APPENDIX B

SMELTING AND REFINING TERMS

May 28, 2012

REVIEW OF POTENTIAL SMELTER TERMS FOR KSM MINE

On March 11, 2010 a report was issued by Butterfield Mineral discussing the saleability of the copper concentrate expected to be produced by the KSM mine and estimating the smelter terms which might apply. The mine may commence operation in Year 2016 and the expected analysis is now estimated to be:

Copper 23-26%	Iron 23-30%
Sulphur 30-34%	Arsenic 0.9%
Bismuth 0.01%	Antimony 0.07%
Mercury <10 ppm	Cobalt 0.76%
Fluorine <210 ppm	Nickel <240 ppm
Selenium 150 ppm	Gold 40-50 g/dmt
	Silver 150-200 g/dmt

The March 11, 2010 report recommended that the concentrate be sold to Asian smelters, preferably located in Japan and/or Korea and this continues to be the recommendation for reasons of freight expense and the expected percentage payment for gold. The copper smelters in those two countries import in aggregate more than 5 million tonnes of copper concentrate annually so should have room to absorb a fresh 350,000 tonnes. However, so as to not surprise the seven smelters there KSM should make contact with them as soon as a production decision is made.

NATURE OF THE ASIAN CUSTOM SMELTING MARKET

This is discussed in the 2010 report and has not changed significantly. The Asian Benchmark still exists and is an appropriate guideline for those making term annual or multiyear contracts with Japanese or Korean copper smelters.

Sales contracts made with Chinese, Indian or Philippine smelters may not follow the Benchmark numbers as closely as those made with Japanese or Korean smelters but are still significantly influenced by them.

FACTORS WHICH AFFECT SMELTER TERMS

1. Balance of Supply and Demand for concentrate. Since Year 2006 the mines have been unable to produce as much concentrate as the custom smelters have wanted to receive. The underlying reasons are that many mines are ageing so their remaining reserves are lower in grade than

before, strikes (Grasberg), environmental restrictions (Prosperity), governmental regulations and delays in start-ups. These difficulties seem unlikely to go away as time proceeds, which suggests that concentrate may remain in short supply.

2. The price of sulphuric acid can have a profound effect on smelting economics since smelting one tonne of copper concentrate generates one tonne of sulphuric acid. The price per tonne in Japan is currently around $80 but it has been as low as $20 and as high as $400. The largest demand is for the production of fertilizers, for which demand is expected to grow as world population increases and the demand for food grows. Accordingly, acid production may be more rewarding for the smelters as time proceeds, helping to smelter charges low.
3. Certain costs that a smelter must pay are rising, particularly the cost of oil and electric power and neither of these trends seem likely to reverse. Also, there is general inflation which in the U.S.A. was 0.96% in 2010 and 1.1% in 2011 for a total of 2.06% over two years. Because of their dependence on oil and electric power the direct costs of smelting copper concentrate will increase more than the GDP deflator index suggests and 5% annually for the next 5 years may be a reasonable guess.

   These factors offset each other. Accordingly, the projection is that the terms in Asian markets will remain the same as estimated in the March 11, 2010 report, in other words $75 U.S. per dmt for the Treatment Charge and 7.5 cents per pound for the Refining Charge, these numbers now expressed in Year 2012 currency value

No changes are recommended to the other terms predicted in the March 11, 2010 report. In other words the percentages of copper, gold and silver to be paid for and the penalty schedule to remain the same as indicated in that report.

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Jack Butterfield

Butterfield Mineral

BUTTERFIELD MINERAL CONSULTANTS LTD.

804 Younette Drive
West Vancouver, B.C.
Canada V7T 159

Telephone: (604) 926-1053
Fax: (604) 913-1053
Email: jabutter@shaw.ca

SALEABILITY AND SALES TERMS FOR MOLYBDENITE CONCENTRATE FROM KSM PROJECT

INTRODUCTION

Seabridge Gold has engaged Wardrop Engineering to prepare a pre-feasibility report on its KSM Project located in northwest British Columbia. The mine may commence operation in Year 2017 at a rate of 120,000 tonnes of ore daily and is expected to generate three products, namely copper concentrate, molybdenite concentrate, and dore metal. Wardrop has engaged Butterfield Mineral to review the saleability and the sales terms for the molybdenite concentrate and for the copper concentrate. This report deals only with molybdenite concentrate. Copper concentrate is discussed in a separate report.

