion payable on a particular invoice eg. 1st Provisional – 90% receivable. When subsequent invoice receipts are being calculated eg. based on final invoice, the increment is to be calculated in US\$ and the result translated into A\$.

All items comprising the value of Particular Minerals and Prescribed Minerals are to be determined on a GST exclusive basis.

Example 3:

A company sells 5,000 tonnes of copper concentrate containing 28% copper and 10 grams per tonne of gold. Payable terms are 96% for copper and 90% for gold. The provisional price is US\$8,000 per tonne for copper and US\$1,200 per ounce for gold. The exchange rate at the time of payment of the provisional invoice for 90% is 0.9700. A few months later the final invoice is paid with the actual prices being US\$8,100 and US\$1,175 for copper and gold respectively, with the exchange rate at the time of receipt having declined to 0.9600. For the purposes of the example, for gold there are 31.103 grams per ounce, and ocean freight has been ignored.

Two separate revenue bases for royalty purposes will be calculated, which may overlap two quarters, as follows:

1st Transaction

US\$ calculations:

Copper = US\$8,000 * 5,000 * 28% * 96% * 90% = US\$9,676,800

Gold = US\$1,200 * 5,000 * 10 / 31.103 * 90% * 90% = US\$1,562,550

A\$ calculations:

Copper = US\$9,676,800 / 0.9700 = A\$9,976,082

Gold = US\$1,562,550 / 0.9700 = A\$1,610,876

The relevant royalty rate for the period will be applied to the above A\$ figures to determine the royalty payable for the period.

2nd Transaction

US\$ calculations:

Copper = US\$8,100 * 5,000 * 28% * 96% * 100% = \$10,886,400

Additional copper revenue = US\$10,886,400 - US\$9,676,800 = US\$1,209,600

Gold = US\$1,175 * 5,000 * 10 / 31.103 * 90% * 100% = US\$1,699,997

Additional gold revenue = US\$1,699,997 - US\$1,562,550 = US\$137,447

A\$ calculations:

Additional copper revenue = US\$1,209,600 / 0.9600 = A\$1,260,000

Additional gold revenue = US\$137,447 / 0.9600 = A\$143,174

In the case of gold sold other than through a metal concentrate sale, the revenue base will be determined by multiplying the actual quantity of gold sold, disposed of or used, by the spot price received provided that the gold is sold on the spot market.

Where gold is delivered in terms of a forward sales contract, or used as repayment of a gold loan or gold overdraft facility (or payment of sundry charges under such facilities), the revenue base will be determined as being the relevant gold quantity multiplied by the gold price on the day the transaction occurred. In this instance one would use the A\$ metal price for the particular day as included in the quarterly schedule of prices notified to entities by the Department and used for the calculation of the quarterly variable royalty rate. This in turn equates to the London Bullion Market p.m. fix price quoted on the day of delivery, translated into Australian dollars by applying the hedge settlement rate of the day.

For the purposes of determining the revenue base for all metals, no account will be taken for royalty purposes of a company's risk management procedures in relation to hedging of metal prices or hedging of exchange rate.

The payable metal revenue should be determined on a cash received basis.

Reference Source for Daily Metal Prices

The daily prices used for the calculation of the "average market price", and consequential variable royalty rates, for cobalt, copper, lead, nickel, and zinc are sourced from the London Metal Exchange's website. The relevant price is the "LME Daily Official and Settlement Prices" "Cash Seller" daily price.

For the purposes of translating the above US\$ prices into A\$ prices, the daily exchange rate is the WM/Reuters Australian Fix 10:00am rate.

Tables for Variable Rate

Tables are attached to assist with the determination of the relevant variable ad valorem rate under different average A\$ price scenarios for the prescribed minerals discussed above. The Department will advise producers of the variable royalty rate to be used each calendar quarter. The table gives effect to the formula expressed in Schedule 4 of the Mineral Resources Regulation 2003.

Rights of Appeal

Persons aggrieved by an administrative decision made under an enactment may, within 28 days of notification of the decision, apply in writing to the decision-maker for a statement of reasons under Part 4 of the *Judicial Review Act 1991*.

