



Ryan's Notes

Ferrous and Nonferrous News and Prices

Volume 21, No. 22

June 1, 2015

Ferroalloys

Moly prices edge up in the US and Europe

With similar price tags for molybdenum products in the western markets, both, the US and European markets reported similar bearish sentiments, as spot demand remains disappointing. US buyers seemed eager to locate low month-end prices after postponing buys earlier in the month while European prices keep an anecdotal trend, oscillating in varying directions week on week.

European ferromolybdenum prices inched up slightly early last week as some sources noted that FeMo would keep pace with the paltry spread between moly oxide prices. Conversion margins remain squeezed, and even though demand is limited, sellers continue to seek slightly higher prices when compared to the week prior. The price for European ferromolybdenum is currently \$19.40-19.70 per kg, DDP, compared to \$19.20-19.60 per kg the week prior. European moly oxide prices have remained on a static trend week on week, holding at \$7.70-7.90 per lb, DDP.

US ferromolybdenum prices widened earlier in the week, with the bottom end edging down to \$8.45 per lb, as some sellers reportedly competed for consumers business. Despite the slight downturn, prices recovered a bit, ending the week at \$8.50-9.30 per lb, ex-warehouse; no change week on week. Consumer interest transitioned from truckload volume to more manageable half truckload lots and below, as sellers sought to hold prices level.

US molybdenum oxide prices also rebounded slightly by week's end after losing some ground earlier in the week. Truckload and partial truckload volumes attracted price tags of around \$7.50-7.60 per lb earlier in the week, but seemed slightly higher between \$7.55-7.85 per lb at week's end. Despite a few consumer buys, the bulk of interest has come from trade. The price for molybdenum oxide in the US is presently \$7.55-7.85 per lb, ex-warehouse; a slight rise for price earlier in the week yet still below the \$7.60-7.85 per lb range seen late last week.

EU FeV prices slide, US unchanged

With no change in downstream demand to sustain the recent increase in Europe, prices look to have corrected downward as spot demand has been scarce. Prices seemed to have lost their upward momentum this past week even though Treibacher has essentially stepped back from the spot market. The company reportedly will focus its FeV production to meet contractual requirements after Evraz Highveld, one of its major suppliers of

vanadium bearing slag, indicated that it may remain in business rescue for more than 18 months. Despite the added news, sources agreed that the recent price rise resulted from speculation and that without improved utilization rates, potential price increases should remain tempered.

After a week of diverging offers and bids in Europe, sources noted that the market settled in a wait-and-see mode with both, buyers and sellers alike, willing to postpone business in hopes of clarity in the near term. With a notable pullback in demand, buyers seemed able to bid down prices even with some small volume orders. The prices for ferrovanadium in Europe dipped to \$22.60-23.30 per kg, DDP, compared to \$23.00-24.00 per kg the week prior.

Ryan's Notes

Ferroalloys Europe

8 - 9 June 2015, Zürich Marriott Hotel, Zürich, Switzerland

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US ferrovanadium prices remained stable week on week, after slight increases the week prior. Sources seem divided on the market's direction as some anticipate pronounced increases due to possible supply constraints, while others expect tempered changes pointing to weak utilization rates and unchanged market fundamentals. Despite these varying opinions, the US domestic spot market saw some activity as participants seek to understand the market's direction.

A near half-truckload consumer buy was reportedly concluded near \$9.50-9.55 per lb, ex warehouse, while a 1 mt deal was booked at \$10.15 per lb, ex-warehouse to a consumer. Inter-merchant business was also reported for about 3 mt slightly above \$10.50 per lb, ex-warehouse. The price for US ferrovanadium held largely unchanged week over week at \$9.50-10.00 per lb, ex-warehouse. Nevertheless, price increases are possible as supply dynamics are likely to remain in question for the time being.

Chinese FeV responds to western speculation

The Chinese ferrovanadium market firmed up over the past couple of weeks in response to higher western prices caused by the production disruption in South Africa. Chinese mills have raised their tender prices for monthly procurements in June due to higher pentoxide costs. CITIC Pacific has increased its tender price for 230 mt of 50% V to 64,300 yuan per mt (\$20.78 per kg) DDP, compared to 600 yuan per mt in May. Ma'anshan Steel also raised its tender price to 64,500 yuan per mt (\$20.84 per kg) for 35 mt of material.

Domestic Spot prices for 50% V material rose 64,000-66,000 yuan per mt (\$20.68-21.32 per kg), compared to 63,000-64,000 yuan at the beginning of May. More mills are likely to issue higher tender prices in the next few days, likely underpinning spot prices. Export prices for 80% V material have likewise increased to \$22-23 per kg, compared to \$19-20 per kg earlier in May.

During the first four months of 2015, China exported 2,831 mt of ferrovanadium, up 61.9% compared to 1,749 mt in the same 2014 period. Exports in the first four months of 2015 (same 2014 period in parentheses) were: Netherlands, 1,260 mt (520 mt); South Korea, 502 mt (379 mt); Japan, 460 mt (460 mt); and Taiwan, 206 mt (218 mt). Exports in April were 782 mt vs. 617 mt year on year.

Ferroalloys Notes

The Chinese ferromolybdenum market continued its downward move, as weak market conditions forced some producers to slash offers in order to increase potential sales volumes. Spot prices have been cut to 73,500-74,000 yuan per mt (\$19.79-19.92 per kg) ex-warehouse for 60% grade FeMo. The first price cuts were from major producing areas; nevertheless, additional smelters are reportedly ready to cut offers due to the lack of business. Material was reportedly offered as low as 72,000 yuan per mt (\$19.39 per kg); however, business was unconfirmed at those levels. The production rate in eastern China has fallen to only 20% while northeast China's output rate is down around 30%. "More smelters will slash production in June," said a source. "Mores steel mills are expected to drop their tender prices in the coming days." The Chinese national ferromolybdenum output is currently estimated to be only 9,000 mt per month. A decrease of nearly 50% year on year as the domestic market remains vastly oversupplied. With some reported price increases in within western markets, Chinese producers hope lower domestic prices can give the export market a boost in the near future.

Western cobalt prices edged up this past week, as spot demand continued to show signs of improvement. With spot demand still showing a slow yet steady rise and long term supply still in question, sources anticipate incremental price growth for the long haul. Despite the upticks in price, spot transactions still remain irregular, as buyers continue to work through inventories and limit possible over-procurement. "The market is keeping a steady pace, but if buying picks up prices will respond," said a source. "Buyers are quite aware of those possibilities, so they are keen to gauge their spot buys." The price for 99.8% Co material in Europe rose to 14.60-15.15 per lb, DDP, compared to \$14.50-14.90 per lb the week prior. US prices also increased, currently at \$14.70-15.20 per lb, ex-warehouse, compared to \$14.60-14.90 per lb week on week. Sales volumes in both regions were tempered, with the bulk of spot business being reported in smaller 2-5 mt lots.

Nickel premiums kept a static trend despite a largely quiet spot market this past week. According to sources, spot interest has been on a downward course over the past couple of weeks and likely to continue, as nickel prices remain on a slow downtrend. As has been evident over the past couple of weeks, bids and offers remain at an impasse as market participants were unable to agree on price tags. Prices for European melting grade are currently unchanged at 9.95-12.25¢ per lb, ex-warehouse; while Russian full plate cathode also held flat at \$80-100 per mt, ex-warehouse. The US market has also quiet this past week with prices holding steady at 19-23¢ per lb, ex-warehouse. Despite some oscillation throughout the week, nickel was being traded at \$12,675 per mt on Friday. The LME's 3-month prices settled at \$12,700 per mt, a slight decrease from \$12,775 per mt the week prior.

Ferrotitanium prices dipped slightly over the past week as buyers seemed to be more interested in inventory management and reduction as opposed to stockpiling. The short-term trend suggests that rates for the ferroalloy could dip a bit further; however, some are experiencing firmer order books for the next one to two months when compared to March, April and the first half of May. Prices for ferrotitanium keep at \$2.67-2.77 per lb, ex-warehouse, roughly representing a \$0.03 per lb decrease on week ago levels of \$2.70-2.85 per lb. "There was an obvious slowdown in March, April and May, but things have picked up to a more consistent basis this past week," commented one source. "Customers were more interested in reducing inventory, but that does not seem to be the case anymore." The source remarked that June and July order books are projected to be stronger than the previous three months, however, a cautious approach is being taken as the summer months and subsequent slowdown creep in.

Chrome

US spot market in doldrums

Very little market activity was apparent for US high-carbon ferrochrome over the past week. The week proved to be very much 'more of the same,' sources commented. Even though

one mill was looking for several truckloads of material, most sources felt that the inquiry would likely settle within the *CRU Ryan's Notes'* range.