The annual production of molybdenite concentrate is expected to average 2,000 dry metric tonnes (dmt). A full detailed analysis is not yet available, but the short expected analysis containing the three most important ingredients is:

Molybdenum	50% dry basis
Copper	0.2%
Rhenium	0.1-0.2%

This is an unusual analysis for a co-product molybdenite concentrate. The molybdenum content is normal, but the copper content is considerably below the normal level of 0.8-1.2%, and the rhenium content is considerably higher than in most other co-product concentrates.

HOW ARE CO-PRODUCT MOLYBDENITE CONCENTRATES MARKETED?

The range of uses of molybdenum greatly affects the manner in which molybdenite concentrates are marketed. Some 75-80% of all molybdenum is consumed as an alloying agent in steel. It is either added to molten steel as molybdic oxide or as ferromolybdenum. When ferromolybdenum is to be produced, the starting materials are molybdic oxide and iron so all the molybdenum that is consumed by steel mills must go through the oxide stage. Most of the other uses of molybdenum also require that molybdic oxide be an intermediary product. For example,

804 Younette Drive
West Vancouver, B.C.
Canada V7T 1S9

Telephone: (604) 926-1053
Fax: (604) 913-1053
Email: jabutter@shaw.ca

a significant amount of molybdenum is used to produce the pigment contained in the paint known as Molydate Orange, which is a mixture of molybdenum salts and lead chromate. Similarly, the molybdenum catalyst that is used to accelerate the removal of sulphur from oil in the refining process is produced from molybdic oxide. The only application of significance that does not require molybdenite concentrate to be roasted is purified molybdenum disulphide, which is used as a lubricant.

For these reasons KSM concentrate will surely have be roasted. Seabridge will need to choose from one of the following three options:

- build its own roaster,
- arrange for toll roasting in a roaster owned by an outside party or
- sell its concentrate outright to a party which has roasting space available.

With an annual production of only 2,000 dmt, building its own roaster at or near the KSM property is not likely to be economic. In that case Seabridge will need to look for toll roasting space, or a roaster that is ready to buy its molybdenite concentrate.

Over the past 45 years the molybdenum market has changed considerably. In 1965 annual world demand was only some 80 million pounds molybdenum content of which about 50 million pounds was produced by Climax Molybdenum. A modest amount of primary concentrate was available from other mines so of the total concentrate supply, 70-75% was primary, having very low copper content, and only 25-30% of was co-product concentrate, having a copper content of about 1%. Although the steel mills have never liked copper content in steel their limits on copper levels in steel then were not as severe as now. For these reasons the co-product material being produced could usually be blended in with primary molybdenite concentrate before roasting or during roasting. With stricter standards on copper impurity in steel, and with some 75% of worldwide molybdenite concentrate now being generated as a co-product copper levels contained in concentrate have become a major issue. Accordingly, molybdenite concentrate containing more than 0.2% copper is difficult to sell.

To rectify the copper content problem most producers depress the copper level during flotation by the use of cyanide, and some have also installed leaching circuits based on the Brenda Process (sometimes called the Noranda Process). The process uses a ferric chloride pressure leach which picks up most of the copper and normally reduces the copper content to less than 0.2%.

804 Younette Drive
West Vancouver, B.C.
Canada V7T 1S9

Telephone: (604) 926-1053
Fax: (604) 913-1053
Email: jabutter@shaw.ca

There are several large and medium-sized roasters which might be candidates to toll or purchase the KSM concentrate. The largest single roasting installation appears to be owned by Molymet in Chile, which is jointly owned by several of the copper producers there. The Jinduicheng roaster in China is known to be large and may have to import concentrate to satisfy the rapidly growing local demand. In the United States the Langeloth roasters near Pittsburgh have a capacity of 40 million pounds molybdenum content, and the Phelps Dodge roasters at Fort Madison, Iowa, have a reported annual capacity of 38 million pounds. The capacity of the roasters near Rotterdam, Holland (originally built by Climax Molybdenum) is some 20 million pounds molybdenum annually. In Belgium the SADACI roaster, now owned by the Chilean Molymet group, has been expanded to a capacity of more than 20 million pounds annually. Locally, the roaster at the Endako Mine continues to operate. Several of these roasters may be interested in the KMS material.

