OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
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Abandoned mine features uncovered with lidar
Potential danger for public, foresters, firefighters revealed with new maps

PORTLAND, Ore. – New maps of the North Santiam Mining District reveal the tenacity of historic prospectors, as well as information that's critical today for public safety and the protection of foresters and firefighters.

The district, which sits in Marion County within the Willamette National Forest, is one of five gold and base metal mining districts that stretch throughout the Cascade Range from the Columbia River to the California line. First mineral claims in the district were made in the 1860s, with placer gold discovered there. But mining was no easy feat.

"The mountains are rugged, with steep, densely forested terrain," says Clark Niewendorp, industrial minerals geologist with the Oregon Department of Geology and Mineral Industries (DOGAMI). "Prospectors had to be extremely motivated to get in there."

Though the area's gold rush was short-lived, prospectors found veins that carried copper with zinc and lead. By the 1940s most mines were inactive, but mining resumed in 1977 with Shiny Rock Mining Corporation's reopening of the Ruth Mine and development of several other claims. Mining in the district ceased in 1992 with the closure of the Ruth Mine.

Decades of activity left abandoned mine features, obscured over time by the same heavy vegetation that made historic access a challenge. But DOGAMI's use of lidar, which provides accurate high-resolution images of the earth's surface, offers a clear look at the mine features.

"We can now see an incredibly detailed image of the earth's surface," Niewendorp says. "Lidar imagery has real value for inventorying abandoned mine land, because it can show mine openings that weren't well documented, or that were even completely unknown."

The maps reveal 226 abandoned mine features in the district, including mine entrances, exploration pits, and waste rock areas. Previous mapping showed only 58 abandoned mine features.

The Oregon Department of Geology and Mineral Industries provides earth science information and regulation to make Oregon safe and prosperous. Learn more at www.OregonGeology.org

Identifying where potential pitfalls are hidden is essential to the work of modern foresters and firefighters, who need to know where mine features are to safely and effectively fight fires and manage forest land.

"Lidar aids in the inventory and closure of abandoned mine features with the aim to protect public safety," says Ruth Seegar, area minerals geologist for western and central Oregon and western Washington with the U.S. Forest Service. "Lidar is an effective tool in advance of a ground survey because it increases the efficiency and labor of a time-consuming abandoned mine survey."

ABOUT THE REPORT
Open-File Report O-15-03, Lode Mines and Prospects in the North Santiam Mining District, Marion and Clackamas Counties, Oregon, compiled by Clark A. Niewendorp, DOGAMI, and Joseph W. Ghiorso, U.S. Forest Service, contains eight map plates.

To preview the report, visit: bit.ly/1BnMkOC. To purchase the report on CD for $15 from Nature of the Northwest, visit bit.ly/18TgQsJ or call 971-673-2331

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