

Job Report

LRB 355 and LB 36 in Colombia

“Only Liebherr comes into consideration with such hard soil conditions.”

Daniel Rodriguez, Foundation Unit
Business Manager, Mincivil S.A.



LIEBHERR



Situation

As part of a construction project the infrastructure, especially for freight traffic, is being improved between the Departamentos Tolima and Cundinamarca, two political administrative districts in Colombia. The work is being carried out between January 2016 and December 2021. It involves the

development of the road network from Mosquera to Balsillas, which lies 230 km to the south-west. The project also involves the construction of 16 bridges, achieving an improved link between Tolima and Cundinamarca.

Application

Mincivil, contractor of the project together with Topco S.A., is using deep foundation machines from Liebherr to install the piles for the bridges. Piles with diameters of 1500 mm down to depths of 26 m were made by the drilling rig LB 36 using the Kelly drilling method, and piles with diameters of 600 mm and depths of 33 m were made by the piling and drilling rig

LRB 355 using full displacement drilling equipment. By the end of the work the Colombian company had drilled a total of 57,000 m into the deep. While the LB 36 completed its work in December 2017, the LRB 355 will be operating until March 2019.

Challenge

The deep foundation specialists from Mincivil are located in Cundinamarca, Antioquia and Boyacá. Daniel Rodriguez is Foundation Unit Business Manager. He is at a construction phase in Mosquera, nearly an hour by car from Bogotá, and explains that the soil is so hard there due to the nearby moun-

tains. "These are difficult conditions and a real challenge for the machine." In order to work efficiently under such conditions the choice of drilling machine plays a decisive role. With a glance at the LRB 355 Daniel indicates which solution he found for this problem.

Technical Data – LRB 355 with full displacement drilling equipment:

Operation weight:	95.3 t
Max. Torque:	450 kNm
Max. Crowd force:	400 kN

Engine power:	750 kW
Max. Drilling depth:	34.0 m
Max. Drilling diameter:	600 mm