

Mining Excavator

R 9250

Job Report

Liebherr Mining Excavator located
at the Stockton Mine Site.
Operated by Coal Contractors in USA.



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Situation

Owned by Coal Contractors (1991), Inc., the Stockton Mine comprises a surface coal mine and adjacent anthracite preparation plant that encompasses an area of approximately 900 acres located in the Hazel Creek Valley in Luzerne County, PA. This region of northeast Pennsylvania, formed by sandstone and conglomerate, is renowned for anthracite. The mine produces seven sizes of coal for use in steel, filtration, ore reduction, glass manufacture and home heating industries.

The site has been mined at various times in the last century. Currently, the mine has reserves of 3.0 Mt run-of-mine (ROM), which equates to approximately 1.5 Mt of high quality, high carbon, and washed anthracite after processing.



Assignment Report

The Stockton Mine implemented a strategy to increase production from their current reserves. Their anthracite preparation facilities are capable of washing 500,000 tons of coal per annum. With increased national demand, Coal Contractors wished to meet their export market potential for clean coal. Therefore, primary objectives of the new Stockton Mine plan was to realize an increase in production by replacing the mine's aging equipment with newer machinery with an emphasis on safety, ergonomics, and serviceability.

Performance

As a result of selecting the R 9250, the Stockton Mine reported a production increased from 8,410 m³ to 13,000 m³ moved (11,000 yd³ to 17,000 yd³). 120,850 t of ROM coal was produced and 658,785 bank cubic yards of overburden removed during the first quarter of 2011. A total of 62,000 t of coal was washed and produced 28,376 t of clean coal. At this rate the company can remain on target to produce its estimated 400-500,000 ROM tons of clean coal per annum.

The Liebherr R 9250 excavator has been a major contributor to the success Coal Contractors has experienced at the Stockton Mine. Production has increased to 95 % of available potential. The excavator's operational efficiency has not only boosted production, but has also lowered costs. With its design geared to simplify service and minimize maintenance time, the R 9250 has brought real cost savings in a short time. After recognizing the positive impact of the Liebherr R 9250, Coal Contractors will add a second Liebherr excavator in the first quarter of 2012. By doubling their efforts, even greater productivity is possible at the Stockton Mine.



Solution

The Liebherr R 9250 was selected as their primary loading tool. By commissioning the Liebherr R 9250 backhoe excavator in May of 2010, the company estimated higher productivity than the mine's previous excavator as they aimed to maximize the 3.0 Mt of anthracite reserves at Stockton. With a 15 m³ (19.6 yd³) bucket capacity and cutting width of 3150 mm (124 in), the R 9250 requires only three passes to load coal and rock to 70 and 90 t (85 and 100 ton) dump trucks. The R 9250 has the highest specific digging forces in this hydraulic excavator range and an optimum bucket fill factor with low cycle times. Its efficient cooling concepts minimize energy consumption and maintains reliability in the extreme conditions of the mining environment.

With its panoramic view of the work area and tinted safety glass, the Liebherr R 9250's features create safe and efficient user conditions. The fully air-conditioned cab, shock-absorbant operator seat, and full lumbar support give the operator greater comfort.

The engine and pump compartment allows service personnel standing access to the drive components for maintenance. Located at average chest height, the hydraulically operated service panel is located at the rear of the upper-carriage. This offers optimum access to refill lubricants and wind-screen washer fluid, change engine oil, and for fueling. These service conveniences reduce maintenance time and costs.

Technical Data

R 9250

Operating weight _____ 250,000 kg / 551,150 lb
Engine _____ 1 Cummins Diesel QSK 45
Engine output per SAE J 1995 _____ 960 kW/1287 HP at 1800 RPM

Attachment

Backhoe attachment
Bucket capacity ISO 7451 _____ 15,0 m³ / 19.6 yd³
Cutting width _____ 3120 mm / 10'2"
Max. digging force (SAE) _____ 780 kN/175,351 lbf
Max. breakout force (SAE) _____ 859 kN/193,111 lbf