Legislation

Judicial Review Act 1991

Mineral Resources Act 1989

Mineral Resources Regulation 2003

Approval

Approving Authority:	Minister
Date Approved:	4 January 2011
Division Responsible:	Mining and Petroleum Industry Policy
Branch/Unit Responsible:	Royalty & Rent
Contact Officer:	Manager, Royalty & Rent
Phone Enquiries:	(07) 3237 1402

**RATES OF ROYALTY APPLYING UNDER VARIABLE RATE ROYALTY SYSTEM (PRICES IN \$A)
APPLYING FROM 1 JANUARY 2011**

Copper		Lead		Zinc		Gold		Silver		Nickel		Cobalt	
\$/Tonne	Rate	\$/Tonne	Rate	\$/Tonne	Rate	\$/Ounce	Rate	\$/Ounce	Rate	\$/Tonne	Rate	\$/Pound	Rate
-	2.50%	-	2.50%	-	2.50%	-	2.50%	-	2.50%	-	2.50%	-	2.50%
3,600.00	2.50%	1,100.00	2.50%	1,900.00	2.50%	600.00	2.50%	9.00	2.50%	12,500.00	2.50%	25.00	2.50%
3,644.80	2.52%	1,111.20	2.52%	1,920.00	2.52%	602.32	2.52%	9.06	2.52%	12,704.80	2.52%	25.10	2.52%
3,689.60	2.54%	1,122.40	2.54%	1,940.00	2.54%	604.64	2.54%	9.12	2.54%	12,909.60	2.54%	25.21	2.54%
3,734.40	2.56%	1,133.60	2.56%	1,960.00	2.56%	606.96	2.56%	9.18	2.56%	13,114.40	2.56%	25.31	2.56%
3,779.20	2.58%	1,144.80	2.58%	1,980.00	2.58%	609.28	2.58%	9.24	2.58%	13,319.20	2.58%	25.42	2.58%
3,824.00	2.60%	1,156.00	2.60%	2,000.00	2.60%	611.60	2.60%	9.30	2.60%	13,524.00	2.60%	25.52	2.60%
3,868.80	2.62%	1,167.20	2.62%	2,020.00	2.62%	613.92	2.62%	9.36	2.62%	13,728.80	2.62%	25.62	2.62%
3,913.60	2.64%	1,178.40	2.64%	2,040.00	2.64%	616.24	2.64%	9.42	2.64%	13,933.60	2.64%	25.73	2.64%
3,958.40	2.66%	1,189.60	2.66%	2,060.00	2.66%	618.56	2.66%	9.48	2.66%	14,138.40	2.66%	25.83	2.66%
4,003.20	2.68%	1,200.80	2.68%	2,080.00	2.68%	620.88	2.68%	9.54	2.68%	14,343.20	2.68%	25.94	2.68%
4,048.00	2.70%	1,212.00	2.70%	2,100.00	2.70%	623.20	2.70%	9.60	2.70%	14,548.00	2.70%	26.04	2.70%
4,092.80	2.72%	1,223.20	2.72%	2,120.00	2.72%	625.52	2.72%	9.66	2.72%	14,752.80	2.72%	26.14	2.72%
