

Mount Hope

Eureka moly deposit largest in world

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ELKO — The folks at Idaho General Mines Inc. probably aren't singing a variation of "Good Golly Miss Moly," but nobody would blame them if they were.

After all, the Spokane, Wash.-based company's Mount Hope project near Eureka is home to the world's largest undeveloped molybdenum deposit, with more than 1 billion pounds of the mineral. The company's other moly project in Nevada, Liberty near Tonopah, is home to another world-class deposit with close to half a billion pounds in reserves.

Of the two, however, Mount Hope is closer to startup with feasibility studies winding down and the permitting process ramping up, said Pat Rogers during an interview at the com-

pany's Elko office. Rogers is the firm's director of environmental and permitting.

Moly is primarily used in stainless steel, but end users are finding more applications for the versatile metal all the time, according to Greg Ferdock.

In addition to stainless steel, moly is also used in specialty steels and high-tech applications, and there are no substitutes in most cases.

Ferdock said moly improves corrosive resistance to steel, makes it harder and more durable and increases steel's melting point — which makes it particularly attractive in structural steel and military applications. Ferdock said moly is "essential" to national defense.

Currently, the only active moly mine in Nevada is Ash Downs in northern Humboldt



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Greg Ferdock, left, and Pat Rogers of Idaho General Mines Inc. discuss two molybdenum projects the company has in the hopper.

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County, but moly is virtually everywhere in the region. "There are literally dozens and dozens of prospects in Nevada," said Rogers, but "very few actually produce moly."

At Mount Hope, the anticipated life of mine is a staggering 50-plus years. It will be a pit surface operation. The pit will eventually reach a debt of more than 3,000 feet and stretch more than 5,000 feet, Rogers said. The milling process is somewhat similar to gold in that the product will go through a flotation circuit. Unlike gold, however, chemical leaching is not required.

While roasters at gold mines roast ore, moly roasts only what is separated in the float circuit, and is aerated in a mix of water and diesel.

The targeted construction start is early 2009. Until then, Idaho General Mines has its work cut out. Rogers and Ferdock said a variety of permits must be obtained and an environmental impact statement completed.

The mine plan and design must be finished, and "bankable" feasibility studies finalized. Rogers anticipates

a 15-month construction schedule. The mine will ultimately employ between 350 and 400 employees.

Moly is sold by the pound and like virtually all metals, its price has increased dramatically over the past four years. Indeed, a pound of moly has gone from \$4 in 2003 to \$35 today. At today's costs, the company will spend roughly \$7 on every pound produced.

The future looks bright, Rogers said, because supply has not kept up with demand, driven in part to a burgeoning China.

On the environmental side, Rogers said wasterock management "is going to be a big issue. We've done a tremendous amount of wasterock analyses," he said, adding certain rocks could produce acid if exposed. To mitigate the potential problem the company is developing covered dumps to protect rock from water.

On the subject of water, Ferdock, director of geologic exploration and development, a hydrology plan was developed by SRK that is currently under review by a series of consultants.

Dewatering could impact nearby ranchers in Diamond and Pine valleys as well as the Kobeh Basin. A number of monitoring wells will be established.

The water table depth varies within the planned pit footprint, from 150 to 400 feet. Most of the anticipated 7,000 gallons per minute pumped will be used in the milling process and a well facility in the Kobeh Basin will supply the remainder.

There are also socioeconomic issues, ranging from the potential to greatly increase the population of Eureka, favorably impact the local economy and quality of life.

"We'll do a social impact assessment," Rogers said, adding the mixed bag of impacts will likely be addressed proactively. "I think we've done a good job," said Rogers, "and they (Eureka and Eureka County officials) have been fantastic."

The concerns of American Indians are being addressed as the area is a popular pine nut harvest area in early fall. The mine has been designed to avoid cultural resources, including a portion of the famed

Pony Express trail.

Close to \$750 million will have been spent before mining starts, said Rogers, but that's small potatoes compared to the big picture. The Mount Hope project, for instance, will hold 8 percent of the world moly market.

With little housing available and competition for workers from Barrick Gold of North America's Ruby Hill gold mine, Rogers said Idaho General Mines plans to develop a subdivision on land that was annexed into Eureka several years ago.

The planned housing that was to accommodate the annexation never materialized, but a plan was put in place and Idaho General will work off that plan since it incorporates the community's visions for growth.

The housing will be a mixture of stickbuilt single-family homes, duplexes and apartments.

The Liberty project near Tonopah is months behind Mount Hope in terms of feasibility studies, but mining has occurred on site in the past so much of the needed infrastructure is already in place.