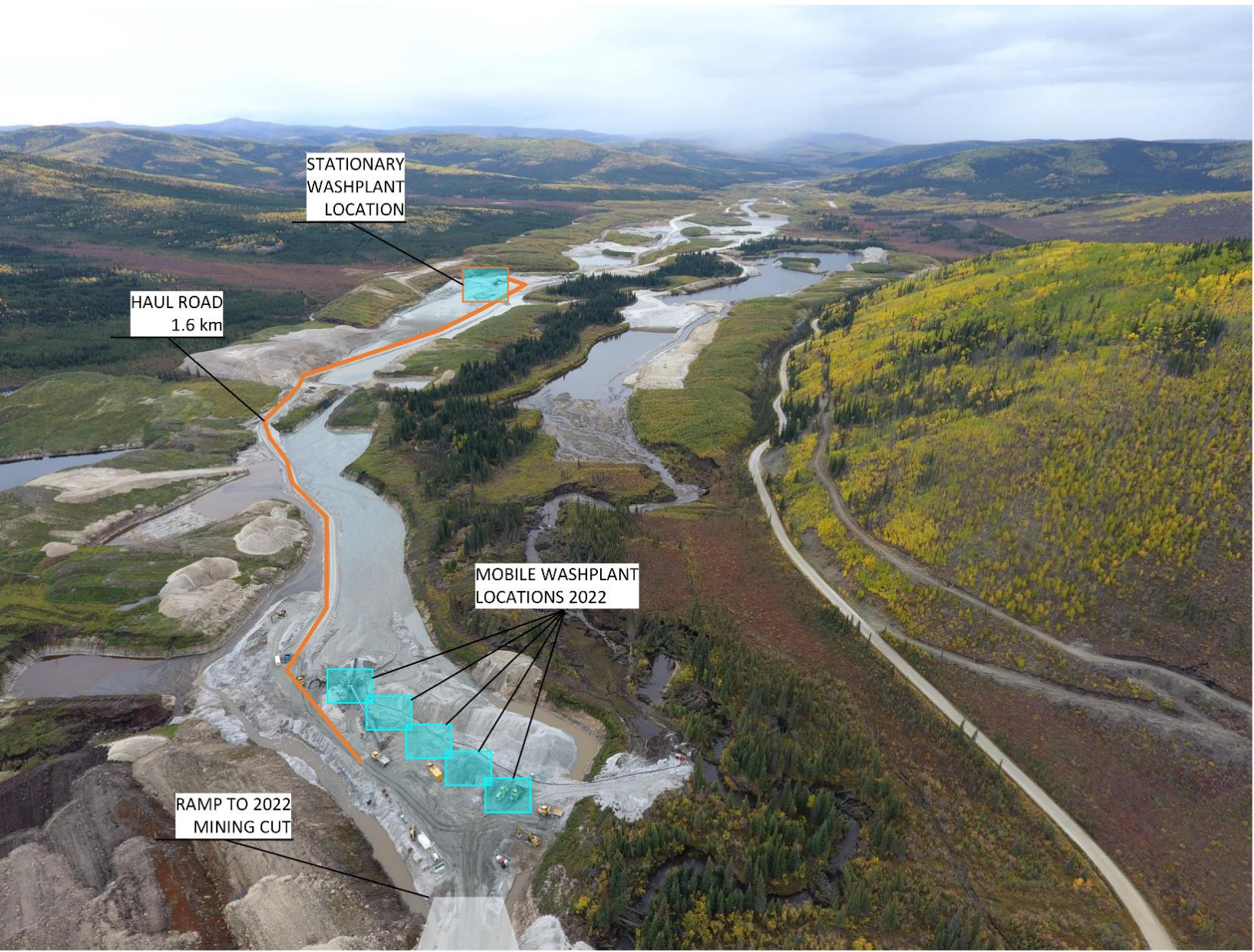


CASE STUDY

EMISSIONS COMPARISON BETWEEN MOBILE AND STATIONARY WASHPLANT CONCEPTS IN PLACER GOLD MINING





Dominion Gold Resources operates one of the largest wash plants in the Klondike. In 2022, the 30 years old stationary plant incorporating a 8' x 20' screen deck with 24' wide sluice runs was replaced by a mobile Macon SD600 washplant. Current mining operations are approximately 1.6 km upstream from the original washplant. Relocating the existing washplant was considered impractical given its size and design. In June 2022 the new washplant incorporating a 6' x 14' screen deck and 20' wide sluice runs mounted on a highly mobile, self-levelling skid frame was commissioned at the entry ramp to the active cut.

As a result of the plant upgrade, Dominion Gold reported considerable savings in fuel, water and electrical from shortening the haul distance, downsizing the pump and generator, while maintaining production levels. The mobile design of the plant allows the operator to relocate it as required in order to maintain close proximity to the active mining area and minimize tailings displacement and re-handling.

Between June and September 2022, Dominion processed approximately 180,000 yd³ of paygravels, while relocating the plant 4 times - only about 50 feet each move - for improved tailings and oversize management, backfilling last season's mining cut.

As a result of shortening the haul distance by 1.6 km, Dominion Gold's fleet of Volvo A40 articulated dump trucks accumulated travel savings of 28,500 km (both directions) during the 2022 season – more than half the way around the globe! For reference, the perimeter of the earth measures just over 40,000 km. Fuel savings directly attributed to the haul trucks are calculated as 30,900 liters, not including reduced road maintenance efforts. With diesel fuel prices averaging almost \$2.00 CAD per liter, season savings are calculated as \$ 60,000 CAD. Carbon emissions are calculated as 2.65 kg CO₂ per liter of diesel



fuel consumed, accounting for **82.0 metric tons of carbon dioxide not emitted in 2022**. Dominion Gold's transition towards a mobile washplant and respective mine plan has demonstrated benefits with respect to the requirement for the Yukon mining sector to reduce 45% of its greenhouse gas emissions by 2035.

