



Looking down on the campsite of the Sulphurets Project, a large high grade gold/silver property located in the Stewart Area of Northwestern British Columbia.



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Newhawk Gold Mines Gearing Up For Gold

By Vivian Danielson

British Columbia has its own unique breed of "wilderness gold-seekers" and perhaps no one in the province today fits this description better than mining veteran, Donald McLeod. A native of the Stewart area of Northwestern British Columbia - where as a young man he got his start in the mining business - McLeod has accumulated years of valuable practical experience in dealing with the unique conditions of this rugged, but very mineral-rich, corner of the province.

Since the 1920's when incredibly high grade gold and silver production began from the Silbak Premier Mine in the Stewart area, Northwestern B.C.'s mineral potential has been the kind from which mining dreams are made. It has only been in recent years however, that B.C. junior companies active in the area were ever able to raise sufficient exploration funds on their own to bring this potential to light. In spite of short working seasons and logistical hardships, some of these juniors have been enormously successful and today Northwestern B.C. is widely recognized to be the most highly mineralized region of the province. This belief is being attested to by an increasing number of advanced precious metals projects, at or near the production decision stage.

One of these projects is the Sulphurets, a joint venture between Newhawk Gold Mines Ltd. (60% and operator) and Granduc Mines Ltd. (40%). (Lacana Mining had previously held a 30% interest but exchanged it for a 41% share position in Newhawk.) Sulphurets is a large, 33 square mile gold/silver property - which Newhawk claims is emerging as one of the highest grade deposits in Canada, with grades similar to those of the famous Premier Mine in its earlier years.

Don McLeod, president and chief executive officer of Newhawk Gold Mines (a company associated with his Northair Group), counts among his many years of mining experience a stint at Premier as mine superintendent, and later, in the early sixties, as mine manager. This exposure to precious metals at a time when B.C. mining mostly meant base metals, proved to invaluable when the most recent gold rush began and once again put the spotlight on Northwestern B.C.

"Millions of dollars and hundreds of thousands of man-hours have been spent to find another Premier Mine," said McLeod in a recent interview. "And no wonder. If you took what that mine produced from the start of production until it closed and calculated it in today's price of metals, you're talking billions. It was probably one of the highest grade mines in the world in its early years, and was able to finance itself

from its rich ore, even at \$20 gold and \$1.00 silver."

McLeod gives much of the credit for Northwestern B.C.'s current prominence in exploration and mine development to two factors - modern transportation methods and the availability of flow-through financings. "Up until the last several years we didn't have the ways and means of getting around which is what really held the area back. Now we have the ability to move in huge quantities of fuel, supplies and people. But the number one thing was flow-through...without it so many things wouldn't have happened in this province and in the rest of Canada. Now when we get good holes we can call people like Alex McDonald at NIM, or risk-takers like Peter Brown, and get the money we need to do the job right. It's been the godsend of the mining industry."

McLeod also says that without flow-through the Sulphurets Project "probably wouldn't have happened", even though he knew of its gold potential as far back as the sixties.

The Sulphurets story goes back to a couple of Americans, Wendell Dawson, the original discoverer of the Granduc Copper Mine and his partner Don Ross, a pilot-pro prospector who had also found several orebodies. After seeing gossans over in what is now the Sulphurets Property, the two men staked them for copper and moly and optioned them to Granduc Mines.

"At the time, Newmont was involved in Granduc and they sent out a prospector named Stu Barkley in the early sixties," recalls McLeod. "He made the first exciting gold-silver discoveries in what we now call the Hanging Glacier Zone."

"At that time I was Manager of the Premier Mine and after hearing about this discovery I went out and staked what is now the Brucejack Lake Deposits."

McLeod's involvement with the area continued even after leaving Premier and going on his own, first with Northair Mines and later with several more public companies, including Newhawk Gold Mines.

"We had no funds in those early days," he remembers. "We were trying to raise money at ten and fifteen cents a share and eventually had to let the claims lapse. Esso Minerals then came along and took over the Granduc Mine from Newmont and part of that deal was that they also spend some money on the Sulphurets. Esso did, and in 1983 they actually made the discoveries that we are working on today. So these discoveries aren't even five years old yet."

"When Esso pulled out of the Granduc Copper Mine they also pulled in their horns on their land holdings in the general area," recalls McLeod. "At that time we were discussing a joint venture with them on Sulphurets and then for some reason they decided to drop the option. Being Johnny-

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Production At Sulphurets

on-the-spot we jumped in and acquired the option from Granduc in July of 1985."

Newhawk began a \$500,000 work program on the Sulphurets in 1985, spent another couple of million in 1986, and are now completing their \$5 million 1987 program.

While there are a minimum of 15 known zones of mineralization on the property, exploration and development has concentrated on an area known as the Brucejack. At the end of 1986, reserves had been outlined in the Brucejack area of 1,584,145 tons grading 0.336 ounces of gold per ton and 22.86 ounces of silver per ton, representing 532,272 ounces of gold and 36,213,554 ounces of silver in place. Work conducted in 1987 is expected to increase these reserves and new calculations are currently being compiled.

Meanwhile Newhawk says that underground development on the West Zone is proceeding on schedule, with a total of 1,373 feet of decline, 901 feet of drifting and 150 feet of raising completed to date.

