Bell Creek Project

CASE STUDY

CLIENT: Pan American Silver

SERVICE: Integrated paste-fill drilling program

LOCATION: Porcupine, Ontario

INTRODUCTION

Foraco partnered with Pan American Silver to deliver a technically demanding drilling program at the Bell Creek Mine in Porcupine, Ontario. The project formed part of a broader paste backfill expansion designed to strengthen underground stability and extend the mine's operational life.

Bringing together multiple Foraco divisions, the team executed a coordinated drilling solution that combined innovation, precision, and safety. The project exemplified Foraco's ability to manage complex, multi-discipline operations while maintaining exceptional communication, collaboration, and efficiency from start to finish.

PROJECT

The Bell Creek program involved drilling a series of large-diameter boreholes to complete a new paste-fill delivery system within the mine. Foraco managed every stage of the work, including pilot hole steering, directional control, reaming, casing installation, and cementing.

Precise alignment between surface and underground drilling was achieved through close coordination among Foraco's Surface, Underground, Percussive, Rotary, and Directional Drilling Divisions. The project was completed in partnership with the **Taykwa Tagamou Nation**, reflecting a continued commitment to collaboration and local engagement.

KEY EQUIPMENT

- Surface Coring – Atelier Val-d'Or drill rig VD8000: Completed two surface pilot holes to depths of approximately 415 metres. Each hole was directionally drilled using the Continuous Wedging Tool (CWT), achieving a [insert accuracy %] alignment with underground intercepts.

KEY EQUIPMENT

- Underground Coring –Boart Longyear LM 90: Drilled [insert number] underground holes to depths between 265 and 310 metres with a diameter of [insert number]. Each hole was directionally drilled to align with the surface pilots, achieving a [insert accuracy %] connection.
- Rotary Drill (Surface) – Foremost DR24 HD: Supported surface-to-underground connection for the paste-fill line. Each hole was reamed to a final diameter of 12 inches, maintaining precise alignment throughout the connection.
- Percussive – Sandvik Cubex 5200: Used to open underground pilot holes to a final diameter of 10 inches. Holes ranged from 266 to 405 metres in depth and were lined with threaded hardened steel casing for long-term stability.
- Casing Running Tool – CRT 25: A hydraulic casing installation system used for setting and cementing threaded steel casing in underground boreholes. The CRT 25 enabled controlled, safe handling and precise placement of casing strings, improving efficiency and reducing manual intervention during the paste-fill installation.

OUTCOME

All holes were drilled accurately and on target, achieving the required depths and diameters with no additional excavation. The resulting system forms a long-term paste-fill network designed to maintain integrity for the life of the mine.

Completed safely, on schedule, and within budget, the project delivered time and cost efficiencies by keeping all services under one provider.

Following completion, Foraco was awarded an extension to further expand the paste-fill system, reinforcing its position as a trusted partner to Pan American Silver.

CRITICAL SUCCESS FACTORS

- Foraco's Directional Drilling Division used the CWT to achieve precise hole steering and maintain alignment between surface and underground targets. This ensured each hole met the required tolerances before reaming and casing installation.
- Operational discipline and safety: We took things step by step, held our daily meetings, and paused to regroup whenever challenges came up. Using our SWPs and JHA Tools, we adapted and created new procedures as needed, including specific updates for the CRT 25.
- Client collaboration: Close coordination with Pan American Silver's special projects team maintained communication, efficiency, and shared project ownership.

Through innovation, collaboration, and a commitment to safety, Foraco delivered a precise and reliable drilling solution that continues to support Bell Creek's operations today.