The significant level of rhenium expected in the KMS concentrate complicates the marketing. Today, with the price of refined rhenium being approximately $3,000 per pound, the value of the 0.1-0.2% expected to be contained in the KSM concentrate is $6,600 to $13,200 per dry metric tonne (dmt), which is not much short of the value of the contained molybdenum, which may be $11,000-$22,000 per dmt. Clearly, attempting to find a roaster that can recover rhenium and is prepared to pay for it is important.

The presence of rhenium in some co-product molybdenite concentrates has been known for decades but historically it has not been paid for even though it has sometimes been recovered. The Molymet roaster in Chile and the Rotterdam roaster are reported to be making recovery as well as two roasters in China, one being the roaster at Jinduicheng and the being the roaster at the Jianxi copper smelter. It is also reported to be recovered or refined in Kazakhistan, which is exporting refined rhenium. Although rhenium is refractory some of its oxides are volatile and fume off in the roasting process after which they can be captured in a baghouse. The oxides are soluble in water and this is reported to permit a method of separation from the other dust materials. Once in aqueous solution recovery and refinement of the rhenium is possible, but is complex and requires several stages, and loss of rhenium is reported to occur. After accounting for the rhenium that is not vaporized in the roaster, the dust that is not captured in the baghouse, and the losses in the further processing, the recovery of rhenium is probably in the range of 45-65%.

Demand for rhenium appears to be increasing, mainly for use in superalloys, and this use has been causing the price to rise. For this reason one consumer believes that some roasters may

804 Younette Drive
West Vancouver, B.C.
Canada V7T 1S9

Telephone: (604) 926-1053
Fax: (604) 913-1053
Email: jabutter@shaw.ca

be ready to pay for rhenium when the content is high. But, because only a few roasters recover rhenium KSM should not expect any of the roasters to pay for the percentage that they recover. As a guess, they might pay for 30% of the agreed content. This assumes the demand will remain strong, which seems probable.

The payment for the molybdenum content will be much higher than for rhenium. The treatment charge varies with the molybdenum price and the supply and demand for the available roaster space. When the price for molybdic oxide reached $30 per pound two years ago the treatment charges increased to $3.00 per pound, but this was unusual.

Molybdic Oxide is in the process of being listed for trading on the London Metal Exchange and this price will probably soon be used as the general reference for the buying and selling of commercial molybdenum products.

EXPECTED TERMS FOR KSM MOLYBDENITE CONCENTRATE

Receive payment for 99.0% of the agreed molybdenum content at the London Metal Exchange price less a treatment charge of $2.00 per pound.

Also receive payment for 30% of the agreed rhenium content at the prevailing price.

From the sum of these payments deduct a penalty if the copper content exceeds 0.1%. The penalty may be 30 cents per pound of the agreed molybdenum content for each 0.1% excess.

Payment terms are negotiable, but would be on average 20 days after delivery of the concentrate to a major roaster or to a port close to a major roaster.

The above money numbers are all expressed in Year 2010 value US currency.

Jack Butterfield

BUTTERFIELD MINERAL CONSULTANTS LTD.

804 Younette Drive
West Vancouver, B.C.
Canada V7T 1S9

Telephone: (604) 926-1053
Fax: (604) 913-1053
Email: jabutter@shaw.ca

SMELTING AND REFINING TERMS FOR KSM COPPER CONCENTRATE

INTRODUCTION

Seabridge Gold has engaged Wardrop to prepare a pre-feasibility report on its KSM project located in northwest British Columbia. The mine may commence operation in Year 2016 at a rate of 120,000 tonnes of ore daily and is expected to generate three products, namely copper concentrate, molybdenite concentrate and dore metal. Wardrop has engaged Butterfield Mineral to estimate what the smelting and refining terms might be for the copper concentrate and what they may be for the molybdenite concentrate. This report deals only with the copper concentrate. Molybdenite concentrate will be reviewed in a separate report.