Most sources bemoaned slow downstream intake. While a number of mills were behind on their contracts, there was little likelihood that there would be any increase in spot market consumption in the near term, sources said. Few were expecting any turnaround, particularly with the onset of summer months in the US. High inventories and sluggish demand across the supply chain were likely to be persistent for the next several months.

One ferrochrome supplier noted that he would re-evaluate shipments for the second half of the year due to slow intake and little prospect for improvement. It could take several months, however, for many market players to work through current inventories and increase consumption demands.

In Europe, market sources revealed a similar market sentiment. Spot demand was difficult to locate, while prices were hovering at 95-106¢ per lb, DDP, for 60-70% Cr. Prices were likely to contract, although many felt that a push for lower prices was diminishing for the time being as purchasing was reduced. Sources were eyeing the late fourth quarter for potential growth in the European stainless market. Business should be soft in the meantime.

US LC ferrochrome prices see challenges

There appeared to be some downside potential for 0.15 low-carbon ferrochrome prices this past week, with at least one mill looking for tonnages in the spot market. With availability of 0.15 grade higher than others, competition among sellers could be increased given limited spot interest.

Current quotes open to the buyer were apparently below the *CRU Ryan's Notes'* range, but the transaction had not yet closed. Sources commented that availability of supply via the DLA's monthly BOA sales should allow more sellers to vie for the sale. Current prices for 0.15 low-carbon ferrochrome have been persistently flat at 208-209¢ per lb.

Prices for 0.10 and 0.05 low-carbon ferrochrome were unmoved as of late last week. Sources indicated small volumes within the current range for 0.10 LC FeCr, but demand has been unpredictable and severely limited. Prices held sideways to end the week at 210-212¢ per lb, ex-warehouse.

European demand for low-carbon ferrochrome was still greatly limited to 'bits and pieces,' sources explained. With sizable inquiries greatly reduced, there did not appear to be much added competition for open business, as prices were holding flat to end the week.

Chrome Notes

Chrome ore and concentrate prices were down for several grades this past week. UG2 prices settled just slightly lower at \$158-162 per dmt, CIF China, while South African 38-40% Cr lumpy was down to \$170-175 per dmt. Turkish 40-42% lump ore were revised downward, sources said, to \$212-215 per dmt, CIF, while 46% concentrate was down to \$252-257 per dmt. According to sources, Chinese buyers were showing added signs of preference for supplemental ores used for blending.

Bulk Ferroalloys

European alloy prices falter

Prices for Europe's bulk ferroalloys settled lower this week, as new deals have indicated lower values. While previous reports suggested a fairly level market in May, recent business has subsequently proved otherwise as mills in the region have found little pushback in spot transactions. It may be possible that a number of sellers are looking to reduce their position before the summer time. Additionally, others noted that low manganese ore prices over the past several months may also be aiding prices for buyers.

Over the past week, prices for European ferrosilicon fell to €1,210-1,250 per mt, DDP, but sources commented that prices could go even lower for 75% grade. With the onset of summertime, while some sources have indicated that there has been no slowdown in downstream consumption in the steel market, some sellers have appeared more eager to sell inventories.

Europe's manganese alloys were not spared from downward pressure this past week. The price for high-carbon ferromanganese contracted to €710-750 per mt, DDP. Recent transactions once again revealed a willingness among sellers to pursue buyers in order to reach deals over the short term. Meanwhile, silicomanganese prices were down twice throughout the week, settling at €790-840 per mt, DDP.

Given recent transactions, it appeared possible that prices could settle lower in the weeks ahead, but most sources were not anticipating any major changes following the declines. Medium-carbon ferromanganese prices also fell, ending the week at €1,130-1,260 per mt, DDP. Deals over the past several weeks have indicated a wide range, and some sellers were holding tight to higher quotes, while others were more willing to chase open business.

US spot activity remains slim

Business among US consumers remained depressed over the past week. "I feel like it's the middle of August at the moment," one source commented. Another market player stated, "It's dead quiet; there's nothing going on." As US steel capacity utilization rates bounce back and forth, hovering just above 70%, few participants felt that the market would change for the better any time soon. With the onset of the summer season, most felt that US mills could take months to deplete current built up inventories.

In the past week, business for the bulk ferroalloys markets was rather limited. One mill in the South booked over 100 tons of material at 94¢ per lb, but there was little additional activity to be noted. Expectations of lower ferrosilicon pricing were still widespread, but spot business has been greatly reduced. The next mill to book material is expected in the second week of June.

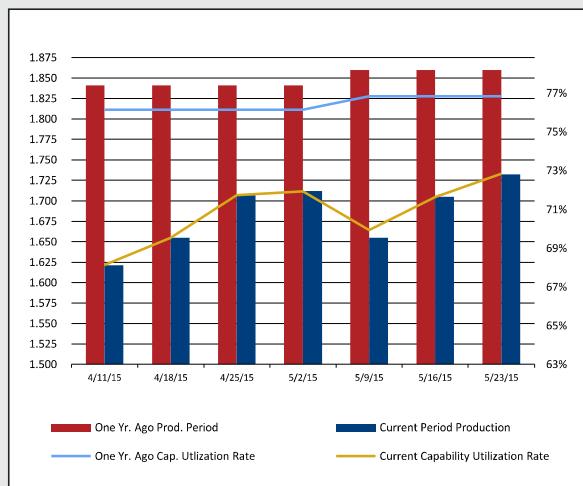
The manganese alloys markets have been persistently flat over the past several weeks. While silicomanganese and high-carbon ferromanganese corrected lower earlier this year, there were expectations that prices could drop even further. Some HC FeMn mill business is expected by mid-June, while there have been other reports of silicomanganese settling lower still under investigation.

The US refined manganese alloy spot market has been near-

ly nonexistent for many weeks. Although medium-carbon ferrromanganese prices were revised downward just slightly a few months back, the spot market has been dead ever since.

Bulk Ferroalloys Notes

US raw steel production was 1,732,000 tons in the week ended May 23, while the capability utilization rate was 73.3%, according to the AISI. Production was up 1.6% from the previous week but down 6.9% from the same 2014 week when output was 1,860,000 tons, and the capability utilization rate was 77.3%. Adjusted year-to-date production through May 23 was 34,942,000 tons with a capability utilization rate of 72.3%, down 7.2% from the same 2014 period when output was 37,645,000 tons and the capability utilization rate was 77%.



Broken down by districts, production for the week ended May 23 was: Great Lakes, 628,000 tons; Southern, 573,000 tons; Northeast, 236,000 tons; Midwest, 209,000 tons; and Western, 86,000 tons.

Chinese manganese metal prices rebounded this past week, as producers reported a rise in inquiries ahead of June procurement needs from major domestic steel mills. Despite the reported increase, a stronger bounce is expected in the near term due to tight spot supplies resulted from decreased manganese production rates. Ma'anshan steel purchased 240 mt of Mn flake at 10,900 yuan per mt (\$1,761) DDP this past week. Wuhan Iron and Steel also bought 1,200 mt of manganese briquettes for 11,200 yuan per mt (\$1,809) DDP. Spot prices for manganese flake firmed to 10,200-10,300 yuan (\$1,648-1,667) per mt ex-works, compared to 10,000-10,100 yuan the week prior. Only around 40% of production capacity was in operation during May, and total output was down 30% in May compared to April numbers. In response to higher domestic prices, export prices also rebounded to \$1,650-1,700 per mt FOB China, as western buyers are set to reenter the market for their replenishments ahead of the summer holidays.

Carbonate manganese ore prices were flat week on week at \$2.6-2.7 per dmtu. One large seller commented that prices had stabilized following sharp declines, but Chinese buyers were reportedly asking for lower offers in June.

There were no changes to demand reported, although it was expected that some buyers could increase their positions should prices hold in the coming days.

Metallics

Metalloinvest plans major expansion

The Russian iron and steel company has set itself the target of increasing iron ore production by 29%, pellets by 17%, hot briquetted and direct reduced iron (HBI/DRI) by 45%, hot metal by 13% and crude steel by 6% by 2023. Last year Metalloinvest's iron ore output was 38.7 million mt, pellets' 22.7 million mt, HBI/DRI's 5.3 million mt, hot metal's 2.3 million mt, and crude steel's 4.5 million mt.

The Russian group puts the capital outlay for what it calls Strategy 2023 at \$5.8 billion, (€5.3 billion), at up to \$600 million to \$700 million a year. Intended outcomes include increased production efficiency, a greater share of high added-value products in its portfolio offering, and improved product quality.

CRU Insight

Cobalt and the Tesla effect: Higher prices or a risk of substitution?



