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Heatherdale Resources Ltd., a Hunter Dickinson Inc. affiliate, is aggressively exploring the Niblack copper-gold-silver-zinc project on Prince of Wales Island in Southeast Alaska. Some 18,000 meters of underground drilling completed by the junior over the past year has traced nearly 1,000 meters of precious metal-rich volcanic massive sulfide mineralization under Lookout Mountain. Page 3

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ALASKA

Explorer expands metal-rich VMS at Niblack

Heatherdale traces long sections of continuous mineralization through Lookout Mountain; new resource, geological model on the way

By SHANE LASLEY
Mining News

Heatherdale Resources Ltd., a subsidiary of Hunter Dickinson Inc., is living up to its pledge to aggressively explore the Niblack copper-gold-silver-zinc project on Prince of Wales Island in Southeast Alaska. Some 18,000 meters of drilling completed by the junior over the past year traced nearly 1,000 meters of precious metal-rich volcanic massive sulfide mineralization under Lookout Mountain.

Heatherdale optioned the project from CBR Gold Corp. (now Niblack Mineral Development Inc.) in July 2009 in hopes of earning a 51 percent interest in the Niblack project by spending US\$15 million by mid-2012.

The junior completed its first US\$5 million exploration program in June, and is currently on track to complete an initial US\$15 million earn-in commitment around the beginning of 2011.

"We did an announcement when we were at the US\$5 million, and our spending has remained steady, Lena Brommeland, Heatherdale's executive general manager, told Mining News Aug. 18. "Drilling with two drills, we continue to find more, and in typical Hunter Dickinson fashion, we are going to keep expending the money we need to develop the resources to move this project forward."

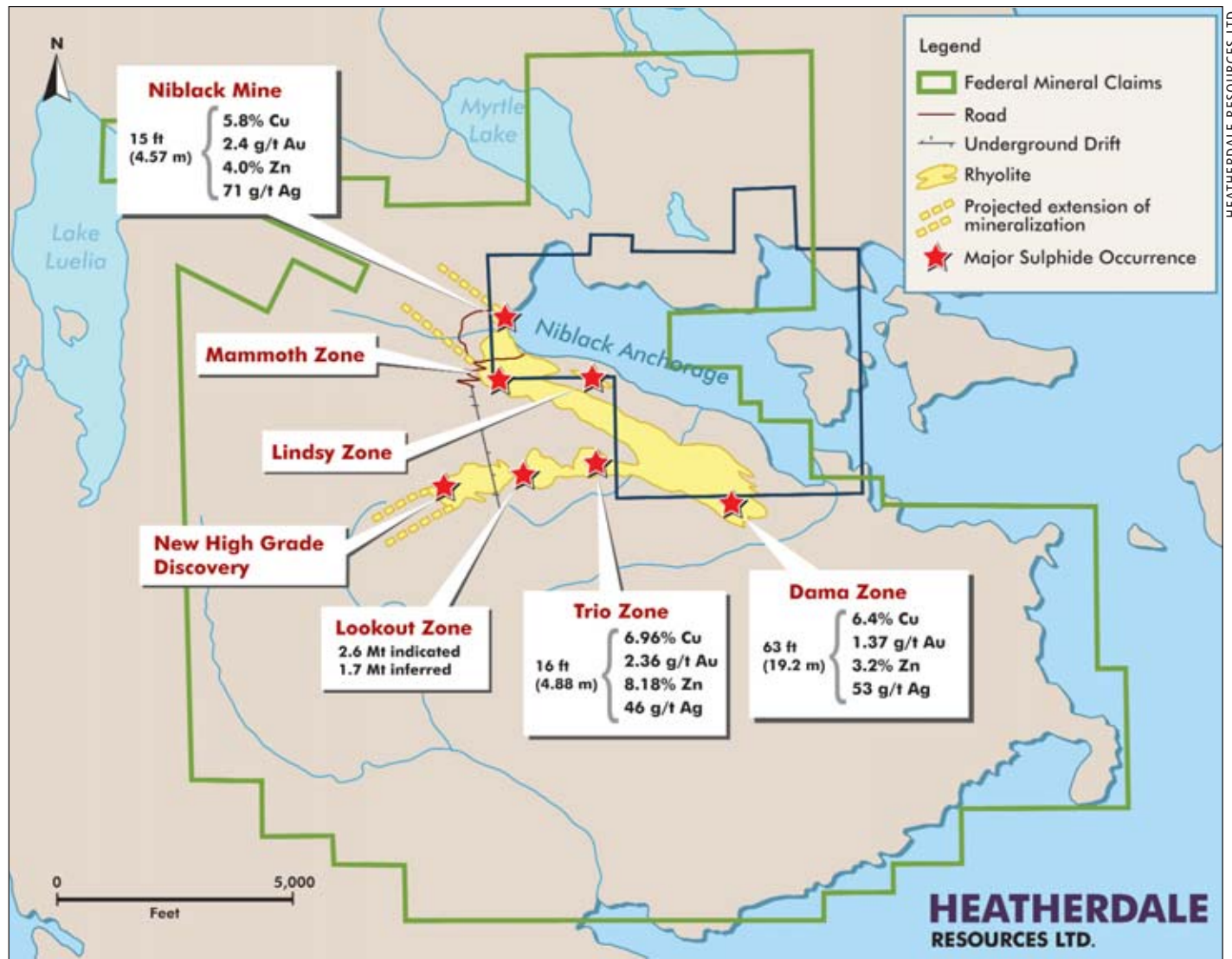
Once Heatherdale completes the initial commitment, it can increase its stake in the project to 60 percent by spending another US\$10 million and then to 70 percent by completing a positive bankable feasibility for the copper-gold-silver-zinc project.