4,137.60	2.74%	1,234.40	2.74%	2,140.00	2.74%	627.84	2.74%	9.72	2.74%	14,957.60	2.74%	26.25	2.74%
4,182.40	2.76%	1,245.60	2.76%	2,160.00	2.76%	630.16	2.76%	9.78	2.76%	15,162.40	2.76%	26.35	2.76%
4,227.20	2.78%	1,256.80	2.78%	2,180.00	2.78%	632.48	2.78%	9.84	2.78%	15,367.20	2.78%	26.46	2.78%
4,272.00	2.80%	1,268.00	2.80%	2,200.00	2.80%	634.80	2.80%	9.90	2.80%	15,572.00	2.80%	26.56	2.80%
4,316.80	2.82%	1,279.20	2.82%	2,220.00	2.82%	637.12	2.82%	9.96	2.82%	15,776.80	2.82%	26.66	2.82%
4,361.60	2.84%	1,290.40	2.84%	2,240.00	2.84%	639.44	2.84%	10.02	2.84%	15,981.60	2.84%	26.77	2.84%
4,406.40	2.86%	1,301.60	2.86%	2,260.00	2.86%	641.76	2.86%	10.08	2.86%	16,186.40	2.86%	26.87	2.86%
4,451.20	2.88%	1,312.80	2.88%	2,280.00	2.88%	644.08	2.88%	10.14	2.88%	16,391.20	2.88%	26.98	2.88%
4,496.00	2.90%	1,324.00	2.90%	2,300.00	2.90%	646.40	2.90%	10.20	2.90%	16,596.00	2.90%	27.08	2.90%
4,540.80	2.92%	1,335.20	2.92%	2,320.00	2.92%	648.72	2.92%	10.26	2.92%	16,800.80	2.92%	27.18	2.92%
4,585.60	2.94%	1,346.40	2.94%	2,340.00	2.94%	651.04	2.94%	10.32	2.94%	17,005.60	2.94%	27.29	2.94%
4,630.40	2.96%	1,357.60	2.96%	2,360.00	2.96%	653.36	2.96%	10.38	2.96%	17,210.40	2.96%	27.39	2.96%
4,675.20	2.98%	1,368.80	2.98%	2,380.00	2.98%	655.68	2.98%	10.44	2.98%	17,415.20	2.98%	27.50	2.98%
4,720.00	3.00%	1,380.00	3.00%	2,400.00	3.00%	658.00	3.00%	10.50	3.00%	17,620.00	3.00%	27.60	3.00%
4,764.80	3.02%	1,391.20	3.02%	2,420.00	3.02%	660.32	3.02%	10.56	3.02%	17,824.80	3.02%	27.70	3.02%
4,809.60	3.04%	1,402.40	3.04%	2,440.00	3.04%	662.64	3.04%	10.62	3.04%	18,029.60	3.04%	27.81	3.04%
4,854.40	3.06%	1,413.60	3.06%	2,460.00	3.06%	664.96	3.06%	10.68	3.06%	18,234.40	3.06%	27.91	3.06%
4,899.20	3.08%	1,424.80	3.08%	2,480.00	3.08%	667.28	3.08%	10.74	3.08%	18,439.20	3.08%	28.02	3.08%
4,944.00	3.10%	1,436.00	3.10%	2,500.00	3.10%	669.60	3.10%	10.80	3.10%	18,644.00	3.10%	28.12	3.10%