Rebecca Gordon
Managing Consultant
CRU Consulting

Tesla's commitment to develop electric cars that rely on cobalt-intensive batteries was expected to put a strain on cobalt supply from 2017 as vehicle production increased. With

the company now planning to expand into the home energy storage market serious questions are being asked about the ability of producers to prevent the chemical-grade cobalt market from slipping into structural deficit. If this proves unavoidable, CRU believes incentives will grow for the development of non- or low-cobalt intensity batteries.



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"Strategy 2023 is based on thorough analysis of market scenarios, which show that amid falling prices for iron ore, HBI and steel products, the HBI price is subject to the least volatility and the product has high margins. In addition, HBI/DRI production costs at Metalloinvest's enterprises are significantly lower than those of Metalloinvest's global competitors for equivalent products," the company said.

Among projects underway are construction of the main production facility at the No.3 HBI plant at the Lebedinsky iron ore operation and phased commissioning of pellet plant No.3 at

the Mikhailovsky operation. The company is also expanding its fleet of heavy-duty mining transport at the mines, and modernizing and replacing equipment at the OEMK and Ural Steel mills to improve product quality.

Serafino Capoferri, CRU Steelmaking Raw Materials analyst said, "Metalloinvest's decision to press ahead with Strategy 2023 confirms how, even in an industry devastated by a 50% crash in benchmark prices, investment opportunities exist. Metalloinvest's exposure to high-value added iron ore products, such as pellets, is a key differentiator compared to international players. While not completely immune from swings in the price of iron ore fines, Metalloinvest has so far benefited from a strong pellet premium, which has maintained intact throughout the past years despite falling benchmark prices."

Metalloinvest is also studying long-term development projects, such as implementation of continuous-cycle technology to transport rock mass at Lebedinsky and Mikhailovsky, mining oxidized quartzites at Mikhailovsky and possible construction of an HBI plant.

Capoferri added, "A smaller market with established players, the pellet and HBI markets have not experienced the dramatic surge in supply seen in the iron ore fines market. We expect CIS crude steel production to rise by 20% by 2019: as domestic iron ore demand rises, local producers with access to value-added products are uniquely placed to meet rising steelmakers' requirements for ore in the years ahead."

Chinese province plans cut in steel output

Shandong in eastern China will lower crude steel production by more than 10 million mt this year in order to reduce pollution, the Beijing Municipal Environmental Protection Bureau has announced. The province is to cap annual output at 50 million mt by the end of the year. Last year its steel makers produced 64.11 million mt of crude steel, including 23.3 million mt from Shandong Steel, China's seventh largest producer.

Hebei, China's most-polluted province and largest steel maker, is aiming to cut 5 million mt of steel making capacity this year and 60 million mt between 2014 and 2017, Reuters reported. To put those figures into an international context, the world's seventh largest crude steel-producing nation, Germany, turned out 42.9 million mt in 2014 and the next two, Turkey and Brazil, around 34 million mt each.

China's smog-hit Beijing-Hebei-Tianjin region has been designated by the central government as a major priority when it comes to controlling pollution. Seven of China's ten most polluted cities are located in Hebei.

Metallics Notes

Messabi Nugget idled, Steel Dynamics announced earlier this week. The company noted that it will be idling two Minnesota-based operations, resulting in the loss of around 200 jobs. The iron ore concentrate facility, which was down earlier in the year in order to install new equipment, will be idled immediately. The iron nugget facility in Hoyt Lakes has been idled since February 2015 when output came to a halt in order to manage inventory levels. Pig iron prices have since fallen well below the \$340-350 per mt threshold that the company previously stated would be required to justify iron nugget production. The company's

announcement states that both facilities will be idled for a period of at least 24 months. However, CRU expects that a weak pricing environment will remain in place, and pig iron prices in the US will not rise above \$300 per mt for any sustained period throughout the next few years.

Scrap prices are likely to rise in June despite some tempered expectations from market players. Early indications suggest that scrap prices in the US could rise by an additional \$5-10 per lt as June buying gets underway. Upward pressure on prices is starting to materialize given renewed mill demand – according to the AISI, crude steel utilization rose to 73.3% last week, a fourteen week high. At the same time, strengthened export demand over the past month has contributed to stronger price rises on the East Coast and, although buying has somewhat pulled back in recent days, this will help to support domestic prices moving into June.

Silicon

US, European silicon prices hold

Prices for silicon metal in the US and Europe were holding level over this past week, following recent declines for 5-5-3 in each region. There were expectations that 5-5-3 grades would settle lower in the weeks ahead. Meanwhile, European 4-4-1 prices were holding firm at €2,420-2,500 per mt, DDP.

The US market has seen sporadic spot business for the past several weeks. Small tonnages were once again confirmed this past week at the lower end of the CRU Ryan's Notes' range. Deals indicated that the range could begin to contract, sending the average lower week on week. There were few expectations, however, that business would pick up in the near term. Most sources felt that activity would further decrease into the summer months.

In Europe, despite relatively good demand for various grades of silicon metal, prices for 5-5-3 have come under added competition recently. Duty-paid Chinese material was likely to play an increasing role in the European market due to lackluster markets in Asia, lower prices in China, and relatively higher prices in Europe. Despite the recent softening, there did not appear to be any business to suggest lower prices for 5-5-3 silicon metal this past week. While there was a general expectation that business activity would reduce in the summer months ahead, sources commented that current demand would not likely falter until August when many Europeans take extended holiday.

Chinese silicon prices fall again

The Chinese silicon market continued downward this week, dragged by an increasing supply due to the onset of the rainy season in southern China. On the back of cheaper electricity tariffs, many smelters in Sichuan province have reportedly restarted production.

As previously reported, the preferential electricity tariffs in Yunnan province will also be settled soon. Amid bearish sentiment, export prices for 5-5-3 grade metal have fallen to \$1,830-1,850 per mt, FOB, down from \$1,830-1,880 per mt

one week ago. Export prices for 4-4-1 grade have also declined to \$1,970-1,990 per mt, FOB, down from \$1,990-2,010 per mt.

In the first four months of 2015, China exported 241,949 mt of silicon metal (Si 99.99% max), down 6.44% from 258,613 mt in the same 2014 period. Exports in the first four months of 2015 (same 2014 period in parentheses) were: South Korea, 50,717 mt (59,786 mt); Japan, 48,324 mt (34,308 mt); Germany, 22,501 mt (13,952 mt); Thailand, 17,242 mt (13,946 mt); Netherlands, 15,252 mt (8,734 mt); UAE, 12,748 mt (7,551 mt); and India, 10,198 mt (11,187 mt). Exports in April were 59,961 mt vs. 74,235 mt in the same 2014 period.

Silicon Notes

Duties on Chinese silicon imports to Europe were set to expire on May 30, 2015, but could likely be renewed. Current duties include 16.3% on Daton Jinneng Industrial Silicon Co. and 19% on all others. An anti-circumvention investigation in 2012 extended the duties to Taiwanese imports as well. The current investigation to prolong the duties is expected to take up to 15 months. The current duties set to expire at month's end will stay in place during the investigation.

Minor Metals

Antimony direction remain unclear

Antimony prices in the US kept flat on week ago levels as market conditions remain relatively unchanged over the past several days. After the recent downturn due to a decrease in Chinese exports, sources anticipate some leveling off in early June. Prices for European antimony remain at \$8,400-8,700 per mt, ex-warehouse Rotterdam, while US figures keep steady at \$3.9-4.0 per lb, in-warehouse Baltimore. At the moment, despite hope of leveling off, players feel as though there is still room for further decreases, but that a cautious approach has to be taken heading into the final third of Q2.

"There is not much in the way of inventory throughout the world at the moment," said a source. Despite the low prices some participants are experiencing consistent inquiries, however volumes and bookings hold thin. "Shipment offers from China are relatively low at the moment. I have received some inquiries, but the volumes are pretty low. Given how everything is operating right now, I would not be surprised if the market softened a bit further in June."

Even though some hold a negative sentiment toward potentially lower prices with low levels of activity in the US, many still have hope that inquiries could experience a controlled increase in the short term. A wait-and-see approach has been employed by many and should continue throughout the remainder of the second quarter.

Minor Metals Notes

US bismuth market keeps quiet as suppliers seem to be experiencing more false activity as opposed to actual bookings. Prices maintain their week ago levels at \$6.85-

7.10 per lb ex-warehouse as bookings continue to suffer. Consumers are showing more interest in receiving quotes as a way of keeping an eye on current price levels in order to gauge when it is absolutely necessary to purchase material given their inventory and production levels. "The market is in a major dead period as far as bookings go," said a source. "No one is really looking with the intent to buy. Potential buyers just seem to be checking on prices." The current trend looks to continue heading into the final month of Q2.

