

# Ecclestone on Palladium – Ignore the Mood Swings

We have long been Palladium bulls but found things were getting all a bit too crazy a few months back when pundits were justifying the metal as a buy on the basis of a strike at a major producer in South Africa. Strikes come and strikes go and going long on the basis of industrial action (unless you are a Just-in-time offtaker) is one of the most feeblest arguments we can think of.



Sure enough the strike ended and the wind went out of the sails and the metal has drifted lower, having made a couple of bottoms in recent times before perking up again.

PGEs have figured only slightly in our past writings with the main focus being upon Platinum Group Metals (PTM) and Duluth Metals (DMM.to). The latter succumbed earlier this month to a “spit bid” from Antofagasta while the former is soldiering on in the face of South Africa’s onerous and distortive BEE program towards program.

The evolution of the Palladium story in recent times though has prompted us to revisit the metal.

Our rationale for liking the current look of the palladium market includes:

- Mined palladium supply is concentrated and constrained
- Large Russian government palladium inventory is at or near depletion (having provided approximately 25% of total palladium supply since 1990)
- Recycling is increasing but insufficient to offset growing demand
- World-wide automobile production expected to increase

significantly

- Use of palladium in diesel catalytic converters is increasing

Palladium (Pd) is a precious metal typically found together with Platinum and Rhodium in ore deposits. It is a rare and lustrous silvery-white metal discovered in 1803 by William Hyde Wollaston. He named it after the asteroid Pallas. Palladium, platinum, rhodium, ruthenium, iridium and osmium form a group of elements referred to as the platinum group metals. These have similar chemical properties, but palladium has the lowest melting point and is the least dense of them.

Over half of the supply of palladium and platinum goes into catalytic converters, which convert up to 90% of auto exhaust gases (hydrocarbons, carbon monoxide, and nitrogen dioxide) into less-harmful substances (nitrogen, carbon dioxide and water vapor). Palladium is also used in electronics, dentistry, medicine, hydrogen purification, chemical applications, and groundwater treatment. Palladium plays a key role in the technology used for fuel cells, which combine hydrogen and oxygen to produce electricity, heat, and water.



*Source: Stillwater Mining*

Ore deposits of palladium and other PGMs are not all that common, with the most extensive deposits being in the norite belt of the Bushveld Igneous Complex covering the Transvaal Basin in South Africa, the Stillwater Complex in Montana, USA, the Thunder Bay district of Ontario, Canada, and the Norilsk complex in Russia. Recycling is also a source of palladium, mostly from scrapped catalytic converters. The numerous applications and limited supply sources of palladium result in the metal attracting considerable investment interest.

**The ETF – Easy Access**

In accessing this metal we prefer to go with a stake in the ETF Securities managed Physical Palladium ETF (NYSE:PALL) which offered the best pure palladium exposure in our estimation. The metal in the ETF is held by the custodian, HSBC Bank USA. Only metal that conforms to the London Platinum and Palladium Association's (LPPM) rules for Good Delivery can be accepted by the custodian. Each physical bar is segregated, individually identified and allocated.



As Palladium usually plays second fiddle to Platinum in virtually all PGM producers it would seem to us that eschewing the miners is the only way to get the best access. The metal has been on a slide of late, but as even the US auto industry is not very ill these days, we find little reason to be bearish on the prospects in any except a global meltdown scenario and the poor supply situation out of Russia, gives us nothing but good vibes on future price trends.

### **Stillwater Mining (NYSE:SWC)**

As the only one primary palladium producer in the US it might merit consideration. It operates two mines in southern Montana. However the purchase in 2011 of the Argentine copper/gold explorer, Peregrine Mining, for \$487mn which many thought to be way too high a price, has put us off favoring this stock. Stillwater's mines in Montana exploit a palladium ore-bearing layer called the J-M (Johns-Manville) Reef, which that company claims is the richest known palladium deposit currently being exploited anywhere in the world. Mining from this location produces a high-grade ore containing a palladium:platinum ratio of just over 3:1. After mining, the ore is refined by Stillwater at a site near Columbus, Montana, to a purity of 60% PGMs, then shipped to Johnson Matthey for final refining of palladium, platinum and other metals at a facility in New Jersey.

In recent weeks the company announced its results for the third quarter ended September 30, 2014. These showed consolidated quarterly net income of \$18.1 million and cash generation of \$37.2mn. Total cash and investments rose \$7.2mn during the quarter to a whopping \$509.1mn, after \$30mn in debt repayment. The party was spoiled though by an all-in sustaining cost of \$837 per mined ounce of palladium and platinum. This was despite corporate overhead expense, including exploration, having been reduced 9% YoY to \$10.7 million. The total mined palladium and platinum production of 123,000 ounces in the quarter.

Stillwater merits watching if one wants a corporate play on Pd but we are feeling safer at the moment with a physical ETF, or a lower-cost producer. A far better choice is the following name.

### **North American Palladium (NAP.to)**

This stock has not hidden its light under a bushel when it came to naming itself. However, it has had this name from long before Palladium became the hot item of recent times. North American Palladium operates its flagship Lac des Iles mine (LDI) located in Ontario, some 90 miles from Thunder Bay. LDI is one of only two primary producers of palladium in the world and is currently undergoing a major expansion.



The Lac des Iles mine commenced production as an open pit in 1993 and expanded underground in 2006 mining the underground Roby Zone. The current mining method at the Lac des Iles mine is longhole stoping with cemented rock fill (using a primary and secondary stoping block sequence).

In late 2010, NAP commenced an expansion of the underground mine to access the Offset Zone, and to transition operations from ramp haulage to shaft haulage. Mining from the Offset Zone commenced in late 2012 (via ramp haulage), and is

expected to be transitioned to shaft-haulage in early Q4, 2013. Through the utilization of the shaft, operations are expected to benefit from increased underground mining rates and decreased operating costs, transforming the Lac des Iles mine into a low cost producer with a rising production profile. The mill has a design capacity of 15,000 tonnes per day.

The high palladium price gave a very nice tailwind to NAP in 2014. During the September quarter it sold 36,430 ounces of payable palladium at a cash cost per ounce of US\$589 (the YTD cash cost per ounce was US\$527). This produced revenue of \$46.4 million (an increase of \$13.1 million or 39% compared to the same period in 2013) The improvement was due to more favorable exchange rates, higher palladium ounces sold and higher palladium prices. The end result was adjusted EBITDA of \$8.3 million for the quarter and \$28.5 million year to date.

The company received a selling price of US\$860 per ounce, giving a palladium operating margin of US\$271 per ounce, or US\$9.9 million. This would have come down in the latest quarter with the severe price pullback. Nevertheless, NAP looks like the best and easiest exposure to an actual Pd producer as it's in a safe jurisdiction compared to the vagaries of South Africa.

## **Conclusion**

While getting access to platinum mainly means playing in South African names, Palladium (despite its "joined at the hip" status) has, as we have demonstrated, at least three ways of getting directly linked exposure to varying degrees without having the play in Johannesburg names.

While the metal has retraced on the expiry of the intellectually feeble bull argument regarding the South African industrial action, the dynamic of global tight supply and on-going demand in the auto sector provides an underlying

impetus for a return to a gradually firming trend upwards.