4,988.80	3.12%	1,447.20	3.12%	2,520.00	3.12%	671.92	3.12%	10.86	3.12%	18,848.80	3.12%	28.22	3.12%
5,033.60	3.14%	1,458.40	3.14%	2,540.00	3.14%	674.24	3.14%	10.92	3.14%	19,053.60	3.14%	28.33	3.14%
5,078.40	3.16%	1,469.60	3.16%	2,560.00	3.16%	676.56	3.16%	10.98	3.16%	19,258.40	3.16%	28.43	3.16%
5,123.20	3.18%	1,480.80	3.18%	2,580.00	3.18%	678.88	3.18%	11.04	3.18%	19,463.20	3.18%	28.54	3.18%
5,168.00	3.20%	1,492.00	3.20%	2,600.00	3.20%	681.20	3.20%	11.10	3.20%	19,668.00	3.20%	28.64	3.20%
5,212.80	3.22%	1,503.20	3.22%	2,620.00	3.22%	683.52	3.22%	11.16	3.22%	19,872.80	3.22%	28.74	3.22%
5,257.60	3.24%	1,514.40	3.24%	2,640.00	3.24%	685.84	3.24%	11.22	3.24%	20,077.60	3.24%	28.85	3.24%
5,302.40	3.26%	1,525.60	3.26%	2,660.00	3.26%	688.16	3.26%	11.28	3.26%	20,282.40	3.26%	28.95	3.26%
5,347.20	3.28%	1,536.80	3.28%	2,680.00	3.28%	690.48	3.28%	11.34	3.28%	20,487.20	3.28%	29.06	3.28%
5,392.00	3.30%	1,548.00	3.30%	2,700.00	3.30%	692.80	3.30%	11.40	3.30%	20,692.00	3.30%	29.16	3.30%
5,436.80	3.32%	1,559.20	3.32%	2,720.00	3.32%	695.12	3.32%	11.46	3.32%	20,896.80	3.32%	29.26	3.32%
5,481.60	3.34%	1,570.40	3.34%	2,740.00	3.34%	697.44	3.34%	11.52	3.34%	21,101.60	3.34%	29.37	3.34%
5,526.40	3.36%	1,581.60	3.36%	2,760.00	3.36%	699.76	3.36%	11.58	3.36%	21,306.40	3.36%	29.47	3.36%
5,571.20	3.38%	1,592.80	3.38%	2,780.00	3.38%	702.08	3.38%	11.64	3.38%	21,511.20	3.38%	29.58	3.38%
5,616.00	3.40%	1,604.00	3.40%	2,800.00	3.40%	704.40	3.40%	11.70	3.40%	21,716.00	3.40%	29.68	3.40%
5,660.80	3.42%	1,615.20	3.42%	2,820.00	3.42%	706.72	3.42%	11.76	3.42%	21,920.80	3.42%	29.78	3.42%
5,705.60	3.44%	1,626.40	3.44%	2,840.00	3.44%	709.04	3.44%	11.82	3.44%	22,125.60	3.44%	29.89	3.44%
5,750.40	3.46%	1,637.60	3.46%	2,860.00	3.46%	711.36	3.46%	11.88	3.46%	22,330.40	3.46%	29.99	3.46%
5,795.20	3.48%	1,648.80	3.48%	2,880.00	3.48%	713.68	3.48%	11.94	3.48%	22,535.20	3.48%	30.10	3.48%