Selenium prices maintain at week ago levels with the possibility of further depreciation due to a lack of overall buying activity and minimal off-take in the US market. Near term optimism remains low with limited spot activity and an increasing pressure to keep prices low, especially from distributors looking for a limited mark-up for resale. Prices for US selenium maintain at \$17.00-18.00 per lb, ex-warehouse, and distributors are more likely to pursue material closer to \$16.80 per pound and resell between \$17.00-17.25 per lb to domestic consumers. "The pushback I have been receiving due to pricing at \$17 per pound and above has been primarily middleman driven," said the supplier. "I have not received much, if any, discontent from those actually buying, so I feel prices are in correct given current conditions." Because of the middleman pushback, participants should be cautious for potential downturns in the short term.

US indium prices experience downgrade as concerns mount due to poor overall activity and negative Chinese sentiment. Last week, the Chinese market was dragged down due to physical and investment demand, coupled with little-to-no change regarding Fanya inventories over the past few months. This week, due to minimal movement in the US and excess material overseas, sources are extremely cautious and adopting a more calculated approach for the near-term. Prices for US indium currently stand at \$485-505 per kg, ex-warehouse, representing a decline of \$35-40 per kg on week ago levels. Further decreases are likely given the depressed state as participants look to remain guarded.

Lead & Zinc

Nyrstar looking to sell Coricancha

Great Panther Silver has signed an option agreement to acquire the Coricancha mine in Peru from Nyrstar. The former has made an initial cash payment of \$1.5 million and will do the same after twelve months if drilling and evaluation activities encourage the company to extend the option for another year.

Under the agreement, Great Panther must also spend \$2 million on exploration in the first year of the option agreement and an additional \$3 million in the second year. It will then be able to make cash payment of \$5 million for a 100% stake in Coricancha on or before the expiry of the two-year option.

Nyrstar bought Coricancha in 2009 and brought it on stream in 2010 before placing it on care and maintenance in early 2014. Silver was the main source of income during this period and the mine's closure coincided with a period in which it was

trading at around \$20 per ounce. This was during the period when a number of main-product silver mining companies appeared to be accepting that the price for silver was not necessarily going to bounce back towards \$30 anytime soon. Great Panther is attracted to the deal because it gives it silver production potential without having to make a significant financial commitment in the current price environment. Coricancha's silver mainly reports to its lead and copper concentrate.

Pilbara set to get new backing

The board of Venturex has recommended that shareholders support its proposed sale of the Pilbara (Sulphur Springs) copper-zinc project in Western Australia to Orion Mine Finance Group for A\$14 million. This recommendation is subject to the standard stipulation that no superior proposal comes to light.

Venturex has struggled to take Pilbara forward because it has been unable to secure financing on acceptable terms. Rather than relinquish too much control to another investor, the company has previously opted to slow project development and cut corporate overhead.

The project may have a construction schedule of just 15 months because there is existing infrastructure, and previous operations have effectively pre-stripped the Whim Creek and Mons Cupri ore bodies. It is therefore an attractive option for anyone who believes in a looming zinc price spike.



Ryan's Notes

Ferrous and Nonferrous News and Prices

Volume 21, No. 22

June 1, 2015

Product / Market		Tuesday May. 26			Friday May. 29			Week Avg	4-Week Avg	6-Week Avg						
Bulk Ferroalloys																
Ferromanganese																
N.A. High-Carbon FeMn	\$/lt	930,000	-	950,000	930,000	-	950,000	940,000	940,000	940,000						
Euro High-Carbon FeMn	€/mt	730,000	-	760,000	710,000	-	750,000	737,500	743,125	743,750						
Chinese High-Carbon FeMn	\$/mt	1300,000	-	1350,000	1300,000	-	1350,000	1325,000	1330,625	1333,750						
N.A. Medium-Carbon FeMn	¢/lb	94,000	-	96,000	94,000	-	96,000	95,000	95,000	94,000						
Euro Medium-Carbon FeMn	€/mt	1140,000	-	1260,000	1130,000	-	1260,000	1197,500	1215,938	1217,292						
Chinese Medium-Carbon FeMn	\$/mt	1750,000	-	1800,000	1750,000	-	1800,000	1775,000	1812,500	1833,333						
N.A. Low-Carbon FeMn	¢/lb	104,000	-	105,000	104,000	-	105,000	104,500	104,500	104,500						
Ferrosilicon																
N.A. FeSi (50%)	¢/lb	104,000	-	109,000	104,000	-	109,000	106,500	106,500	106,500						
N.A. FeSi (75%)	¢/lb	94,000	-	95,000	94,000	-	95,000	94,500	94,500	94,500						
Euro FeSi (75%)	€/mt	1210,000	-	1260,000	1210,000	-	1250,000	1232,500	1237,188	1239,583						
N.A. Silicon Carbide	\$/st	790,000	-	800,000	790,000	-	800,000	795,000	795,000	795,000						
Chinese FeSi (75%)	\$/mt	1200,000	-	1240,000	1200,000	-	1240,000	1220,000	1221,875	1226,667						
Manganese																
Mn Ore 36-39% lumpy	\$/MnU	2,600	-	2,700	2,600	-	2,700	2,650	2,672	2,698						
Mn Ore 44% lumpy	\$/MnU	2,800	-	3,050	2,800	-	3,050	2,925	2,978	3,010						
Mn Ore 46% lumpy	\$/MnU	3,250	-	3,350	3,250	-	3,350	3,300	3,328	3,385						
Chinese Mn Metal Flake	\$/MnU	1630,000	-	1650,000	1625,000	-	1675,000	1645,000	1683,125	1728,542						
N.A. Electrolytic Mn	¢/lb	115,000	-	118,000	115,000	-	118,000	116,500	119,000	119,500						
Silicomanganese																
N.A. SiMn	¢/lb	51,000	-	53,000	51,000	-	53,000	52,000	52,000	52,000						
Euro SiMn	€/mt	790,000	-	860,000	790,000	-	840,000	820,000	838,438	838,125						
Chinese SiMn (65/17)	\$/mt	1300,000	-	1350,000	1300,000	-	1350,000	1325,000	1325,000	1325,000						
Chinese SiMn (60/14)	\$/mt	1100,000	-	1150,000	1100,000	-	1150,000	1125,000	1125,000	1125,000						
Chrome																
Chrome Metal																
US Aluminothermic Cr	\$/lb	4.400	-	4.600	4.400	-	4.600	4.500	4.500	4.500						
Chrome Ore																
Turkish Cr Ore 40-42%	\$/dmt	212,000	-	217,000	212,000	-	217,000	214,500	218,000	222,833						
Turkish Cr Concentrate 46-48%	\$/dmt	252,000	-	257,000	252,000	-	257,000	254,500	256,750	257,833						
S.A. Cr Ore 38-40%	\$/dmt	170,000	-	175,000	170,000	-	175,000	172,500	174,375	174,583						
S.A. Cr Concentrate 44%	\$/dmt	178,000	-	182,000	178,000	-	182,000	180,000	180,000	180,000						
S.A. UG2 42%	\$/dmt	158,000	-	162,000	158,000	-	162,000	160,000	161,125	161,250						

