



GETTING THE GREEN LIGHT

As the western United States continues to advance a number of new projects, streamlined mine permitting has once again become a hot topic. North American Mining magazine talked to Stantec Project Manager Sierra Marke about smoothing the path on these projects' journey to operation.

Edited by Donna Schmidt

The western U.S. states are stuffed with mining opportunities, and with quickly changing regulatory outlines, getting a clear path to that first truck of ore is perhaps harder than it has ever been. It's a key time, no doubt, and many developers are putting boots on the ground – pun intended – to get the most from their investments.

Of those companies brave enough to take on the challenge, some are looking beyond the soil stakes driven by the U.S. government – as the largest mining claim owner in the country – and putting their money on private land mining projects.

Even on private land, however, there are still permitting hurdles. The good news is that there are ways to not only do it correctly, but also act proactively with stakeholders. Project planning minimizes the stress of this crucial time in a mine's life.

NAM: What are the easiest ways to permit a mine, particularly one on private lands?

Marke: There are advantages to not working on federal lands. One advantage is the potential for no federal permitting with its requirements for consideration of public comments on the project. There is just local and state permitting. Federal permitting would only be required if there is a special project element that triggers the requirements for federal permitting to occur. That said, it is quite a challenge to find a deposit that is entirely on private lands and does not cross into any federal land.

The permitting process is more streamlined if the deposit, claims, exploration, and project footprint is entirely on private land. This means both the project permitting timeline and expenses significantly drop.

Once that project is acquired, we'll complete a Critical Issues Analysis (CIA) to go through the project's list of environmental resources. These resources include, but are not limited to, water, biology, noise, air, visual, and cultural resources. This assessment looks at the project from a

high overview to evaluate these resources and allows an opportunity to be introduced to potential resource impacts.

From there, we can really start planning. A CIA typically includes a permitting matrix that outlines the required permits and other documents that may be needed throughout the project duration. This is helpful to have when working in a new jurisdiction or state, as every U.S. state handles permitting differently. For example, every state has their own state laws, regulations, and agencies, and therefore, their own set of permits. For example, you may have a water pollution control permit in Nevada, but an aquifer protection permit in Arizona. There is crossover, but often the permitting matrixes and requirements are quite different.

One other factor to consider: existing sites, such as a historic site or an acquisition, tend to have documentation gaps. We find that a lot of these mine sites that have been through closure, or perhaps were not well maintained, leave the new operator with a lot of gaps pertaining to permit maintenance. In these scenarios, we will conduct a gap analysis for that site. This will help us determine which permits may have been neglected or expired, and what we need to do to make the site compliant again.

What causes scope changes when permitting a mine?

There are several factors that can cause a scope change. If you look at the big picture, most of our regulatory laws and regulations were established in the 1970s and 1980s. They've changed a lot in the last 50 years and continue to change today to adapt to our modern-day mining (and society in general). There's a lot of regulations that you'll see change, and they could impact a mining project depending on its stage.

Existing mines that have already been permitted are typically grandfathered into whatever the permitting landscape was like when the mine began. Mines in the exploration or permitting phases are much more susceptible



Stantec professionals completing a sage grouse survey in Elko, Nevada.

to changes in regulations. If a regulation changes before the permit is finalized, the permitting process may be restarted. A good example of a regulation that changes often is the federal and state special status species lists. These get updated on a regular basis. If there is speculation that a species may be added to the federal and state special status species lists, it is advisable to survey for them even prior to making list-status. Otherwise, if there is no permit in hand, we would have to wait until the following season to go back out in the field and complete those surveys for the new species.

Project design changes are another factor to consider. Permitting can be delayed for something as seemingly simple as if an eagle's nest is on the property. If there are water jurisdiction issues, or if a cultural resource is realized in the mine footprint or surrounding areas, it may mean permitting delays.

Finally, economic conditions could also change; while gold may be \$2,200 an ounce at one moment, it may not remain there. It's easy to come up with big ideas of where you want to mine when prices are up. Most of these big ideas don't sound so great once the prices decrease and the owner then has to reconsider components such as where to place certain facilities or what grade cut-off is economic. These changes may create a need for regulatory agencies to re-analyze project effects as part of their permitting processes.

What can a mine do to mitigate some of these issues, near- and long-term?

I always advise mine clients to engage agencies early. A lot of startup companies are not as familiar with permitting processes and may be hesitant to engage an agency. There is a common misconception within mining companies not engaging with agencies early because they fear it will slow down the process and create many barriers before mining. This is typically not the case. Agencies are there so that you can mine, just within regulations to limit environmental impacts.

I also recommend clients to get the baseline studies completed early. A great study to start with is collecting water resource data. Water is a huge permitting effort that requires extensive data collection and modelling. Some projects

don't maximize the chance to obtain this data during their exploration programs. Exploration drilling, typically used to determine the area geology and deposit outline, can also be utilized to gather water quality and quantity data. Doing all of this testing at once cuts down both cost and timing tremendously.

Lastly, another baseline study to conduct early is the survey for biological resources. Biological surveys are conducted based on phenology; therefore, have seasonal restrictions on timing. Due to this, depending on the timing of project initiation, you may have to wait a full year to complete a species-specific survey. That's another common issue that we run into a lot – people want to get boots on the ground and have big ideas that this will be a very streamlined, easy process, but then the realities of location, seasonality and weather set in.

What are some of the top environmental resources to consider when conducting early baseline work?

Water resources are a huge deal just because there's so much data that goes into it. When conducting wetland delineations, spring and seep monitoring, and/or surface water monitoring, it is beneficial to send a biologist and/or botanist to the field to check for special status species and vegetation.

Cultural resource studies are important to conduct early as well. Pedestrian surveys are conducted at very close interval spacing and thus is time consuming and can be expensive, especially if the project footprint is large. Cultural surveys are also seasonally restricted based on ground coverage (snow). One benefit to conducting cultural resource studies early is their lengthy shelf-life, allowing for project modifications to occur with more ease within the surveyed footprint.

Lastly, biological resource studies, due to their seasonal constraints and expansive number of species evaluated per project, can be beneficial to conduct early on to help streamline permitting processes.

Sometimes, one person can complete multiple studies, so just ask and plan ahead to see if this is a viable option to save both money and time. The more data you can collect across disciplines, the better picture you are able to paint to help streamline your permitting process.