

## **New Afton Mine Project DRC Resources Backgrounder**

Chester Millar's 1972 Afton discovery symbolizes the pinnacle of mining in British Columbia. Millar's discovery set off a claim staking rush that resulted in exploration expenditures of nearly \$220 million. Three decades later, DRC Resources' discovery of a substantial mineral deposit under the abandoned Afton mine is triggering another round of those heady days.

By the end of 2000, DRC Resources had completed drilling 21 diamond drill holes in the Afton zone, and to date have identified an indicated resource of 25 million grading about 3 % Cu equivalent. Add these results to the previously document 10 million tones of open pitable resource and the potential from the nearby Ajax mineral property and it's no surprise that major producers are taking this discovery seriously—another world-class Afton Mine could soon be in the works.

The original Afton Mine is famous in British Columbia's mining history. For seventy years prior to development, numerous mining companies, large and small, unsuccessfully explored the Kamloops area seeking the mother lode until the Afton discovery.

"The Afton Mine was a sensation because of the high-grade drill results and the unusual geological ore formation," says Jim McDougall, consulting geological engineer for DRC Resources. Later in 1972, the original Afton company shares increased dramatically during a takeover battle between Placer Development and Teck Corp. Teck succeeded in the takeover at \$55 a share, and Afton disappeared as a public company.

When production commenced from the Afton open-pit in 1978, the company's reserves were estimated at 34 million tons of 1% copper, 0.016 oz/t (0.58 g/t) gold and 0.12 oz/t (4.2 g/t) silver. From 1978 to 1987, 24 million tons were mined to a 920 ft (280m) depth. "The Afton mine gave Teck Corp the opportunity to demonstrate that it had world-class flair and capability. The Afton mine cash flow secured for Teck the financial clout to become the strong resource developer it is today," says Steven Lightburn, an Independent Mining Analyst.

Prior to the DRC Resources' Afton discovery, the conventional wisdom was that Afton was a supergene enriched porphyry copper deposit, where the surface waters percolate down through the rock, oxidizing and enriching low grade copper mineral to high grade ore near the surface. This theory suggests that only low-grade primary ore exists at depth. Thus, when the native copper ore seemed to be depleted at 900ft. below surface, exploration ceased and the mine closed.

This miscalculation—along with low world market prices for copper, a provincial government not friendly to mining and the lure of larger South America deposits—prompted Teck Corporation to close the mine and concentrate their efforts on off shore investments.

But prior to closing the Afton Mine, Teck drilled seven holes (2 in 1973 and 5 in 1980) testing the 90-metre thick copper-gold body beneath the final open pit floor. It was the assay results of these seven holes that tipped DRC Resources off about the possibility of a rich ore body existing under the open pit.

In Afton's 1980 Annual Report it stated: "Five deep diamond drill holes were drilled to test the continuity of the ore zone beneath the open pit. As a result of these holes and the two drilled in 1973, underground reserves have been estimated at 6,500,000 tons grading 1.55% copper, 0.047 ounces gold and 0.20 ounces silver. The deepest hole penetrated the zone 2,000 feet below surface or 1,100 feet below the final pit. The ore zone is open at depth."

Another encouraging clue that DRC Resources was on the right track is illustrated in a 1982 report written by mine manager M. Lipkewich that concludes: "Gold grades mined by underground would be three times those obtained at present, while silver would be twice that of the open pit." In the same article chief mine engineer D. Stewart confirmed "... the orebody widens and deepens westward."

It's not unheard of for a major to turn off the operations with feasible ore left in the pit leaving it to a junior company to redefine the deposit and proceed with re-opening the operations. Nor is it unheard of for a major to reject projects that later turn into significant mines—Miramar Mining in Yellowknife and the Pegasus Zortman-Landasky Mine in Montana are two examples that immediately come to mind.

Encouraged by the indications that a significant ore body existed under the open pit, DRC Resources acquired 100 per cent interest in the Afton Mines property in 1999. Believing there was excellent potential for a high-grade block caving mine they commenced drilling in the opposite direction the previous operators had.

Soon suspecting the possibility that the Afton deposit was a new type of copper ore body formed under conditions not fully understood, DRC Resources engaged Dr. J. F. Harris, a leading professor for mineralogy and petrography.

Dr. Harris confirmed DRC Resources' hunch, "The style of intergrowth of the three copper sulfide species in all the samples is hypogene aspect...as distinct from the sequential formation features associated with secondary enrichment under supergene conditions. The relationships resemble those characterizing the net-texture mineralization seen in certain gabbroic or anorthositic rocks—where the sulfides are thought to be magmatic origin," says Harris.

The modified porphyry deposit was found to have a reversal of the standard porphyry situation with hypogene at depth being higher grade than the near surface supergene zone. Afton has 1 % supergene with a 3 % hypogene grade relationship that DRC has continued to find extending at depth with both gold values and palladium values increasing as well.

“The Afton Mine was always unique because of the unusual high gold content recovered from the copper ore as well as silver,” says McDougall.

The unique deposit is very distinctly fault controlled with a fault pebble breccia bounding the hanging wall side of the zone. On the footwall side the copper sulphides grade to iron sulphides marking the limit of the mineralization.

“The general consensus is that the mineralization is related to deep seated structure that has tapped into a deep high temperature magmatic system. The textures of the ore minerals seen in the deposit are unknown in porphyries but usually associated with magmatic gabbroic rocks,” says McDougall.

So far drilling results confirm McDougall’s thinking.