Product / Market		Tuesday May. 26			Friday May. 29			Week Avg	4-Week Avg	6-Week Avg
Ferrochrome										
N.A. High-Carbon FeCr 47-55%	\$/lb	107.000	-	108.000	107.000	-	108.000	107.500	107.500	107.500
Euro High-Carbon FeCr 47-55%	\$/lb	85.000	-	108.000	85.000	-	108.000	96.500	96.500	96.500
Euro High-Carbon FeCr 47-55% FM	\$/lb	84.000	-	86.000	84.000	-	86.000	85.000	85.000	85.000
Chinese Domestic HC FeCr 49-70%	\$/lb	78.310	-	80.190	78.940	-	80.820	79.565	79.446	79.694
Chinese Import HC FeCr 49-70%	\$/lb	77.000	-	80.000	77.000	-	80.000	78.500	79.063	79.375
Euro Mid-Grade FeCr 54-60%	\$/lb	92.000	-	93.000	92.000	-	93.000	92.500	92.500	92.500
N.A. High-Carbon FeCr 60-70%	\$/lb	108.000	-	113.000	108.000	-	113.000	110.500	110.500	110.583
Euro High-Carbon FeCr 60-70%	\$/lb	95.000	-	106.000	95.000	-	106.000	100.500	100.500	100.500
N.A. 0.05% Low-Carbon FeCr	\$/lb	227.000	-	230.000	227.000	-	230.000	228.500	228.500	228.500
Euro 0.05% Low-Carbon FeCr	\$/lb	214.000	-	215.000	214.000	-	215.000	222.000	222.000	222.000
N.A. 0.1% Low-Carbon FeCr	\$/lb	210.000	-	212.000	210.000	-	212.000	211.000	211.000	211.000
Euro 0.1% Low-Carbon FeCr	\$/lb	200.000	-	207.000	200.000	-	207.000	203.500	203.500	203.500
N.A. 0.15% Low-Carbon FeCr	\$/lb	208.000	-	209.000	208.000	-	209.000	208.500	208.500	208.500
N.A. FeCr/Si	\$/lb	102.500			102.500			102.500	102.500	102.542
Ferroalloys										
Cobalt										
N.A. Cobalt (99.8%)	\$/lb	14.600	-	14.900	14.700	-	15.200	14.850	14.666	14.506
Euro Cobalt (99.8%)	\$/lb	14.500	-	14.900	14.600	-	15.150	14.788	14.616	14.465
N.A. Cobalt (99.65%)	\$/lb	14.200	-	14.600	14.400	-	14.900	14.525	14.344	14.196
Euro Cobalt (99.65%)	\$/lb	14.200	-	14.600	14.400	-	14.900	14.525	14.334	14.173
N.A. Cobalt (99.3%)	\$/lb	14.000	-	14.400	14.200	-	14.600	14.300	14.138	13.975
Euro Cobalt (99.3%)	\$/lb	13.900	-	14.300	14.150	-	14.500	14.213	14.056	13.917
Ferromolybdenum										
US FeMo	\$/lb	8.450	-	9.300	8.500	-	9.300	8.888	8.991	9.092
Western Euro FeMo	\$/kg	19.400	-	19.700	19.400	-	19.700	19.550	19.531	19.598
Chinese FeMo	\$/kg	19.900	-	20.700	19.900	-	20.700	20.300	20.738	20.825
Ferrotitanium										
N.A. FeTi	\$/lb	2.700	-	2.850	2.700	-	2.850	2.775	2.775	2.775
Ferrotungsten										
N.A. FeW	\$/lb	24.400	-	24.900	24.400	-	24.900	24.650	24.650	24.650
Ferrovanadium										
N.A. FeV	\$/lb	9.500	-	10.000	9.500	-	10.000	9.750	9.609	9.715
Euro FeV	\$/kg	23.000	-	24.000	22.600	-	23.300	23.225	22.075	21.142
Molybdenum										
US Mo Oxide	\$/lb	7.500	-	7.800	7.550	-	7.850	7.675	7.788	7.835
US Mo Oxide Mean	\$/lb	7.650			7.700					
Euro Mo Oxide	\$/lb	7.700	-	7.900	7.700	-	7.900	7.800	7.831	7.871
Euro Mo Oxide Mean	\$/lb	7.800			7.800					
Nickel										
US Melting Premium	\$/lb	19.000	-	23.000	19.000	-	23.000	21.000	22.125	22.750
Euro Melting Premium	\$/lb	9.950	-	12.250	9.950	-	12.250	11.100	11.616	11.992
US Plating Premium	\$/lb	52.000	-	55.000	52.000	-	55.000	53.500	56.313	57.875
Euro Plating Premium	\$/lb	46.000	-	50.000	46.000	-	50.000	48.000	51.000	52.667
Russia Full-Plate Cathode	\$/t	80.000	-	100.000	80.000	-	100.000	90.000	101.250	107.500

Product / Market		Tuesday May. 26			Friday May. 29			Week Avg	4-Week Avg	6-Week Avg
Tantalum										
US Ta Ore	\$/lb	85.000	-	90.000	85.000	-	90.000	87.500	87.500	87.500
Tungsten										
US W Ore	\$/stu	300.000	-	305.000	300.000	-	305.000	302.500	302.500	302.500
N.A. APT	\$/stu	365.000	-	370.000	365.000	-	370.000	367.500	367.500	367.500
Vanadium										
V2O5	\$/lb	4.000	-	4.300	4.000	-	4.300	4.150	4.150	4.150
Metallics										
US HBI	\$/mt	320.000	-	325.000	320.000	-	325.000	322.500	322.500	322.500
US Pig Iron (Steel-Making Grade)	\$/lt	275.000	-	285.000	275.000	-	285.000	280.000	280.000	280.000
Minor Metals										
US Antimony	\$/lb	3.900	-	4.000	3.900	-	4.000	3.950	4.013	4.021
US Bismuth	\$/lb	6.850	-	7.100	6.850	-	7.100	6.975	6.978	6.985
US Cadmium	\$/lb	1.700	-	1.800	1.700	-	1.800	1.750	1.750	1.750
US Indium	\$/kg	525.000	-	540.000	485.000	-	505.000	513.750	527.813	529.375
US Selenium	\$/lb	17.000	-	18.000	17.000	-	18.000	17.500	17.938	19.208
Silicon Metal										
US 5-5-3 Si	¢/lb	133.000	-	142.000	133.000	-	142.000	137.500	139.750	140.333
US 5-5-3 Si Mean	¢/lb	137.500			137.500					
Euro 5-5-3 Si	€/mt	2300.000	-	2420.000	2300.000	-	2420.000	2360.000	2365.000	2362.917
Chinese 5-5-3 Si	\$/mt	1830.000	-	1880.000	1830.000	-	1850.000	1847.500	1889.375	1915.833
Euro 4-4-1 Si	€/mt	2420.000	-	2500.000	2420.000	-	2500.000	2460.000	2460.000	2455.625
Chinese 4-4-1 Si	\$/mt	1990.000	-	2010.000	1970.000	-	1990.000	1990.000	2019.375	2050.417
Polysilicon Trans	\$/kg	18.500	-	19.500	18.500	-	19.500	19.000	19.000	19.000

Product		May. 25	May. 26	May. 27
Base Metals				
Aluminum - LME HG Cash	\$/mt	-	1710.00	1699.00
Aluminum - LME HG Settlement	\$/mt	-	1710.50	1699.50
Aluminum - LME HG 3-Month	\$/mt	-	1751.50	1738.00
Aluminum - LME HG Year 1	\$/mt	-	1840.00	1823.00
Aluminum - LME HG Year 2	\$/mt	-	1903.00	1883.00
Aluminum - LME Alloy Cash	\$/mt	-	1730.00	1725.00
Aluminum - LME Alloy Settlement	\$/mt	-	1740.00	1735.00
Aluminum - LME Alloy 3-Month	\$/mt	-	1745.00	1740.00
Aluminum - LME Alloy Year 1	\$/mt	-	1745.00	1740.00
Aluminum - NASAA Cash	\$/mt	-	1700.00	1715.00
Aluminum - NASAA Settlement	\$/mt	-	1710.00	1720.00
Aluminum - NASAA 3-Month	\$/mt	-	1750.00	1740.00
Aluminum - NASAA Year 1	\$/mt	-	1820.00	1815.00
Copper - COMEX HG Cash*	c/lb	-	285.35	281.60
Copper - COMEX HG 2nd Position*	c/lb	-	279.65	278.75
Copper - COMEX HG 3rd Position*	c/lb	-	277.80	276.85
Copper - LME Grade A Cash	\$/mt	-	6134.00	6084.50
Copper - LME Grade A Settlement	\$/mt	-	6134.50	6085.00
Copper - LME Grade A 3-Month	\$/mt	-	6131.00	6083.00
Copper - LME Year 1	\$/mt	-	6135.00	6095.00
Copper - LME Year 2	\$/mt	-	6135.00	6095.00
Lead - LME Cash	\$/mt	-	1930.00	1920.00
Lead - LME Settlement	\$/mt	-	1932.00	1921.00
Lead - LME 3-Month	\$/mt	-	1943.00	1933.00
Lead - LME Lead Year 1	\$/mt	-	1967.00	1958.00
Lead - RN US Lead Oxide	c/lb	-	102.52	102.04
Lead - RN NA Solder Transaction	c/lb	-	118.23	117.72
Lead - RN HG	c/lb	-	94.13	93.68
Lead - RN SG	c/lb	-	92.63	92.14
Nickel - LME Cash	\$/mt	-	12640.00	12600.00
Nickel - LME Settlement	\$/mt	-	12650.00	12625.00
Nickel - LME 3-Month	\$/mt	-	12675.00	12680.00
Nickel - LME Nickel Year 1	\$/mt	-	12820.00	12920.00
Nickel - LME Nickel Year 2	\$/mt	-	12900.00	13000.00
Nickel - RN NA Melting	c/lb	-	12680.00	12645.00
Nickel - RN NA Plating	c/lb	-	12820.00	12770.00
Ferronickel - RN 40% FeNi NA Trans.	\$/mt	-	5284.87	5274.87
Ferronickel - RN 25% FeNi NA Trans.	\$/mt	-	3443.59	3437.34
Tin - LME Cash	\$/mt	-	15670.00	15675.00
Tin - LME Settlement	\$/mt	-	15675.00	15340.00
Tin - LME 3-Month	\$/mt	-	15700.00	15705.00
Tin - LME 15-Month	\$/mt	-	15735.00	15785.00
Tin - RN NA Solder Transaction	c/lb	-	118.23	117.72
Tin - RN NA Dealer	c/lb	-	729.15	714.18
Tin - KLTM	c/lb	718.04	718.94	705.34
Zinc - LME Cash	\$/mt	-	2177.00	2178.00
Zinc - LME Settlement	\$/mt	-	2178.00	2166.00
Zinc - LME 3-Month	\$/mt	-	2184.00	2166.00
Zinc - LME Year 1	\$/mt	-	2198.00	2168.00
Zinc - LME Year 2	\$/mt	-	2188.00	2168.50
Zinc - RN NA Dealer	c/lb	-	729.15	2182.00
Zinc - RN NA #3 Alloyers	c/lb	-	111.81	2172.00
Zinc - RN NA #3 Alloyers	c/lb	-	111.81	2177.00
Precious Metals				
Gold - COMEX Cash	\$/oz	-	1187.20	1185.90
Gold - COMEX 2nd Position*	\$/oz	-	1186.90	1185.60
Gold - COMEX 3rd Position*	\$/oz	-	1187.30	1186.00
Gold - London Initial	\$/oz	-	-	-
Gold - London Final	\$/oz	-	-	-
Palladium - NYMEX Cash	\$/oz	-	780.40	785.00
Platinum - NYMEX Cash	\$/oz	-	1123.40	1118.50
Platinum - NYMEX 2nd Position*	\$/oz	-	1123.50	1118.50
Silver - COMEX Cash	c/oz	-	1673.40	1663.80
Silver - COMEX 2nd Position*	c/oz	-	1672.70	1662.80
Silver - COMEX 3rd Position*	c/oz	-	1674.60	1664.70
Silver - London Spot (US Equivalent)	c/oz	-	-	-
Minor Metals				
Cobalt - LME Cash	\$/mt	-	30300.00	30600.00
Cobalt - LME Settlement	\$/mt	-	30600.00	30600.00
Cobalt - LME 3-Month	\$/mt	-	30300.00	30600.00
Cobalt - LME 15-Month	\$/mt	-	30395.00	30400.00
Molybdenum - LME Cash	\$/mt	-	16800.00	31450.00
Molybdenum - LME Settlement	\$/mt	-	17300.00	31450.00
Molybdenum - LME 3-Month	\$/mt	-	17000.00	17300.00
Molybdenum - LME 15-month	\$/mt	-	17220.00	17200.00
Molybdenum - LME 15-month	\$/mt	-	17220.00	18200.00