According to Fred Hewett, P. Eng., Vice-President and Exploration Manager, mineralization from the drift has averaged 0.486 ounces gold per ton and 40.43 ounces of silver per ton across an average width of 8.9 feet over a length of 105 feet. The decline to the 1300 metre level is scheduled for completion in early January with an extensive underground diamond drilling program to follow.

Newhawk also recently reported additional surface diamond drill holes with spectacular results, including: (from West Zone step-out drilling) 18.6 ft. of 1.038 oz/t gold and 2.09 oz/t silver; 10 ft. of 9.718 oz/t gold and 7.72 oz/t silver; 10.9 ft. of 6.326 oz/t gold and 2.79 oz/t silver and (from West Zone infill drilling): 18.1 ft. of 0.884 oz/t gold and 1.46 oz/t silver; 7.8 feet of 0.872 oz/t gold and 1.40 oz/t silver and 5.4 feet of 6.570 oz/t gold and 2.10 oz/t silver. Recent results from the Gossan Hill Zone include: 4 ft. of 10.930 oz/t gold and 11.90 oz/t silver; 9.9 feet of 4.188 oz/t gold and 3.92 oz/t silver and including 3.7 feet of 10.741 oz/t gold and 9.80 oz/t silver.

Even though the seasons are short in this region, Newhawk feels it has made significant accomplishments in the past several years. "We've come a long way," says McLeod. "We've now done several thousand feet of underground development and probably drilled well over a hundred thousand feet including 35,000 this past summer. We have a permanent camp on site now and we even have an overland route, which everyone thought was one of the impossible things to do. At this stage its only a temporary tote road, but its being proven that quantities of fuel and supplies can be hauled over a glacier using the

right techniques and the right equipment."

"Sulphurets has always been thought of as having a location problem," admits McLeod, "but we've fought very hard to overcome this in the eyes of many mining analysts and I think we can now prove without any doubt at all that the economics of mining this deposit are there."

Overland access to the Sulphurets from Highway 37 was accomplished in mid-November in order to bring in supplies to allow for continuation of work through the winter.

McLeod says however, that the most important thing Newhawk has done this past season is to prove the depth potential of the deposit.

"Historically, most of the mines in British Columbia have not had great depth potential, including the Bralorne and Pioneer Mines and also the Premier Mine, which, as the system went down, the gold and silver grades depleted. We think we have the reverse case here...the grades appear to improve at depth. We're confident this thing will go for least another 1000 feet below the lowest drill hole."

"Instead of looking at a shallow 500-800 ft. depth deposit, we're now maybe looking at thousands of feet. It's going to take a lot of work, a lot of time, and a lot of money, but I'm very confident that the geology of these structures is so strong - with no indication at all of a narrowing, any fracturing, or a decrease in grade - that if this property were in Quebec or Ontario, where they have an abundance of analysts, they'd be as excited as I am."

McLeod said there was some concern in the early stages that there might be a continuity problem but this was later found to be the result of a misinterpretation of the strike of the zones. McLeod says the recent drifts on ore have shown both the grades and continuity to be excellent.

Asked about the ground conditions, McLeod says they are the best he's ever seen. "There are only three rock bolts in all of the underground development. You can mine that deposit any way you want."

"Dilution will be very, very low" he said. "And it could be zero, because you have an assay wall. The combination of the good ground, the good geology and the assay wall is going to make it very easy to mine and very easy to hold your grade. There's no water to speak of and we think it's going to be a very economical operation."

What's ahead for Newhawk in '88?

"Production," said McLeod. "Late in the year, maybe by Christmas. There will be a permanent mill, designed specifically for expansion, built on site. Our attitude is not to start too big - probably in the 400 tpd range - and put in a good size crushing plant capable of 1000 to 1500 tpd and take it from there."



From left to right, Don McLeod, Tom Drown and Fred Hewett examine drill core at the Sulphurets campsite during a property visit this past summer.

McLeod said the metallurgy is extremely simple. Most of the values are made up in metallic gold which will be taken off by gravity and a bar poured on site. The silver is mostly associated with minor sulphides which McLeod says will make a very clean and high grade concentrate with a ratio of 40:1.

Gold production based on reserves and grades of last year have been estimated (at 500 tpd) in the order of 50,000 ounces of gold and 3,380,000 ounces of silver. McLeod says the company now expects that gold production numbers "may be much higher" based on the fact that the gold-silver ratio has changed dramatically from recent exploration results from the southern extension of the deposit.

"This doesn't bother us a bit," he said. "Because it's much cheaper and economical to market a dore bar than it is to ship a concentrate."

Total capital costs have been roughly

estimated in the order of \$20-\$25 million with the single highest cost item being the road. The company hopes to finance the project with a gold loan and expects very little further dilution on its issued shares.

Newhawk is now working towards its Stage I Report and has also recently received a favourable report on installing its own hydro-electric plant.

"We're extremely pleased with the way things have gone on this project," said McLeod, "and with our association with Lacana. We are going to continue to operate as a separate entity with their support. They recognize that juniors like ourselves, with some background in mining, are the ones to operate these remote, difficult, smaller mines."

Meanwhile exploration work will continue on other portions of the property. "The challenge at Sulphurets now is not to bring it into production...the challenge now

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