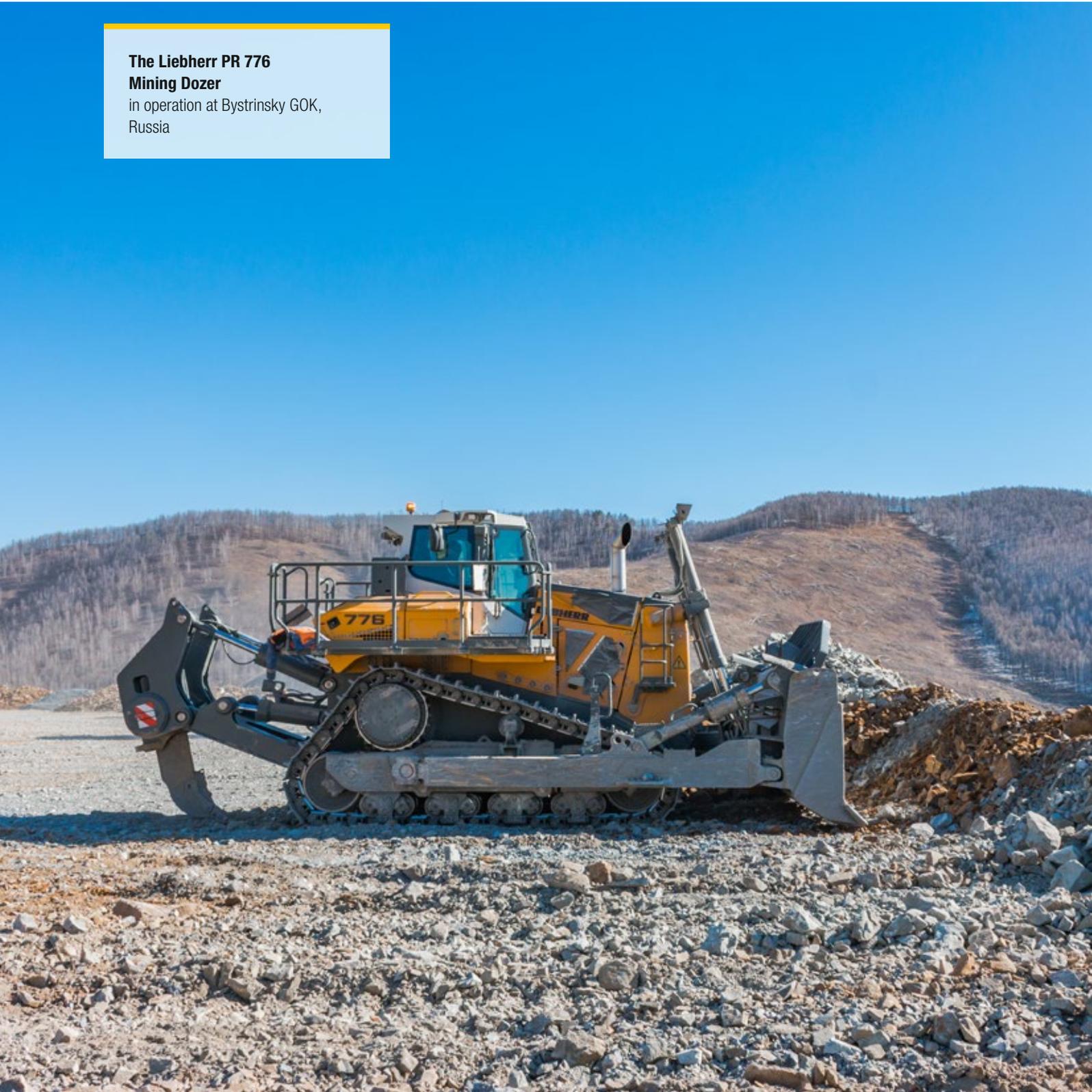


Job Report Mining Dozer

PR 776

**The Liebherr PR 776
Mining Dozer**
in operation at Bystrinsky GOK,
Russia



LIEBHERR



Overview

Russia. Siberia. The Trans-Baikal Territory. More than 6,000 km east from Moscow lies Bystrinsky GOK, one of the largest mining and concentration plants. Bystrinsky GOK is owned by Nornickel, a market-leading Russian mining company both domestically and internationally.

Globally, Nornickel ranks first in refined nickel and palladium output, fourth in rhodium and platinum production and eleventh in copper mining. The company delivers products to 37 countries and controls a unique resource base comprising 757 million tonnes of ore. More than half of this volume is located at the Bystrinskoye Deposit.

Bystrinsky GOK is the largest greenfield project in the Russian metals industry. Located in a hard-to-reach area of the Trans-Baikal Territory, Bystrinsky GOK took a mere 3.5 years to complete. In the middle of nowhere, Nornickel developed a territory of 4,400 ha, built a high-voltage substation, ran 234 km of high-voltage power lines and constructed 250 km of railroads. Bystrinsky GOK was launched in 2017 and now operates in "commissioning under load" mode. In its current state the open pit mine provides an annual ore output of 10 million tonnes.

The Challenge

In order to efficiently develop the Bystrinskoye Deposit, the management of Bystrinsky GOK chose to rely on 70 tonne dozers for ground ripping, material handling and dump formation applications. The key requirement: the dozers would have to work continuously 24/7 in harsh conditions and an unforgiving climate.

Technical Data

Engine	Liebherr D 9512 A7
Engine output according to ISO 9249 (FWD/REV)	565 kW / 768 HP
Operating weight	73,000 kg
Blade capacity	18.5 m ³ / 24.2 yd ³

The Solution

Stepping up to this challenge, Liebherr provided two PR 776 dozers that commenced operation at the mine in early 2018. Both machines shared the same configuration: a semi-U blade with a capacity of 18.5 m³ at the front, a single-shank ripper at the rear and a 12 cylinder Liebherr engine with an output of 565 kW / 768 hp.

Additionally, Liebherr fitted the dozers with an arctic package that ensured reliable and efficient operation in temperatures as low as -40°C. Among other things, the arctic package consists of pre-heaters for coolants, oils and batteries. Liebherr also put extensive effort into providing dozer operators with a comfortable and safe workplace. The operators of both PR 776 appreciated the panoramic view, ergonomics, low noise, and vibration proofing of the cabin. They also praised the smooth performance of the PR 776 undercarriage driven by Liebherr's hydrostatic transmission. For safety and comfort, Liebherr equipped the dozers with broad working platforms on both sides, to ensure quick and easy entrance to the cabin as well as fast and safe maintenance of components.

Over the course of one year, both machines exhibited high productivity, solid availability and low fuel consumption with averages of 27.1 l/h and 30.8 l/h. These results prompted the management of Bystrinsky GOK to order one more PR 776 of the same configuration in late 2018. The trio of Liebherr dozers achieved an average fuel consumption of less than 31 l/h, even after 17,000 hours of operation. By being highly productive and fuel efficient, Liebherr dozers have the potential to reduce customer's cost per tonne.

Equipment

Semi-U Blade
Single shank ripper
LED lighting
Arctic package
Rear view camera

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