The annual quantity of the copper concentrate to be produced is estimated at 350,000 dry metric tonnes and the chemical analysis is expected to be:

Copper	24-26%
Iron	31%
Sulphur	34%
Arsenic	0.09%
Antimony	0.07%
Bismuth	0.01%
Mercury	<1 ppm
Cobalt	76 ppm
Nickel	240 ppm
Fluorine	210 ppm
Selenium	102 ppm
Molybdenum	0.23%
Gold	50 g per dry metric tonne (dmt)
Silver	90 g per dmt

804 Younette Drive
West Vancouver, B.C.
Canada V7T 1S9

Telephone: (604) 926-1053
Fax: (604) 913-1053
Email: jabutter@shaw.ca

COPPER CONCENTRATE MARKETED FROM BRITISH COLUMBIA

Although there are a very few exceptions, almost all copper-gold-silver concentrates are delivered to conventional pyro-metallurgical smelters for recovery of the payable values. Several companies have attempted to develop leaching processes, with some success. However, except where special problems such as high impurity levels exist, the traditional pyro-metallurgical smelters dominate the concentrate process. They are efficient and make excellent recoveries of the three values usually contained in sulphide concentrates, as follows:

Copper	97-98%
Gold	98-99%
Silver	96-98%

The cost of processing a dry metric tonne of copper concentrate in a conventional copper smelter is less than processing a dry metric tonne of zinc concentrate in a zinc smelter or lead concentrate in a lead smelter. In other words, the efficiencies of today's copper smelters are such that producers of clean copper concentrates have no reason to investigate alternative methods of processing.

In the recent past, several companies have examined the economics of constructing a copper smelter in British Columbia. All of them have concluded that such a move would be uneconomic, the principal reasons being that there is insufficient nearby market for the sulphuric acid that would be produced, and there is not enough local demand for the refined copper that would be produced. Major freight expenses would be incurred to deliver the products of smelting to the areas where large quantities are consumed (such as China, India, Eastern Canada and the Eastern United States).

Accordingly, Seabridge Gold will almost surely have to deliver its copper concentrate to a custom smelter. Custom space is available in Central and Eastern Canada (Hudson Bay and Noranda smelters) and some producers in British Columbia quite properly deliver there. But the majority of concentrate from this province has for the past 40 years been delivered to Asian smelters. These smelters will be more attractive to Seabridge than the Canadian smelters because of the proximity of the KSM property to the Pacific Ocean and because some of the Asian smelters pay for a higher percentage of gold than do the Canadian smelters. For these reasons the copper mines in British Columbia that are close to the Pacific Ocean almost always receive a higher FOB mine return when shipping their concentrates to Asian markets rather than to domestic or U.S. smelters. Accordingly, this report will examine only the Asian custom smelting markets.

There are five East Asian countries that have custom smelters and to which Seabridge might wish to consider selling their concentrates. There are Japan, South Korea, India, China, and the Philippines. All of them operate efficient smelters and all or most of them would probably be

804 Younette Drive
West Vancouver, B.C.
Canada V7T 1S9

Telephone: (604) 926-1053
Fax: (604) 913-1053
Email: jabutter@shaw.ca

willing to conclude a term contract with Seabridge shaped to meet the needs of a large new mine.

Of the above five countries, probably the best targets for Seabridge are Japan and Korea. They are closer to our west coast ports than the smelters in India, China and the Philippines. Since the mine pays the freight to the smelter port, this would be a direct saving. Also the receiving ports in India and China are sometimes congested. In addition, a greater number of bulk ore carriers move to Japanese and Korean ports than to the Indian, Chinese or Philippine ports so that they offer better flexibility.

NATURE OF THE ASIAN CUSTOM SMELTER MARKETS

The capacity of the East Asian custom smelters to receive imports of copper concentrate is the largest in the world and is growing quickly mainly because of the needs of China, India and South Korea for copper. In China alone demand for copper contained in concentrate is approaching 2 million tonnes annually. The five main custom smelting countries referred to above import their concentrates mainly from Chile, Peru, Australia, Indonesia, Canada and the United States.

The smelting terms to apply are generally negotiated half-yearly and can vary substantially from one period to the next. Usually the first sellers to reach a conclusion are Broken Hill Proprietary and Freeport Indonesia. The terms which these large shippers conclude become what is called the Asian Benchmark and this benchmark is used as a guideline for the other sellers.

Sometimes a smelter buyer and a concentrate seller will conclude a contract of duration two to five years with the understanding that the terms to apply for each half-year period will be the Asian Benchmark terms. This may be the shape of contract which could be of interest to Seabridge.

Over the past 40 years copper smelters have become significantly more efficient for two reasons, the first being the increases in capacity. An installation with an annual capacity of 100,000-200,000 tonnes of refined copper was considered a major smelter in 1970, but is considered small now when many smelters produce more than 400,000 tonnes annually, and one smelter in India is studying an expansion to 800,000 tonnes refined copper capacity. The second reason is that most smelters now inject oxygen into the smelting furnace. This speeds up the smelting process dramatically. As an example, two smelters in Japan which installed furnaces with a rated monthly capacity of 10,000 tonnes of copper are now operating them at almost 40,000 tonnes monthly. These factors have led to smelters almost everywhere reducing their Treatment and Refining Charges.