Copper		Lead		Zinc		Gold		Silver		Nickel		Cobalt	
\$/Tonne	Rate	\$/Tonne	Rate	\$/Tonne	Rate	\$/Ounce	Rate	\$/Ounce	Rate	\$/Tonne	Rate	\$/Pound	Rate
5,840.00	3.50%	1,660.00	3.50%	2,900.00	3.50%	716.00	3.50%	12.00	3.50%	22,740.00	3.50%	30.20	3.50%
5,884.80	3.52%	1,671.20	3.52%	2,920.00	3.52%	718.32	3.52%	12.06	3.52%	22,944.80	3.52%	30.30	3.52%
5,929.60	3.54%	1,682.40	3.54%	2,940.00	3.54%	720.64	3.54%	12.12	3.54%	23,149.60	3.54%	30.41	3.54%
5,974.40	3.56%	1,693.60	3.56%	2,960.00	3.56%	722.96	3.56%	12.18	3.56%	23,354.40	3.56%	30.51	3.56%
6,019.20	3.58%	1,704.80	3.58%	2,980.00	3.58%	725.28	3.58%	12.24	3.58%	23,559.20	3.58%	30.62	3.58%
6,064.00	3.60%	1,716.00	3.60%	3,000.00	3.60%	727.60	3.60%	12.30	3.60%	23,764.00	3.60%	30.72	3.60%
6,108.80	3.62%	1,727.20	3.62%	3,020.00	3.62%	729.92	3.62%	12.36	3.62%	23,968.80	3.62%	30.82	3.62%
6,153.60	3.64%	1,738.40	3.64%	3,040.00	3.64%	732.24	3.64%	12.42	3.64%	24,173.60	3.64%	30.93	3.64%
6,198.40	3.66%	1,749.60	3.66%	3,060.00	3.66%	734.56	3.66%	12.48	3.66%	24,378.40	3.66%	31.03	3.66%
6,243.20	3.68%	1,760.80	3.68%	3,080.00	3.68%	736.88	3.68%	12.54	3.68%	24,583.20	3.68%	31.14	3.68%
6,288.00	3.70%	1,772.00	3.70%	3,100.00	3.70%	739.20	3.70%	12.60	3.70%	24,788.00	3.70%	31.24	3.70%
6,332.80	3.72%	1,783.20	3.72%	3,120.00	3.72%	741.52	3.72%	12.66	3.72%	24,992.80	3.72%	31.34	3.72%
6,377.60	3.74%	1,794.40	3.74%	3,140.00	3.74%	743.84	3.74%	12.72	3.74%	25,197.60	3.74%	31.45	3.74%
6,422.40	3.76%	1,805.60	3.76%	3,160.00	3.76%	746.16	3.76%	12.78	3.76%	25,402.40	3.76%	31.55	3.76%
6,467.20	3.78%	1,816.80	3.78%	3,180.00	3.78%	748.48	3.78%	12.84	3.78%	25,607.20	3.78%	31.66	3.78%
6,512.00	3.80%	1,828.00	3.80%	3,200.00	3.80%	750.80	3.80%	12.90	3.80%	25,812.00	3.80%	31.76	3.80%
6,556.80	3.82%	1,839.20	3.82%	3,220.00	3.82%	753.12	3.82%	12.96	3.82%	26,016.80	3.82%	31.86	3.82%
6,601.60	3.84%	1,850.40	3.84%	3,240.00	3.84%	755.44	3.84%	13.02	3.84%	26,221.60	3.84%	31.97	3.84%
6,646.40	3.86%	1,861.60	3.86%	3,260.00	3.86%	757.76	3.86%	13.08	3.86%	26,426.40	3.86%	32.07	3.86%
6,691.20	3.88%	1,872.80	3.88%	3,280.00	3.88%	760.08	3.88%	13.14	3.88%	26,631.20	3.88%	32.18	3.88%
6,736.00	3.90%	1,884.00	3.90%	3,300.00	3.90%	762.40	3.90%	13.20	3.90%	26,836.00	3.90%	32.28	3.90%
6,780.80	3.92%	1,895.20	3.92%	3,320.00	3.92%	764.72	3.92%	13.26	3.92%	27,040.80	3.92%	32.38	3.92%
6,825.60	3.94%	1,906.40	3.94%	3,340.00	3.94%	767.04	3.94%	13.32	3.94%	27,245.60	3.94%	32.49	3.94%
6,870.40	3.96%	1,917.60	3.96%	3,360.00	3.96%	769.36	3.96%	13.38	3.96%	27,450.40	3.96%	32.59	3.96%
6,915.20	3.98%	1,928.80	3.98%	3,380.00	3.98%	771.68	3.98%	13.44	3.98%	27,655.20	3.98%	32.70	3.98%
6,960.00	4.00%	1,940.00	4.00%	3,400.00	4.00%	774.00	4.00%	13.50	4.00%	27,860.00	4.00%	32.80	4.00%