"We fully intend to continue our investment at Niblack to move the project forward in a timely and efficient way," said Heatherdale President and CEO Dave Copeland.

Mine maker

When Heatherdale took over exploration of the project, an area known as the Lookout zone had a previously defined indicated resource of 2.272 million metric tons grading 2.42 g/t gold, 34.66 g/t silver, 1.27 percent copper, and 2.36 percent zinc. The deposit also had an inferred resource of 1.712 million metric tons grading 2.08 g/t gold, 32.56 g/t silver, 1.55 percent copper and 3.17 percent zinc. The estimate was based on a US\$50 net smelter royalty cut-off.

What piqued Hunter Dickinson's interest in the project was high-grade mineralization struck by CBR Gold in an area to the southwest of the defined resource. Drilled late in 2008, holes U027 and U028 intercepted a previously unknown precious metal-rich zone with values nearly three times greater than the Niblack average.



"In terms of gross metal values, the dollar value of the rock was double and triple what had been seen in the historic resource," Brommeland told Mining News.

The Heatherdale executive characterized the new discovery as a "mine maker."

"When you can peg into one of the high-grade zones in a deposit and establish substantial tons of that kind of grade, it really doesn't take that many tons in order to make an economic deposit; and so we established our drill program in that higher grade mineralization, and we have continued to expand the mineralization in that zone," she said.

Precious metal-rich zone grows

Heatherdale began investigating the higher grade extension of the Lookout zone by fan drilling the target from a 1,000-meter underground exploration drift completed in 2008.

As of mid-July the junior had received assay results from 10,670 meters of drilling. The results from these 23 holes, which were fan-drilled from six underground drill stations, indicate that the precious metals-enriched system located southwest of the Lookout deposit continues to expand and remains open in several directions.

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U029, the first hole of Heatherdale's underground program, cut 18.7 meters with an average grade of 2.4 g/t gold, 48 g/t silver, 1.4 percent copper and 2.8 percent zinc. The best intersection of the first three holes was in U031, which cut 43.9 meters grading 3.01 g/t gold, 76 g/t silver, 2.25 percent copper and 8.66 percent zinc.

These precious metal-rich intercepts have continued throughout the program. U052, the most recent hole for which assays have been released, cut 9.7 meters averaging 1.49 percent copper, 3.78 percent zinc, 1.86 g/t gold and 85 g/t silver; and included 3.8 meter section grading 1.92 percent copper, 6.95 percent zinc, 3.25 g/t gold and 160 g/t silver.

"The assay results released today confirm the continuity of high-grade VMS mineralization at Niblack, and reflect a consistently strong and improving grade profile and growing resource base," Copeland said July 13. "The findings validate our geological team's growing knowledge of the precious metals-enriched system we're seeking to delineate, and enhance our confidence that we will define a polymetallic VMS deposit with the grades, volume and other characteristics necessary to support an economically robust underground mining operation in future."

