

Mining Truck

T 282 C

Job Report

Fleet of T 282 C Mining Trucks
Operating at Peabody's
North Antelope Rochelle Mine



LIEBHERR

Situation

Since 1983, Peabody Energy has had a successful coal mining presence in Wyoming's Powder River Basin. Originally two separate mines, the North Antelope and Rochelle operations merged in 1999 to become one of America's largest coal mines. Located 65 miles south of Gillette, WY, the North Antelope Rochelle Mine (NARM) is located in the top coal-producing region in the world.

In 2010, NARM shipped a record 105.8 million tons of compliance coal. Nearly 2.5 billion tons of recoverable low-sulfur coal remain in an area covering almost 28,000 acres (11,331 hectares). Coal is moved at NARM by the truck and shovel method. Considering the annual shipment levels and the recoverable tonnage available, a considerable fleet of equipment is necessary to maintain current production.



Solution

In order to achieve these increased productivity goals, Peabody chose to build a fleet of Liebherr T 282 C mining trucks at NARM. The T 282 C combines a high-horsepower diesel engine with an efficient Litronic Plus AC drive system to maximize productivity and minimize fuel consumption. Having the largest payload to empty vehicle weight in its class, the T 282 C hauls more for less to achieve maximum profitability.

Discussions started between Peabody and Liebherr in 2008. Peabody Energy began replacing their smaller mining trucks with T 282 C models in 2010. As of November of that year, 14 trucks were sent to NARM, a number that was doubled four months later. At present, over 40 Liebherr T 282 C mining trucks are operating in the Powder River Basin.



Assignment Report

NARM has coal seams in this area ranging from 60 to 80 feet thick (18 to 24 meters) in reserve areas 100-400 feet below the surface (30-122 meters). Average high temperature is 85° F (29° C), and average low temperature is 10° F (-12° C), but ambient temperatures can range anywhere from -40° F (-40° C) to 110° F (43° C). As Peabody sought to maintain and increase production at NARM, a fleet of mining trucks capable of high-level productivity in extreme conditions and adaptable to various surfaces and applications was needed to meet these goals. This challenging mining environment demanded equipment that not only delivered the performance necessary to maintain and increase production, but that could also perform efficiently under such conditions.

With such a high volume of coal being extracted and moved through the mine, Peabody's goal required an extensive, cost-effective fleet of mining trucks. To make this increased production profitable, this fleet needed to be fuel-efficient in order to reduce costs, and to have the versatility to haul coal and waste.

Performance

With its versatility to consistently haul 400-ton payloads of coal or overburden and its high fuel efficiency, the T 282 C has proven its productivity while maintaining a low cost per ton. For these reasons, the Liebherr T 282 C will continue to be an integral part of Peabody Energy's increased production goal at NARM.

Technical Data

T 282 C

Drive system: Liebherr-Litronic Plus AC drive system
Engine_____MTU 20V 4000 C22
Engine Output_____2.722 kW / 3,650 HP
Gross vehicle weight_____600 t / 661 ton
Maximum speed_____54 km/hr / 34 mph
Nominal payload_____363 t / 400 ton