



# The 920i<sup>®</sup> and Android<sup>®</sup> detect Caterpillar<sup>®</sup> Abuse

by Caleb Olson

MINING IS A TOUGH INDUSTRY. DAY IN AND DAY OUT, THE GOAL IS TO MOVE AS MUCH MATERIAL AS POSSIBLE. This is demanding on miners and equipment alike, both of which are prone to frequent breakdowns. For Ferreyros, a Peruvian company supplying Caterpillar<sup>®</sup> trucks to local mines, equipment failure can lead to enormous warranty costs. They needed to make sure any warranty claims are valid and not due to trucks being loaded over capacity, a tempting practice for mine operators.

Ferreyros contacted Scale International Service S.A.C. (SISSAC) in Lima, where Jaime Raya came up with a solution: use two axle scales, Rice Lake's 920i<sup>®</sup> indicator, and an Android<sup>™</sup> smartphone to document truck weighments. The open architecture of Android's operating system would make the app develop-

ment possible. By mounting the 920i in a Pelican<sup>™</sup> case, the entire system would be portable and durable.

SISSAC developed the custom app to track all the needed information: truck ID number, gas tank level, engine RPMs at the time of weighing, number of front-loader scoops used to fill the truck, and weight on the onboard weighing instrument. This data is manually entered into the app's prompts as the truck is parked on the axle scale. Because the indicator and phone are connected to the same Wi-Fi network, live weighments from the 920i are captured by the app and attached to the truck's ID.

This offered the ultimate portable, self-contained weighing system. SISSAC can transport the equipment to different sites to take instant weighments, ensuring trucks at any location are not being mistreated. Once back at the office, all data is

transferred from the app to a PC where a report is generated, analyzing the weights.

With the increasing functionality of tablets, SISSAC programmed their app to be scalable to larger screens. Now, they can use their original Motorola Milestone<sup>™</sup> or the new kid in the office—a Samsung Galaxy Tab<sup>™</sup> with a larger touchscreen for easier data entry.

SISSAC is currently working on more improvements to be released in the app's second phase. The future version will automatically capture all data from the truck's computer to their Android device through the computer's serial output.

Rice Lake's 920i and the latest mobile technology—a combination that's destined to hit pay dirt! ■

1. The weighing system is set up and on standby for vehicles.
2. A truck enters the weighing station and parks on the axle scale. Its front axle is weighed and information is entered in the application.
3. The 920i obtains the weight, which is wirelessly captured and saved in the smartphone.
4. The rear axle is then weighed.
5. Later, the information is transferred from the smartphone to a PC to produce a final report that analyzes the weight.