New geological model

A new resource estimate not only will outline the high-grade VMS mineralization the explorer has delineated with its aggressive underground drill program, but also will debut a new geological model for the Niblack project.

"I'm looking forward to being able to tell the world, when we do our new resource calculations, what we have here," Brommeland said. "We have been pretty-much focused on understanding the geology so we can put together the model and then do a block model that is not only the grade-shell; it is a model that incorporates the geological environment," Brommeland explained.

The geology under Lookout Mountain is relatively simple compared to other VMS deposits. The mineralization has not been broken up by extensive localized faulting and folding.

"We have done a bit of a reinterpretation of the geology. Historically Niblack was thought to be a very complex structurally modified deposit – a lot of folding, a lot of faulting," Brommeland explained. "We don't see a lot of offsetting, and we don't see a lot of complex folds. That has been a



The bulk of the drilling completed by Heatherdale Resources has focused on expanding a new mineral-rich zone west of the Lookout Deposit. U052, the most recent hole for which assays have been released, cut 9.7 meters averaging 1.49 percent copper, 3.78 percent zinc, 1.86 g/t gold and 85 g/t silver; and included 3.8 meter section grading 1.92 percent copper, 6.95 percent zinc, 3.25 g/t gold and 160 g/t silver.

game-changer for the project. That is something we are definitely using to our advantage as we step out from known mineralization, and continue to expand the deposit."

This lack of complexity, coupled with the fact that both exhalative and replacement style mineralization exist, provide for large continuous sections of thick mineralization.

Exhalative deposits are formed when ocean water is drawn down and heated by the volcanic rock, creating a mineral-rich brine that is then "exhaled" back into the ocean creating layers of sulfide ore. This process continues today in the form of black smokers on the ocean floor. When the brine is trapped in the ocean floor sediments, it is considered replacement-style mineralization.

"We see replacement-style mineralogy as well as exhalative characteristics and stack sequences," Brommeland explained. "It's complicated in terms of being predictive of where those true exhalative sequences are, but once you are onto one of these replacement-style zones they can be rather large."

She said the company is encountering zones that are more than 150 meters thick with widths in excess of 20 meters and running several hundred meters long.

Connecting the zones

Heatherdale's drill program has con-

nected the new precious metal-rich zone to the Lookout deposit, extending Lookout about 300 meters to the west. The drills at Niblack have the reach to continue to expand the deposit in this direction before the drift needs to be extended.

"At some point here we will definitely need to do underground development, and the timing of that is going to be dependent on when we achieve the maximum we think we can achieve from the underground stations," Brommeland explained.

The company has plenty of targets to investigate before it needs to expand the exploration drift, a nearly horizontal tunnel. The 1,000 meters of underground development was dug out to explore the mineralization to the east of the Lookout Zone and below the drift where rhyolite, an intrusive volcanic rock, winds its way through the mountain.

"We have those underground workings that provide us with a fantastic platform for exploration," Brommeland said. "We just initiated some holes off to the east (of the drift). The majority of the drilling that was done historically was done above the elevation of the drift, we also have expanded the resources by drilling below the elevation of the drift."

The Trio Zone, which is located about 400 meters from the Lookout Zone as the VMS mineralization plunges to the east,

is one such target. An inferred resource at Trio of 493,000 metric tons grading 1.77 percent copper, 3.47 percent zinc, 2.06 g/t gold and 31.5 g/t silver is included in the previous estimate for Niblack.

The executive director said if drilling cuts mineralization in an untested gap of about 220 meters, some 900 meters of continuous mineralization from the zone west of Lookout through Trio will have been outlined.

From Trio the rhyolite continues along strike about 800 meters to the Dama Zone before it turns west on a limb that extends some 2,100 meters to the historical Niblack Mine.

A previous intersection at the Dama Zone cut 19.2 meters grading 6.4 percent copper, 3.2 percent zinc, 1.37 g/t gold and 53 g/t silver. Because of the folding, it is anticipated that the mineralization will be particularly thick in this area.

The lack of geological complexity suggests that VMS mineralization could continue unbroken as it winds its way through these known zones from the historical Niblack mine to the newly discovered zone beyond Lookout.

"This system is amazing actually. All of our geoscientists that are on the project have seen a lot of these types of systems, and they are really impressed with this one," Brommeland said. "Their enthusiasm is really kind of contagious!" ●

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