Product		May. 28		May. 29		Week Avg	4-Week Avg	6-Week Avg		
Base Metals										
Aluminum - LME HG Cash	\$/mt	1719.00	-	1719.50	1705.00	-	1705.50	1708.25	1798.22	1818.38
Aluminum - LME HG Settlement	\$/mt	1719.50			1705.50			1708.75	1798.89	1819.14
Aluminum - LME HG 3-Month	\$/mt	1760.00	-	1760.50	1742.00	-	1745.00	1747.88	1832.83	1836.34
Aluminum - LME HG Year 1	\$/mt	1845.00	-	1850.00	1830.00	-	1835.00	1834.50	1911.78	1913.07
Aluminum - LME HG Year 2	\$/mt	1905.00	-	1910.00	1890.00	-	1895.00	1895.25	1967.67	1968.61
Aluminum - LME Alloy Cash	\$/mt	1715.00	-	1725.00	1715.00	-	1725.00	1721.25	1769.69	1778.73
Aluminum - LME Alloy Settlement	\$/mt	1725.00			1725.00			1731.25	1778.17	1787.07
Aluminum - LME Alloy 3-Month	\$/mt	1730.00	-	1740.00	1730.00	-	1740.00	1736.25	1776.94	1785.54
Aluminum - LME Alloy Year 1	\$/mt	1730.00	-	1740.00	1730.00	-	1740.00	1736.25	1776.94	1785.54
Aluminum - NASAA Cash	\$/mt	1715.00	-	1725.00	1695.00	-	1700.00	1706.25	1777.22	1805.61
Aluminum - NASAA Settlement	\$/mt	1725.00			1700.00			1713.75	1782.42	1809.91
Aluminum - NASAA 3-Month	\$/mt	1740.00	-	1750.00	1720.00	-	1730.00	1737.50	1805.00	1832.32
Aluminum - NASAA Year 1	\$/mt	1815.00	-	1825.00	1795.00	-	1805.00	1811.25	1879.44	1896.07
Copper - COMEX HG Cash*	c/lb	279.30			275.95			280.55	289.14	285.04
Copper - COMEX HG 2nd Position*	c/lb	276.75			272.80			276.99	287.46	283.88
Copper - COMEX HG 3rd Position*	c/lb	277.20			273.30			276.29	286.92	283.63
Copper - LME Grade A Cash	\$/mt	6116.00	-	6117.00	6088.00	-	6088.50	6105.63	6296.11	6215.95
Copper - LME Grade A Settlement	\$/mt	6117.00			6088.50			6106.25	6297.25	6217.05
Copper - LME Grade A 3-Month	\$/mt	6110.00	-	6111.00	6090.00	-	6095.00	6103.50	6296.22	6214.04
Copper - LME Year 1	\$/mt	6120.00	-	6130.00	6105.00	-	6115.00	6113.75	6298.61	6219.11
Copper - LME Year 2	\$/mt	6120.00	-	6130.00	6105.00	-	6115.00	6113.75	6302.22	6224.64
Lead - LME Cash	\$/mt	1967.50	-	1968.00	1959.00	-	1959.50	1944.13	1995.50	2021.68
Lead - LME Settlement	\$/mt	1968.00			1959.50			1945.13	1996.42	2022.73
Lead - LME 3-Month	\$/mt	1983.00	-	1984.00	1974.00	-	1975.00	1958.25	2005.64	2028.61
Lead - LME Lead Year 1	\$/mt	2010.00	-	2015.00	2002.00	-	2007.00	1984.25	2026.72	2052.04
Lead - RN US Lead Oxide	c/lb	104.42			103.99			103.24	105.50	106.59
Lead - RN NA Solder Transaction	c/lb	120.35			119.90			119.05	121.52	122.82
Lead - RN HG	c/lb	95.95			95.54			94.82	96.97	98.02
Lead - RN SG	c/lb	94.27			93.88			93.23	95.56	96.75
Nickel - LME Cash	\$/mt	12835.00	-	12840.00	12670.00	-	12675.00	12686.25	13486.94	13340.18
Nickel - LME Settlement	\$/mt	12840.00			12675.00			12697.50	13498.00	13349.25
Nickel - LME 3-Month	\$/mt	12890.00	-	12900.00	12700.00	-	12725.00	12726.25	13534.44	13384.82
Nickel - LME Nickel Year 1	\$/mt	13025.00	-	13125.00	12850.00	-	12950.00	12866.25	13670.28	13531.07
Nickel - LME Nickel Year 2	\$/mt	13115.00	-	13215.00	12940.00	-	13040.00	12953.75	13742.78	13617.68
Nickel - RN NA Melting	\$/lb	12900.00			12725.00			6.03	6.40	6.33
Nickel - RN NA Plating	\$/lb	13025.00			12850.00			6.28	6.65	6.58
Ferronickel - RN 40% FeNi NA Trans.	\$/mt	5360.87			5294.87			5303.87	5624.07	5564.57
Ferronickel - RN 25% FeNi NA Trans.	\$/mt	3491.09			3449.84			3455.46	3655.59	3618.40
Tin - LME Cash	\$/mt	15450.00	-	15455.00	15445.00	-	15450.00	15476.25	15790.83	15765.71
Tin - LME Settlement	\$/mt	15455.00			15450.00			15481.25	15806.67	15780.18
Tin - LME 3-Month	\$/mt	15500.00	-	15525.00	15450.00	-	15475.00	15506.25	15794.17	15768.04
Tin - LME 15-Month	\$/mt	15555.00	-	15605.00	15515.00	-	15565.00	15557.50	15865.56	15845.71
Tin - RN NA Solder Transaction	c/lb	120.35			119.90			119.05	121.52	122.82
Tin - RN NA Dealer	c/lb	719.17			718.94			720.36	735.12	733.92
Tin - KLTM	c/lb	703.07			706.70			710.42	720.02	715.75
Zinc - LME Cash	\$/mt	2219.50	-	2220.00	2211.50	-	2212.50	2193.38	2284.94	2277.89
Zinc - LME Settlement	\$/mt	2220.00			2212.50			2194.13	2285.59	2278.13
Zinc - LME 3-Month	\$/mt	2216.00	-	2218.00	2213.00	-	2214.00	2195.25	2280.00	2272.95
Zinc - LME Year 1	\$/mt	2227.00	-	2232.00	2223.00	-	2228.00	2207.50	2285.78	2282.14
Zinc - LME Year 2	\$/mt	2217.00	-	2222.00	2213.00	-	2218.00	2197.50	2271.33	2269.39
Zinc - RN NA Dealer	c/lb	719.17			718.94			720.36	735.12	733.92
Zinc - RN NA #3 Alloys	c/lb	113.54			113.22			112.45	116.51	116.24
Precious Metals										
Gold - COMEX Cash	\$/oz	1188.10			1189.40			1187.65	1199.46	1197.47
Gold - COMEX 2ndPosition*	\$/oz	1188.40			1189.60			1187.63	1199.32	1197.30
Gold - COMEX 3rd Position*	\$/oz	1188.80			1189.80			1187.98	1199.78	1197.74
Gold - London Initial	\$/oz	-			-					
Gold - London Final	\$/oz	-			-					
Palladium - NYMEX Cash	\$/oz	784.80						781.74	785.26	781.36
Platinum - NYMEX Cash	\$/oz	1115.80						1117.18	1142.28	1142.38
Platinum - NYMEX 2nd Position*	\$/oz	1116.30						1117.45	1142.53	1142.57
Silver - COMEX Cash	c/oz	1665.30			1668.40			1667.73	1683.61	1658.27
Silver - COMEX 2nd Position*	c/oz	1666.90			1670.10			1668.13	1684.17	1658.91
Silver - COMEX 3rd Position*	c/oz	1668.90			1672.10			1670.08	1685.68	1660.54
Silver - London Spot (US Equivalent)	c/oz	-			-					
Minor Metals										
Cobalt - LME Cash	\$/mt	30500.00	-	30750.00	30400.00	-	30600.00	30400.00	30038.89	29921.43
Cobalt - LME Settlement	\$/mt	30750.00			30600.00			30637.50	30286.11	30158.93
Cobalt - LME 3-Month	\$/mt	30500.00	-	30750.00	30300.00	-	30500.00	30375.00	30044.44	29946.43
Cobalt - LME 15-Month	\$/mt	30570.00	-	31570.00	30340.00	-	31340.00	30438.75	30115.83	30011.96
Molybdenum - LME Cash	\$/mt	16800.00	-	17300.00	16800.00	-	17100.00	16820.00	16738.89	16764.29
Molybdenum - LME Settlement	\$/mt	17300.00			17100.00			17250.00	17227.78	17235.71
Molybdenum - LME 3-Month	\$/mt	17000.00	-	17500.00	17000.00	-	17500.00	17000.00	16972.22	16921.43
Molybdenum - LME 15-month	\$/mt	17220.00	-	18220.00	17220.00	-	18220.00	17215.00	17199.44	17128.57

