

# GLOBAL BUSINESS REPORTS

— GBR SERIES —

## ARIZONA & NEVADA MINING 2023



Production - Exploration - Precious Metals - Green Metals  
Mine Reclamation - Innovation - Technology - Services



## Scott Bedell

President  
CALTROL

### Can you introduce Caltrol?

Caltrol is an automation company that was founded in 1934. We operate on the West coast and have offices in California, Arizona, Nevada and Hawaii. We provide control systems, valves and instrumentation, reliability programs, software, and multiple engineering and technical services to optimize our customers' operations.

Mining represents around 40% of our activity in Arizona. We work with all the mining majors and several independents. Our experience in this industry has allowed us to build mining-specific applications and solutions to help our customers with automation modernization, as many of the mines in Arizona have control systems that are coming to end-of-life. We are currently in conversations with Lithium Americas and their project in Nevada, the team working on the Hell's Kitchen project in the Salton Sea.

**To what extent are mining companies in Arizona and Nevada adopting automation as part of their processes?**

Automation is increasingly becoming more important to operating mines. Companies are asking for more return from past automation investments and additional, relevant data for decision-making. There has been a transition over the last decade to utilizing preventive technology to detect potential failures before they occur. Advanced Process Control is another area where mines could realize major operational improvements and we are starting to see more interest in this area.

Remote mining and autonomous mining are increasingly important. There are efficiency and safety gains, as well as an opportunity to gain real-time data. This has led to an afflux of data into the cloud and we are in discussions with several of our clients about how to best manage and utilize it. In many cases, what started as a pre-emption to predict failure has left us with data we can now use for optimizing plant operations and reducing emissions.

### What are the main trends that will continue to drive growth for Caltrol in the Southwest US?

One of the trends is modernizing existing automation infrastructure and leveraging OT Data in the cloud. Another trend is that customers are looking for more industry-specific solutions and service support. Without referring to sustainability as a trend, the focus in this area has increased drastically.

The West Coast is leading the country in innovation around the energy transition, the transition to electric vehicles, and other alternative processes, such as organic plastics. We are partnering with these leading companies to help automate their innovations. Caltrol has participated in nine green diesel conversion projects, and we worked with SoCal Gas on their Hydrogen Home of the Future. We are helping our long-time customers in traditional industries with their ESG journey and environmental goals by providing point solutions that reduce or eliminate emissions or water usage. ■



## Howard M. Portz

CEO  
WESTERN CAST PARTS



**We do customized supply to our customers' drawings and have a mechanical engineer who is extremely conversant in designing castings.**



**Can you give a brief overview of Western Cast Parts?**

Today, WCP remains a small company with only four people permanently on the team. Our geographical footprint spans across Canada and the US, with also some business overseas. Most of our suppliers are either in China, India, or the Middle East. We like to visit our suppliers on a regular basis to ensure that they are providing the right materials, testing, and everything that we need to supply the mining industry and major equipment manufacturers in North America.

**Can you elaborate on the products WCP offers to the mining industry?**

When I established WCP, our focus was more on manganese castings; this includes crusher parts, mill parts, and miscellaneous things like feeder pans. Over the years, the company has broadened our product portfolio to include alloy steel, high chrome irons, carbon steel, heat resistant steels, and sometimes on request nonferrous metal products like brass and bronze. We do customized supply to our customers' drawings and have a mechanical engineer who is extremely conversant in designing castings.

**How has demand for your products evolved?**

The mining industry is cyclical, and therefore in our 27 years of business we have seen peaks and valleys. That is the way it has always been, and we have set up the company to be adaptable to this. 99% of our products are made specifically to customers' orders. We thus do not hold inventory, which helps us keep our costs low and maintain a competitive advantage in the industry. We are able to react quite quickly to the trends. For example, commodity prices have been great over the past year and our business reflects that – we have been extraordinarily busy. With global supply chain challenges experienced over the past few years, we have been as upfront as possible with our customers, and we have all worked well together to mitigate this challenge to still make things happen.

**What is WCP's R&D approach and innovation strategy?**

Since WCP is basically a brokerage company, we rely on our partner foundries for R&D. They do a great job in working within their companies to try and improve the materials we work with, which we can then pass along to our customers as applicable. ■



## Braden Lusk

President Americas  
DYNO NOBEL

**Could you share some details of Dyno Nobel's latest innovations in blasting technology?**

As technology advances, we have developed some unique products. One of these is ΔE (DIFFERENTIAL ENERGY), a proprietary bulk explosive. We are also applying ΔE2 (Delta E Squared) technology, which utilizes data from drills or other sources that characterize rock properties to allow targeted placement of energy in the blast hole. It enables mine blasting load plans to be sent directly to our state-of-the-art bulk emulsion trucks to help ensure boreholes are loaded as designed using our DynoLogix software. We have seen great results with these technologies. As we progress, we will use these materials combined with our latest generation electronic detonating systems, our DigiShot Plus 4G, to control the blasting outcomes the way we need to.

In addition, we are investing heavily in developing technologies related to more efficient energy use and looking at automated loading and wireless initiation systems.

**What can you tell us about DigiShot Plus 4G system and how digitalization is shaping the company's innovation focus?**

The DigiShot system has evolved over several years and the DigiShot Plus 4G system is top of the line in the market. One of our products that work well with DigiShot Plus 4G is our Commander Blaster System. It provides flexibility for larger mines in their blasting initiation sequences and remote firing.

Digitalization affects every aspect of the company. We are working to understand how our customers can improve their milling processes by providing real-time data-driven information. For example, using ΔE2, we can program the drilling and loading truck to deliver the right amount of explosive energy to each hole at different levels. Then, we receive digital records for our blast reporting. This wealth of data over the life of a mine allows us to understand and track the blasting history and gauge efficiency.

**What impact can Dyno Nobel have on the productivity of mining operations?**

Our goal is to discover our blasting procedures' outcomes and change our processes to provide the customer with the desired outcomes. This requires strong relationships, expertise on the side of both companies, and a digital interface that makes it easier to map and implement the desired results. So, being able to integrate previously disconnected systems and being able to connect data from machines at the mine site to our systems has been critical.

**What is Dyno Nobel's approach to training and education, and could you give some insights into the Nobel Academy?**

Dyno Nobel has launched several programs inside the company through what we call the Nobel Academy. It starts with our blaster and operator training and goes all the way to leadership training. Dyno Nobel not only trains its staff but also our customers' employees on how to safely operate with our systems and products. ■

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