



Peregrine expands DO-27 diamond parcel

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by Will Purcell

Peregrine Diamonds Ltd. has a good grade from its DO-27 pipe southeast of Lac de Gras, but the diamond valuation, which will be the real news, remains unknown. The company's consultants modelled a diamond value much rosier than the actually appraised value for a smaller parcel collected in 2006, and Peregrine will have to close the gap with its much larger carat crop. Fortunately, the latest haul does include some valuable gems. The company will also have to show it has enough kimberlite to support a mine.

The value question

Peregrine recovered 1,693 carats of diamonds from 1,939 tonnes of pyroclastic kimberlite taken from the main and northeastern lobes of the DO-27 pipe, good for a grade of 0.87 carat per tonne. The company's full test this year delivered 1,724.57 carats from 2,520 tonnes of material, which yields a grade of 0.68 carat per tonne.

The grade is no surprise, as Peregrine tested 353 tonnes of the pyroclastic rock last year and recovered 311 carats, which pointed to an average grade of 0.88 carat per tonne. The biggest difference between the two samples was that Peregrine managed to rake in a larger supply of big diamonds in its current sample.

Diamonds larger than a six-millimetre screen weighed 117.25 carats in the 2007 test, and those stones provided 7.5 per cent of the total diamond weight. Last year, the six-millimetre stones contributed just 4.3 per cent of the parcel and most of those gems came from the northeastern lobe, not the main vent.

Peregrine recovered 670.52 carats of diamonds that sat on a three-millimetre sieve in its 2007 bulk sample, and those gems provided 42.7 per cent of the parcel. Meanwhile, the 2006 test delivered 120.92 carats larger than a three-millimetre cut-off, and those diamonds accounted for just 31.7 per cent of the parcel.

The diamond size distribution curve is clearly superior in the latest sample and that bodes well for the diamond value, but larger samples are expected to flesh out the numbers of stones in the larger size bins. That expectation is a key reason why modelled diamond values typically exceed actual valuations by a substantial margin.

In 2006, Peregrine's modelled diamond value, after a few optimistic twists and turns, managed to hit \$70 (U.S.) per carat. The company never revealed the actual value given to the diamonds, but it was considerably lower, coming in at less than \$40 (U.S.) per carat. As a result, much of the added parcel value ascribed to the larger diamonds will go to closing the gap between the appraised and modelled values.

Peregrine also has a number of diamonds that appear to be of top quality. Some of those stones appeared in a small test in 2005, but the largest gems in the 2006 sample were generally of inferior quality. The latest test confirms that much of the DO-27 value will come from a small number of big, valuable gems. That is normal in an economic diamond deposit, and their presence is an encouraging sign for the project. Still, expectations for diamond valuations beyond \$75 (U.S.) per carat may be overly optimistic, without any hidden surprises.

The tonnage question

Peregrine will also have to show it has a large amount of kimberlite capable of delivering the sample grades and diamond values. Although the sample results from the pyroclastic phase appear encouragingly uniform, the other kimberlite tested produced markedly lower results. Still, much of that material could be economic to mine, if Peregrine can show it has enough kimberlite in the richest regions to support what could be a costly mine.

Peregrine's next tasks will be to prepare a resource estimate for DO-27 and flesh out a plan to wash away much of the kimberlite, rather than sending it all to a processing plant. That would allow the company to lower its operating costs significantly, enhancing the prospects of making a mine. Washing away the kimberlite mud is resulting in some gaudy grades, but it also produces a corresponding drop in the amount of material available.

Peregrine closed down nine cents to \$1.21 Monday on 32,600 shares.