7,004.80	4.02%	1,951.20	4.02%	3,420.00	4.02%	776.32	4.02%	13.56	4.02%	28,064.80	4.02%	32.90	4.02%
7,049.60	4.04%	1,962.40	4.04%	3,440.00	4.04%	778.64	4.04%	13.62	4.04%	28,269.60	4.04%	33.01	4.04%
7,094.40	4.06%	1,973.60	4.06%	3,460.00	4.06%	780.96	4.06%	13.68	4.06%	28,474.40	4.06%	33.11	4.06%
7,139.20	4.08%	1,984.80	4.08%	3,480.00	4.08%	783.28	4.08%	13.74	4.08%	28,679.20	4.08%	33.22	4.08%
7,184.00	4.10%	1,996.00	4.10%	3,500.00	4.10%	785.60	4.10%	13.80	4.10%	28,884.00	4.10%	33.32	4.10%
7,228.80	4.12%	2,007.20	4.12%	3,520.00	4.12%	787.92	4.12%	13.86	4.12%	29,088.80	4.12%	33.42	4.12%
7,273.60	4.14%	2,018.40	4.14%	3,540.00	4.14%	790.24	4.14%	13.92	4.14%	29,293.60	4.14%	33.53	4.14%
7,318.40	4.16%	2,029.60	4.16%	3,560.00	4.16%	792.56	4.16%	13.98	4.16%	29,498.40	4.16%	33.63	4.16%
7,363.20	4.18%	2,040.80	4.18%	3,580.00	4.18%	794.88	4.18%	14.04	4.18%	29,703.20	4.18%	33.74	4.18%
7,408.00	4.20%	2,052.00	4.20%	3,600.00	4.20%	797.20	4.20%	14.10	4.20%	29,908.00	4.20%	33.84	4.20%
7,452.80	4.22%	2,063.20	4.22%	3,620.00	4.22%	799.52	4.22%	14.16	4.22%	30,112.80	4.22%	33.94	4.22%
7,497.60	4.24%	2,074.40	4.24%	3,640.00	4.24%	801.84	4.24%	14.22	4.24%	30,317.60	4.24%	34.05	4.24%
7,542.40	4.26%	2,085.60	4.26%	3,660.00	4.26%	804.16	4.26%	14.28	4.26%	30,522.40	4.26%	34.15	4.26%
7,587.20	4.28%	2,096.80	4.28%	3,680.00	4.28%	806.48	4.28%	14.34	4.28%	30,727.20	4.28%	34.26	4.28%
7,632.00	4.30%	2,108.00	4.30%	3,700.00	4.30%	808.80	4.30%	14.40	4.30%	30,932.00	4.30%	34.36	4.30%
7,676.80	4.32%	2,119.20	4.32%	3,720.00	4.32%	811.12	4.32%	14.46	4.32%	31,136.80	4.32%	34.46	4.32%
7,721.60	4.34%	2,130.40	4.34%	3,740.00	4.34%	813.44	4.34%	14.52	4.34%	31,341.60	4.34%	34.57	4.34%
7,766.40	4.36%	2,141.60	4.36%	3,760.00	4.36%	815.76	4.36%	14.58	4.36%	31,546.40	4.36%	34.67	4.36%
7,811.20	4.38%	2,152.80	4.38%	3,780.00	4.38%	818.08	4.38%	14.64	4.38%	31,751.20	4.38%	34.78	4.38%
7,856.00	4.40%	2,164.00	4.40%	3,800.00	4.40%	820.40	4.40%	14.70	4.40%	31,956.00	4.40%	34.88	4.40%
7,900.80	4.42%	2,175.20	4.42%	3,820.00	4.42%	822.72	4.42%	14.76	4.42%	32,160.80	4.42%	34.98	4.42%
7,945.60	4.44%	2,186.40	4.44%	3,840.00	4.44%	825.04	4.44%	14.82	4.44%	32,365.60	4.44%	35.09	4.44%
7,990.40	4.46%	2,197.60	4.46%	3,860.00	4.46%	827.36	4.46%	14.88	4.46%	32,570.40	4.46%	35.19	4.46%
8,035.20	4.48%	2,208.80	4.48%	3,880.00	4.48%	829.68	4.48%	14.94	4.48%	32,775.20	4.48%	35.30	4.48%
8,080.00	4.50%	2,220.00	4.50%	3,900.00	4.50%	832.00	4.50%	15.00	4.50%	32,980.00	4.50%	35.40	4.50%
8,124.80	4.52%	2,231.20	4.52%	3,920.00	4.52%	834.32	4.52%	15.06	4.52%	33,184.80	4.52%	35.50	4.52%
8,169.60	4.54%	2,242.40	4.54%	3,940.00	4.54%	836.64	4.54%	15.12	4.54%	33,389.60	4.54%	35.61	4.54%
8,214.40	4.56%	2,253.60	4.56%	3,960.00	4.56%	838.96	4.56%	15.18	4.56%	33,594.40	4.56%	35.71	4.56%