LME Warehouse Stocks (mt)	Friday May. 29	Week Change	Friday May. 22	Apr. 17
Aluminum	3,733,550	-35,700	3,769,250	3,878,375
Aluminum Alloy	19,860	-940	20,800	24,760
Copper	322,150	-8,675	330,825	341,275
Lead	158,700	-2,775	161,475	200,200
Nickel	464,364	8,574	455,790	433,734
Tin	7,570	-580	8,150	9,655
Zinc	454,575	-8,400	462,975	492,575

LIBOR Rates (BMT)	05/25	05/26	05/27	05/28	05/29	Wk. Avg.
Avg Offered 1-Mo	HOLIDAY	0.186300	0.185350	0.184000	0.184000	0.184913
Avg Offered 3-Mo	HOLIDAY	0.285850	0.283500	0.282750	0.283750	0.283963
Avg Offered 6-Mo	HOLIDAY	0.425000	0.423050	0.423150	0.424650	0.423963

Exchange Rates	May. 25	May. 26	May. 27	May. 28	May. 29	Wk. Avg	4-Wk. Avg.	6-Wk. Avg.
LME Sterling	HOLIDAY	1.541300	1.537000	1.527700	1.526000	1.533000	1.547883	1.536068
LME Yen	HOLIDAY	122.560000	123.720000	124.280000	123.870000	123.607500	120.872778	120.342143
Euro	HOLIDAY	1.093400	1.086300	1.088600	1.098200	1.091625	1.116083	1.106854

Price Assessment Methodology

CRU Ryan's Notes (RN) methodology seeks to reflect the developing regulatory landscape for price assessment. CRU RN constantly reviews its practice to comply with the highest industry standards and best practices. This document outlines the current price discovery and reporting methodology.

CRU RN's price assessments are based on twice-weekly regular contact with a wide network of market participants. This network is constantly reviewed and expanded to ensure a representation of buyers and sellers, and to reflect the pulse of market activity. CRU RN endeavors to record actual transactions and verifies the details of these transactions with buyers and sellers. When collecting a range of prices, CRU RN will exclude obvious outliers based on volumes, terms, and near-term market trends.

Transactions must meet the minimum volumes established in CRU RN's methodology for individual prices; they must also meet all other definitions set out in this document. Every price published by CRU RN is reviewed by the editorial team before publication. Information on prices is gathered and published twice weekly – on Tuesdays and Friday – identifying the spot market's weekly fluctuations.

CRU RN employees are prohibited to have a financial interest in the performance of markets or particular prices. CRU RN maintains notes and a log of its interactions with market participants, but these are treated as confidential market intelligence, and no details are shared with third parties. CRU RN regularly consults with the market in regard to its methodology.

For complete methodology and price specifications, please visit www.ryansnotes.com/price-specs/. If you have comments or questions regarding the methodology employed by CRU RN or regarding particular prices, please email David Schollaert, Editor CRU Ryan's Notes at david.schollaert@crugroup.com.