804 Younette Drive
West Vancouver, B.C.
Canada V7T 1S9

Telephone: (604) 926-1053
Fax: (604) 913-1053
Email: jabutter@shaw.ca

Appendix 1 reviews the Asian Benchmark terms from 1987 to the end of 2009. Although the numbers show substantial year to year variations, the downward trends in the charges are clear and a reversal of the general trend is not anticipated.

Factors other than the two mentioned in the previous paragraph also affect smelter terms. An important item is the price of sulphuric acid, which almost all smelters produce from the sulphur dioxide gas generated in the smelting furnace. Each dmt of sulphide concentrate generates about one tonne of acid. For this reason when the acid market is poor, smelters will try to increase their charges, but when the acid market is strong the opposite is true. Also, the balance of supply and demand for concentrate will affect the charges. Most analysts are expecting that concentrate may be in short supply for the next few years mainly because of the rapid growth in copper requirements in China, India and Korea.

The total refining charges show an abrupt change at the end of calendar year 2006 because of the sudden elimination of price participation at that time. Price participation allowed for an increase in refining charges when the copper price was favourable. Specifically it increased the refining change by 10% of any excess copper price over 90 cents per pound. Similarly, it reduced the refining charge by 10% of any deficiency when the copper price was less than 90 cents per pound. This was a favourable clause for the smelters in most years and was especially in 2006 when the copper price was high. The experience of 2006 was so drastic that the sellers have refused to pay price participation since then. This change would not have been possible without the improved efficiencies of the smelters.

Appendix 1 shows that the Asian Benchmark terms for the past three years have been very sharp with the numbers averaging $57.57 per dmt for the Treatment Charge and 5.63 cents per pound of copper paid for the Refining Charge (all expressed in Year 2010 value US currency). These low terms may not have been possible had the price for sulphuric acid not been at record levels for part of the period. Accordingly the future terms may be a little higher and using $75 per dmt of concentrate for the Treatment Charge and 7.5 cents be per pound of copper for the Refining Charge is recommended.

ESTIMATED SMELTER TERMS FOR THE PERIOD 2016 TO 2026

For copper concentrate delivered C.I.F. to smelter ports in Japan or Korea the terms may be:

Receive payment for:

1. The agreed copper content at the London Metal Exchange price for Grade A copper less a Refining Charge of 7.5 Cents per pound.

2. The agreed gold content to be paid for under the following schedule:

804 Younette Drive
West Vancouver, B.C.
Canada V7T 1S9

Telephone: (604) 926-1053
Fax: (604) 913-1053
Email: jabutter@shaw.ca

Gold Content gram per dmt	Payment Schedule %
< 1	No Payment
1 to 3	90
3 to 5	93
5 to 7	95
7 to 10	96.5
10 to 20	97
20 to 30	97.5
Over 30	97.75

The price to be the London Fixing price for gold less a Refining Charge of $8 per troy oz.

3. Silver, if over 30g per dmt are present, receive payment for 90% of the agreed content at the London Settlement price less a Refining Charge of 50 cents per troy oz.

From these three payments deduct a Treatment Charge of $75 per dmt. Also, deduct penalties, if applicable under the following schedule:

Arsenic	$3.00 per 0.1% over 0.2%
Antimony	$3.00 per 0.1% over 0.1%
Bismuth	$1.00 for each 0.1% over 0.05%
Zinc	$1.50 per 1.0% over 3.0%
Lead	$1.50 per 1% over 1%
Nickel plus Cobalt	$0.30 per 0.1% over 0.5% combined
Chlorine	$0.50 per 0.01% over 0.03%
Fluorine	$0.125 per 10ppm over 0.002%
Mercury	$0.20 per 10ppm over 5ppm
Al203	$5.00 per 1.0% over 3%

All of the numbers related to the smelter terms are expressed in year 2010 US currency values.

A concern for the receiving smelters may be relatively low copper content of the KSM concentrate. They generally like to see the copper content at higher than 25%.