### **2000 Drilling Program**

During the period from April to December 31, 2000, DRC completed 30,575 feet (9,320 m) in 21 NQ diamond drill holes from setups on the 1610 ft and the 2100 ft bench near the southwest pit-rim.

The diamond drilling has traced the mineral zone for 1200 feet (365 m) along the predicted southwesterly trend, indicating an average true width of about 250 feet (76m). The zone has been intersected for at least 1000 ft (305 m) below the open pit, 250 ft (76 m) above sea level. The drilling indicates the mineral zone is related to a continuous northeast trending, steeply southeast dipping structure.

Mineral grades in 18 drill holes that crossed the zone at low oblique angles along the 1200 foot (365 m) strike length average 2.00 % copper, 0.045 oz/t gold, 0.004 oz/t palladium and 0.20 oz/t silver, resulting in a copper equivalent grade of 3.00 % copper.

The indicated mineral resource has been estimated at 25,000,000 tons not including 200 feet of the mineral zone to the northeast indicated by Afton Mines Ltd. 1973 diamond drill holes. The zone remains open to the southwest, northwest, and to depth for exploration to develop additional tonnage.

“We intend to continue with more intensive drilling and we are confident that the tonnage will continue to increase,” says McDougall.

One thing is certain, DRC will continue drilling deeper than any holes drilled in the mine previously. The company will be bringing in a rig with directional drilling capabilities to look under the adjacent thick volcanics between this pit and the nearby Pothook pit. They think the two pits are connected at a deeper level. There is a high probability that all the small ore bodies in this specific Kamloops area are connected deep underground to the same system. If DRC can prove this link, a large, world-class mine will develop.

### Afton Mine Project Statistics

<b>Ore Reserve</b>	25,000,000 tons	2.0 % Copper 0.045 opt Gold 0.20 opt Silver 0.004 opt Palladium
<b>Mine</b>		
Mining Methods		Block Caving
Production Rate		4,500 tons/day
<b>Mill</b>		
Re-furbishing deign capacity		5,000 tons/day
Availability (%)		90
Average Daily Throughput		4.500 tons/day
Operating Days per year		365
<b>Recoveries</b>	Copper	87%
	Gold	90%
	Silver	75%
	Palladium	74%
<b>Financial</b>		
Recovered Metal Quality and Commodity Price Used	Copper	870,000,000 lbs \$US 0.85/lb
	Gold	990,000 oz \$US 280/oz
	Silver	3,750,000 oz \$US 5.00/oz
	Palladium	74,000 oz \$US 1,000/oz
<b>Operating cost</b>		
	Mine	C\$ 8.00-C\$ 9.14
	Mill	C\$5.50
	Administration	C\$1.06
	Home office contingency	C\$1.72
	Total (per tone milled)	C\$16.28-C\$17.42
<b>Initial Capital Investment</b>		
		C\$91,156,000
		C\$41,477,000
Life of Mine (after-tax) Cash Flow		C\$366,279,000
Net Present Value (10% Disc. Rate)		C\$117,815,000
Internal Rate of Return		32.3%

**Fig 1. All indications are that if the New Afton Mine was brought into production today it would be profitable with an initial rate of return of 32.3 percent.**

But DRC doesn't have plans to operate the mines themselves. They consider themselves an exploration company and are being courted by a number of major mining companies who have the capacity to take the project into production. This happened at the original Afton and it is likely that history will repeat itself.

Despite initial skepticism that the previous Afton Mine operators could never have missed such a significant mineral deposit, interest from large global mining companies is mounting. Interest will increase when the geological naysayers come out of their state of denial and begin to accept the reasons for the phenomenal assay results being reported.

Once the mineral resource is established, this will be a dream project for most majors. Here is a property located in a previously mined area, serviced with good road access, water, power, infrastructure and a trained labour force. The best news of all—all of the government permits are available, there are no outstanding claims and all levels of government are enthusiastic and supportive.

With no debt, \$5 million in working capital and over 25 million tons waiting to be tested and further expansion of the resource expected, DRC is poised to take advantage of some of the highest copper prices in recent years and so are the shareholders. In a recent article Freeport-McMoRan Copper & Gold Inc. (FCX) Chairman and CEO James (Joe Bob) Moffett, called copper the "infrastructure metal of the world economy". He went on to warn that currently there is only a three week supply of copper in the world market inventory which could stimulate significant price swings. He was very bullish on copper in 2001 and cautioned passionately "don't be surprised when copper goes to \$3 or 4 dollars a pound because of declining world inventories and remember my warning today when it happens". This spells good news for the mining in British Columbia. It is not inconceivable that in the next few years the Afton Mine will be up and operating at capacities far exceeding the original mine.

*For more information contact*

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- 4,500 t/day
- block carving
- Teck → discussions
- Environmental
- Re seed slopes?
- Tailings Pond
- Pump out pit & put in a decline

Q. Amount of water in pit.

→ to tailings pond: water quality  
Selenium levels - could be high & above standards.

• Status of permits with Teck. Can these be transferred

**TECK**: Mines Act Permit for Reclamation

Fred: (EA) not a simple cut of transferring permits from Teck.  
Contaminated sites regs - means Teck forever liable for Afton.

2 big permits - Mines Act Permit - re-permitting  
- Tailings Pond & discharge

• DRC Identify Teck

{ Summer - explor.  
Fall - feasibility.

MIKE: Study of mine geology.  
Deposit model.

**Joint geological study**

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