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Product / Market		Low	Mid	High	Product / Market		Low	Mid	High
Bulk Ferroalloys									
Ferromanganese									
RN 78% Imported NA Trans	\$/lt	930.000	940.000	950.000	RN US FeMo	\$/lb	8,611	9,017	9,422
RN Euro HC Trans	€/mt	727.778	743.333	758.889	RN Western Euro FeMo	\$/kg	19,350	19,556	19,761
RN Chinese HC FeMn	\$/mt	1,308.889	1,331.667	1,354.444	RN Chinese FeMo	\$/kg	20,367	20,767	21,167
RN Medium Carbon NA Trans	¢/lb	94.000	95.000	96.000					
RN Euro MC Trans	€/mt	1,173.889	1,216.389	1,258.889					
RN Chinese MC FeMn	\$/mt	1,794.444	1,819.444	1,844.444					
RN Low-Carbon NA Trans	¢/lb	104.000	104.500	105.000					
Ferrosilicon									
RN 50% NA Trans	¢/lb	104.000	106.500	109.000					
RN 75% NA Trans	¢/lb	94.000	94.500	95.000					
RN Euro FeSi	€/mt	1,216.667	1,237.778	1,258.889					
RN SIC	\$/st	790.000	795.000	800.000					
Chinese FeSi	\$/mt	1,204.444	1,223.333	1,242.222					
Manganese									
RN 36-39% Mn Ore	\$/MnU	2.633	2.681	2.728					
RN 44% Mn Ore	\$/MnU	2.911	2.989	3.067					
RN 46% Mn Ore	\$/MnU	3.290	3.330	3.370					
RN Chinese Mn Metal Flake	\$/MnU	1,671.667	1,693.333	1,715.000					
RN NA Trans, Electrolytic Metal	¢/lb	118.333	119.167	120.000					
Silicomanganese									
RN NA Trans	¢/lb	51.000	52.000	53.000					
RN Euro Trans	€/mt	812.222	838.889	865.556					
Chinese SiMn 65/17	\$/mt	1,300.000	1,325.000	1,350.000					
Chinese SiMn 60/14	\$/mt	1,100.000	1,125.000	1,150.000					
Chrome									
Chrome Metal									
RN Aluminothermic Imported	\$/lb	4.400	4.500	4.600					
Chrome Ore									
RN Turkish Ore 40-42% Cr	\$/dmt	217.111	219.611	222.111					
RN Turkish Conc. 46-48% Cr	\$/dmt	254.667	257.111	259.556					
RN SA 38-40% Cr	\$/dmt	172.333	174.444	176.556					
RN SA Conc. 44% Cr	\$/dmt	178.000	180.000	182.000					
RN South African UG2 42% Cr	\$/dmt	159.556	161.167	162.778					
Ferrochrome									
RN 47-55% HC Imp. NA Trans	¢/lb	107.000	107.500	108.000					
RN 47-55% Euro Trans	¢/lb	85.000	96.500	108.000					
RN 47-55% Euro FM	¢/lb	84.000	85.000	86.000					
RN 49-65% China Imp. Trans	¢/lb	77.444	79.167	80.889					
RN 49-65% China Domestic Trans	¢/lb	78.658	79.529	80.400					
RN 54-60% Mid-Grade Euro	¢/lb	92.000	92.500	93.000					
RN 60-70% HC Imp.NA Trans	¢/lb	108.000	110.500	113.000					
RN 60-70% HC Euro Trans	¢/lb	95.000	100.500	106.000					
RN 0.05% LC Imp. NA Trans	¢/lb	227.000	228.500	230.000					
RN 0.05% LC Euro Trans	¢/lb	214.000	214.500	215.000					
RN 0.1% LC Imp. NA Trans	¢/lb	210.000	211.000	212.000					
RN 0.1% LC Euro Trans	¢/lb	200.000	203.500	207.000					
RN 0.15% LC Imp.NA Trans	¢/lb	208.000	208.500	209.000					
RN FeCr/Si NA Trans	¢/lb	102.500							
Ferroalloys									
Cobalt									
RN 98.8% NA Trans	\$/lb	14.378	14.622	14.867					
RN 98.8% Euro Trans	\$/lb	14.311	14.575	14.839					
RN 99.65% NA Trans	\$/lb	14.089	14.306	14.522					
RN 99.65% Euro Trans	\$/lb	14.078	14.294	14.511					
RN 99.3% NA Trans	\$/lb	13.889	14.100	14.311					
RN 99.3% Euro Trans	\$/lb	13.817	14.025	14.233					
Ferromolybdenum									
RN US FeMo	\$/lb	8,611	9,017	9,422					
RN Western Euro FeMo	\$/kg	19,350	19,556	19,761					
RN Chinese FeMo	\$/kg	20,367	20,767	21,167					
Ferrotitanium									
RN 68-72% Ti NA	\$/lb	2.700	2.775	2.850					
Ferrotungsten									
RN NA Trans	\$/lb	24.400	24.650	24.900					
Ferrovanadium									
RN NA Trans	\$/lb	9,361	9,644	9,928					
RN Euro Trans	\$/kg	21.333	21.764	22.194					
Molybdenum									
RN US Oxide	\$/lb	7,650	7,797	7,944					
RN US Oxide Mean	\$/lb	7,797							
RN Euro Oxide	\$/lb	7,711	7,844	7,978					
RN Euro Oxide Mean	\$/lb	7,844							
Nickel									
US Melting Premium	¢/lb	20.333	22.333	24.333					
EU Melting Premium	¢/lb	10.572	11.711	12.850					
US Plating Premium	¢/lb	55.556	56.833	58.111					
EU Plating Premium	¢/lb	49.556	51.556	53.556					
Russian Full-Plate Cathode	¢/lb	94.222	103.333	112.444					
Tantalum									
RN Ore	\$/lb	85.000	87.500	90.000					
Tungsten									
RN Ore	\$/stu	300.000	302.500	305.000					
RN APT NA	\$/stu	365.000	367.500	370.000					
Vanadium									
RN V2O5 Trans	\$/lb	4.000	4.150	4.300					
Metallics									
HBI	\$/mt	320.000	322.500	325.000					
Pig Iron	\$/lt	275.000	280.000	285.000					
Minor Metals									
RN US Antimony	\$/lb	3.967	4.017	4.067					
RN US Bismuth	\$/lb	6.861	6.981	7.100					
RN US Cadmium	\$/lb	1.700	1.750	1.800					
RN US Indium	\$/kg	520.556	528.333	536.111					
RN US Selenium	\$/lb	17.556	18.111	18.667					
Silicon Metal									
RN US 5-5-3 Trans	¢/lb	136.333	139.944	143.556					
RN US 5-5-3 Trans Mean	¢/lb	139.944							
RN Euro 5-5-3 Trans	€/mt	2,311.111	2,365.556	2,420.000					
RN Chinese 5-5-3	\$/mt	1,876.667	1,897.778	1,918.889					
RN Euro 4-4-1 Trans	€/mt	2,420.000	2,460.000	2,500.000					
RN Chinese 4-4-1	\$/mt	2,007.778	2,025.556	2,043.333					
RN Polysilicon Trans	\$/kg	18.500	19.000	19.500					

Daily Prices (LME & COMEX)

Product	Average	Product	Average
Base Metals			
Aluminum - LME HG Cash	\$/mt 1,804.526	Gold - COMEX Cash	\$/oz 1,198.215
Aluminum - LME HG Settlement	\$/mt 1,805.211	Gold - COMEX 2nd Position*	\$/oz 1,198.080
Aluminum - LME HG 3-Month	\$/mt 1,837.474	Gold - COMEX 3rd Position*	\$/oz 1,198.545
Aluminum - LME HG Year 1	\$/mt 1,915.789	Gold - London Initial	\$/oz -
Aluminum - LME HG Year 2	\$/mt 1,971.579	Gold - London Final	\$/oz -
Aluminum - LME Alloy Cash	\$/mt 1,771.289	Palladium - NYMEX Cash	\$/oz 784.680
Aluminum - LME Alloy Settlement	\$/mt 1,779.842	Platinum - NYMEX Cash	\$/oz 1,141.615
Aluminum - LME Alloy 3-Month	\$/mt 1,778.158	Platinum - NYMEX 2nd Position*	\$/oz 1,141.855
Aluminum - LME Alloy Year 1	\$/mt 1,778.158	Silver - COMEX Cash	c/oz 1,679.985
Aluminum - NASAA Cash	\$/mt 1,782.105	Silver - COMEX 2nd Position*	c/oz 1,680.570
Aluminum - NASAA Settlement	\$/mt 1,787.079	Silver - COMEX 3rd Position*	c/oz 1,682.070
Aluminum - NASAA 3-Month	\$/mt 1,809.737	Silver - London Spot (US Equivalent)	c/oz -
Aluminum - NASAA Year 1	\$/mt 1,884.474		
Copper - COMEX HG Cash*	c/lb 289.338		
Copper - COMEX HG 2nd Position*	c/lb 287.738		
Copper - COMEX HG 3rd Position*	c/lb 287.225		
Copper - LME Grade A Cash	\$/mt 6,299.553	Cobalt - LME Cash	\$/mt 30,042.105
Copper - LME Grade A Settlement	\$/mt 6,300.658	Cobalt - LME Settlement	\$/mt 30,286.842
Copper - LME Grade A 3-Month	\$/mt 6,299.263	Cobalt - LME 3-Month	\$/mt 30,052.632
Copper - LME Year 1	\$/mt 6,301.053	Cobalt - LME 15-Month	\$/mt 30,123.684
Copper - LME Year 2	\$/mt 6,304.474	Molybdenum - LME Cash	\$/mt 16,739.474
Lead - LME Cash	\$/mt 2,003.000	Molybdenum - LME Settlement	\$/mt 17,228.947
Lead - LME Settlement	\$/mt 2,003.921	Molybdenum - LME 3-Month	\$/mt 16,960.526
Lead - LME 3-Month	\$/mt 2,012.447	Molybdenum - LME 15-month	\$/mt 17,188.947
Lead - LME Lead Year 1	\$/mt 2,033.632		
Lead - RN US Lead Oxide	c/lb 105.822		
Lead - RN NA Solder Transaction	c/lb 121.886		
Lead - RN HG	c/lb 97.283		
Lead - RN SG	c/lb 95.896		
Nickel - LME Cash	\$/mt 13,501.053		
Nickel - LME Settlement	\$/mt 13,511.789		
Nickel - LME 3-Month	\$/mt 13,548.421		
Nickel - LME Nickel Year 1	\$/mt 13,684.474		
Nickel - LME Nickel Year 2	\$/mt 13,758.158		
Nickel - RN NA Melting	\$/lb 6.404		
Nickel - RN NA Plating	\$/lb 6.654		
Ferronickel - RN 40% FeNi NA Trans.	\$/mt 5,629.587		
Ferronickel - RN 25% FeNi NA Trans.	\$/mt 3,659.036		
Tin - LME Cash	\$/mt 15,809.737		
Tin - LME Settlement	\$/mt 15,827.368		
Tin - LME 3-Month	\$/mt 15,814.211		
Tin - LME 15-Month	\$/mt 15,888.421		
Tin - RN NA Solder Transaction	c/lb 121.886		
Tin - RN NA Dealer	c/lb 736.062		
Tin - KLTM	c/lb 720.017		
Zinc - LME Cash	\$/mt 2,288.632		
Zinc - LME Settlement	\$/mt 2,289.735		
Zinc - LME 3-Month	\$/mt 2,282.842		
Zinc - LME Year 1	\$/mt 2,288.789		
Zinc - LME Year 2	\$/mt 2,274.316		
Zinc - RN NA Dealer	c/lb 736.062		
Zinc - RN NA #3 Alloys	c/lb 116.698		

Exchange Rates

Product	Average
LME Sterling	1.54583
LME Yen	120.00750
Euro	1.11698