804 Younette Drive
West Vancouver, B.C.
Canada V7T 1S9

Telephone: (604) 926-1053
Fax: (604) 913-1053
Email: jabutter@shaw.ca

A normal payment schedule would be for the seller to receive a 90% provisional payment 7 days after arrival of the vessel at the smelter port. The amount of the payment would be based upon the estimated weight of the concentrate loaded on the vessel, the assays for copper, gold and silver based on sample tables during loading, and the latest market prices for copper, gold and silver. The final 10% would be paid as soon as all the relevant data is known, such as final weights, assays and final prices.

Jack Butterfield

BUTTERFIELD MINERAL CONSULTANTS LTD.

804 Younette Drive
West Vancouver, B.C.
Canada V7T 1S9

Telephone: (604) 926-1053
Fax: (604) 913-1053
Email: jabutter@shaw.ca

APPENDIX 1

ASIAN BENCHMARK SMELTING AND REFINING TERMS

Year	GDP Deflator Index (1992 = 100)	Actual Treatment Charge US per dmt	Actual Refining Charge c/pound	Treatment Charge in 2010 Current Value US per dmt
1987	83.10	40.00	7.5	70.54
1988	86.10	55.00	7.5	93.61
1989	89.70	70.00	9.0	114.36
1990	93.60	70.00	9.0	109.60
1991	97.30	72.50	9.0	109.20
1992	100.00	100.00	10.0	100.00
1993	102.60	100.00	10.0	142.84
1994	105.10	85.00	8.5	118.52
1995	107.80	72.00	7.2	97.88
1996	110.20	95.00	9.5	126.34
1997	112.40	105.00	10.5	136.90
1998	113.75	99.00	9.9	127.55
1999	115.34	67.00	6.7	85.13
2000	117.99	69.00	6.9	85.70
2001	121.18	75.00	7.5	90.70
2002	123.60	70.00	7.0	83.00
2003	125.95	58.00	5.8	67.47
2004	129.10	43.00	4.3	48.81
2005	132.72	85.50	8.5	94.41
2006	136.70	95.00	9.5	101.18
2007	140.80	60.00	6.0	62.45
2008	143.61	45.00	4.5	45.92
2009 (est.)	145.05	60.00	6.0	60.60
2010 (est.)	146.55			

BUTTERFIELD MINERAL CONSULTANTS LTD.

804 Younette Drive
West Vancouver, B.C.
Canada V7T 1S9

Telephone: (604) 926-1053
Fax: (604) 913-1053
Email: jabutter@shaw.ca

APPENDIX 1

REFINING NUMBERS IN US CURRENCY

Base Refining Charge c. per pound	Price c/per pound	Price Participation Factor c/per pound	Total Actual Refining Charge c/per pound	Refining Charge in 2010 Value
7.5	80.10	(1.0)	6.5	11.46
7.5	118.10	2.8	10.3	17.53
9.0	129.10	3.9	12.9	16.32
9.0	120.72	3.1	12.1	21.05
9.0	106.05	1.6	10.6	16.60
10.0	103.54	1.4	12.6	18.40
10.0	86.80	(0.3)	9.7	13.67
8.5	104.66	1.5	10.0	13.95
7.2	133.20	4.3	11.5	15.63
9.5	103.89	1.4	10.9	14.50
10.5	103.24	1.3	11.8	15.38
9.9	74.97	(1.5)	8.4	10.85
6.7	71.38	(1.9)	4.8	6.10
6.9	82.28	(0.8)	6.1	7.57
7.5	71.55	(1.8)	5.7	6.89
7.0	69.70	(2.0)	5.0	5.93
5.8	80.73	(0.9)	4.9	5.70
4.3	130.00	4.0	8.3	9.42
8.5	167.10	7.7	16.2	17.89
9.5	305.30	21.5	31.0	33.23
6.0	323.25	0.0	6.0	6.25
4.5	315.32	0.0	4.5	4.59
6.0	234.16	0.0	6.0	6.06

The average treatment charge for the first 10 years when expressed year 2010 US currency is $108.29 per dmt. The average treatment charge for the second 10 years is $92.08 per dmt. The average for the last 3 years is $56.32 per dmt.

The average refining charge including price participation of the past 10 years is 15.91 units per pound when expressed in year 2010 value US currency. The average for the second 10 years is 11.90 units per pound. The average for the last 3 years is 5.63 cents per pound. The decline in the real charges in both the treatment charge and the refining charge is significant and is mainly due to the improved efficiency of smelters.