Copper		Lead		Zinc		Gold		Silver		Nickel		Cobalt	
\$/Tonne	Rate	\$/Tonne	Rate	\$/Tonne	Rate	\$/Ounce	Rate	\$/Ounce	Rate	\$/Tonne	Rate	\$/Pound	Rate
8,259.20	4.58%	2,264.80	4.58%	3,980.00	4.58%	841.28	4.58%	15.24	4.58%	33,799.20	4.58%	35.82	4.58%
8,304.00	4.60%	2,276.00	4.60%	4,000.00	4.60%	843.60	4.60%	15.30	4.60%	34,004.00	4.60%	35.92	4.60%
8,348.80	4.62%	2,287.20	4.62%	4,020.00	4.62%	845.92	4.62%	15.36	4.62%	34,208.80	4.62%	36.02	4.62%
8,393.60	4.64%	2,298.40	4.64%	4,040.00	4.64%	848.24	4.64%	15.42	4.64%	34,413.60	4.64%	36.13	4.64%
8,438.40	4.66%	2,309.60	4.66%	4,060.00	4.66%	850.56	4.66%	15.48	4.66%	34,618.40	4.66%	36.23	4.66%
8,483.20	4.68%	2,320.80	4.68%	4,080.00	4.68%	852.88	4.68%	15.54	4.68%	34,823.20	4.68%	36.34	4.68%
8,528.00	4.70%	2,332.00	4.70%	4,100.00	4.70%	855.20	4.70%	15.60	4.70%	35,028.00	4.70%	36.44	4.70%
8,572.80	4.72%	2,343.20	4.72%	4,120.00	4.72%	857.52	4.72%	15.66	4.72%	35,232.80	4.72%	36.54	4.72%
8,617.60	4.74%	2,354.40	4.74%	4,140.00	4.74%	859.84	4.74%	15.72	4.74%	35,437.60	4.74%	36.65	4.74%
8,662.40	4.76%	2,365.60	4.76%	4,160.00	4.76%	862.16	4.76%	15.78	4.76%	35,642.40	4.76%	36.75	4.76%
8,707.20	4.78%	2,376.80	4.78%	4,180.00	4.78%	864.48	4.78%	15.84	4.78%	35,847.20	4.78%	36.86	4.78%
8,752.00	4.80%	2,388.00	4.80%	4,200.00	4.80%	866.80	4.80%	15.90	4.80%	36,052.00	4.80%	36.96	4.80%
8,796.80	4.82%	2,399.20	4.82%	4,220.00	4.82%	869.12	4.82%	15.96	4.82%	36,256.80	4.82%	37.06	4.82%
8,841.60	4.84%	2,410.40	4.84%	4,240.00	4.84%	871.44	4.84%	16.02	4.84%	36,461.60	4.84%	37.17	4.84%
8,886.40	4.86%	2,421.60	4.86%	4,260.00	4.86%	873.76	4.86%	16.08	4.86%	36,666.40	4.86%	37.27	4.86%
8,931.20	4.88%	2,432.80	4.88%	4,280.00	4.88%	876.08	4.88%	16.14	4.88%	36,871.20	4.88%	37.38	4.88%
8,976.00	4.90%	2,444.00	4.90%	4,300.00	4.90%	878.40	4.90%	16.20	4.90%	37,076.00	4.90%	37.48	4.90%
9,020.80	4.92%	2,455.20	4.92%	4,320.00	4.92%	880.72	4.92%	16.26	4.92%	37,280.80	4.92%	37.58	4.92%
9,065.60	4.94%	2,466.40	4.94%	4,340.00	4.94%	883.04	4.94%	16.32	4.94%	37,485.60	4.94%	37.69	4.94%
9,110.40	4.96%	2,477.60	4.96%	4,360.00	4.96%	885.36	4.96%	16.38	4.96%	37,690.40	4.96%	37.79	4.96%
9,155.20	4.98%	2,488.80	4.98%	4,380.00	4.98%	887.68	4.98%	16.44	4.98%	37,895.20	4.98%	37.90	4.98%
9,200.00	5.00%	2,500.00	5.00%	4,400.00	5.00%	890.00	5.00%	16.50	5.00%	38,100.00	5.00%	38.00	5.00%