wialon

The control automation for an agricultural enterprise in the south of Russia

PROBLEM

The project owner is an agricultural enterprise in the south of Russia. This organization cultivates grapes on the territory of 500+ hectares and produces wine materials. The client wanted to solve a set of problems typical for the agricultural sector:

• unreasonably high fuel consumption (possible reasons – theft, ineffective performance, and imperfect accounting);
• unreasonably high engine hours and mileage (it indicated the equipment misuse).

These are practical problems. At the same time, the managers wanted to understand the way the resources of the enterprise were spent, and how the equipment was used.

Let us take a look at how Wialon's partner Rostelematika coped with this classic telematics task.

SOLUTION

Tracking fuel costs and fleet performance

First of all, it was necessary to ensure the monitoring of 90+ transport units and their fuel costs as they were the main fuel consumers at the enterprise:

• Rostelematika equipped tractors, combines, and other machinery with Navtelecom Smart series trackers and Arnavi LS-2DF FLSs. The tracker collects the location, vehicle speed, and fuel consumption data and sends it to Wialon Hosting.

• Reports include all the details on agricultural machinery and employees' performance: what time machinery leaves the garage, completes an operation and comes back, what tasks a driver performs.
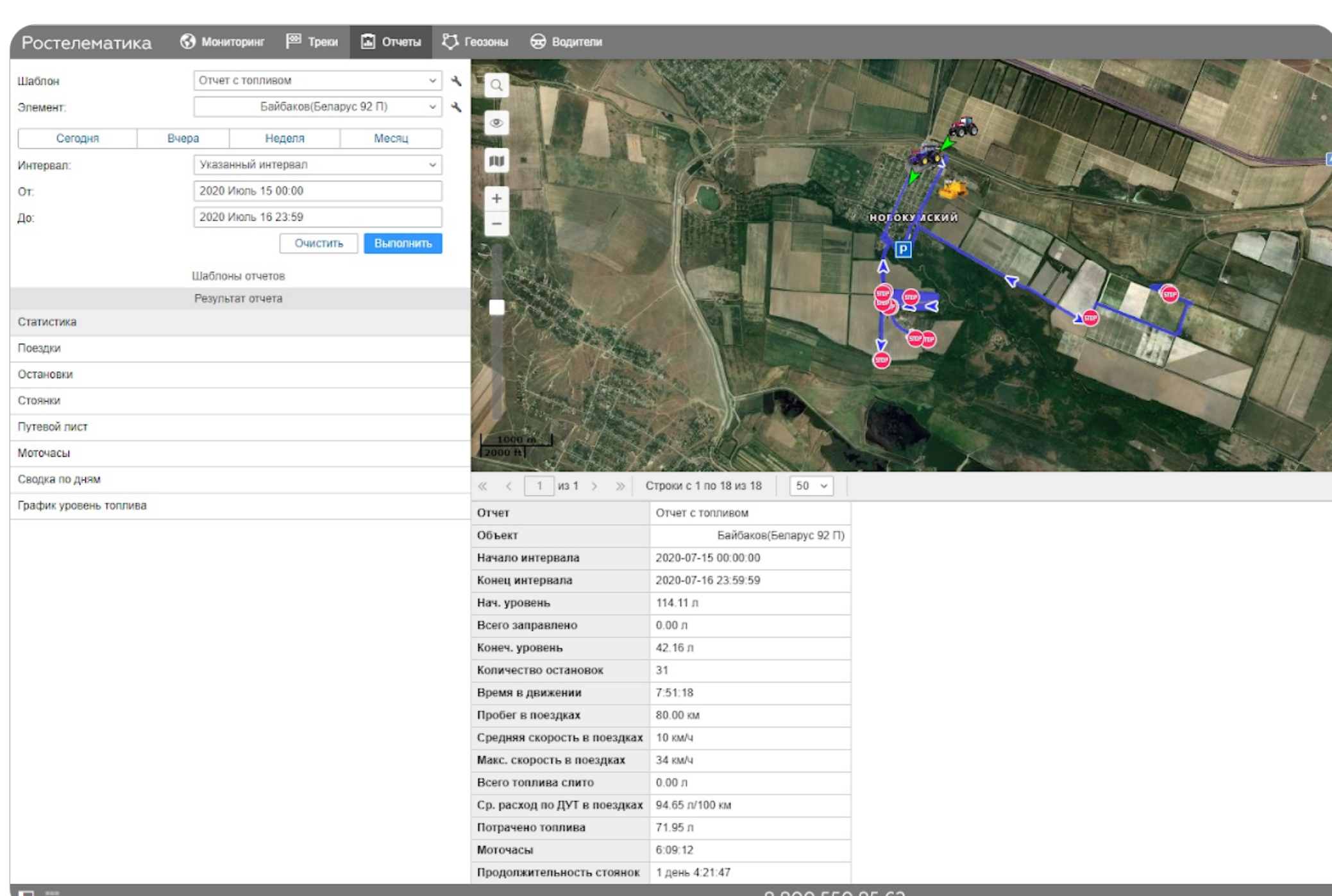
THE WIALON HOSTING REPORTS ALLOW TRACKING THE USE OF MACHINERY AND ITS FUEL CONSUMPTION

The client doesn't refill the agricultural machinery at a filling station but uses fueling trucks for this purpose, which also means occasional fuel losses. That's why, at the second project step, our partner set up the fuel control:

• MicroSensor rpm sensors record how much fuel is coming from the fueling trucks.

• The fueling trucks were equipped with Matrix III RD-ALL RFID readers. Every driver received an RFID tag.

• As a result, in the monitoring system, the client sees whom, when, where, and how much fuel was poured, where the fueling trucks are, and how they move.

The last step was to set up the fuel pump control. The pump fills fueling trucks, trucks, and light vehicles. It was equipped with an rpm sensor and a card reader – now the client knows whom, when, and how much fuel is poured from the storage.

Agricultural works control

Knowing where the machinery is at the moment and what task it is fulfilling is useful for an agricultural enterprise, but it's not enough. Hence, Rostelematika's specialists offered the client Hecterra, a Wialon-based app for agribusiness. The app helps track the operations carried out in the fields, their quality, the amount of fuel spent; it also provides reports with summary data on field works.

THE SOLUTION MONITORS EVERY LITER OF FUEL POURED INTO OR OUT OF A FUELING TRUCK
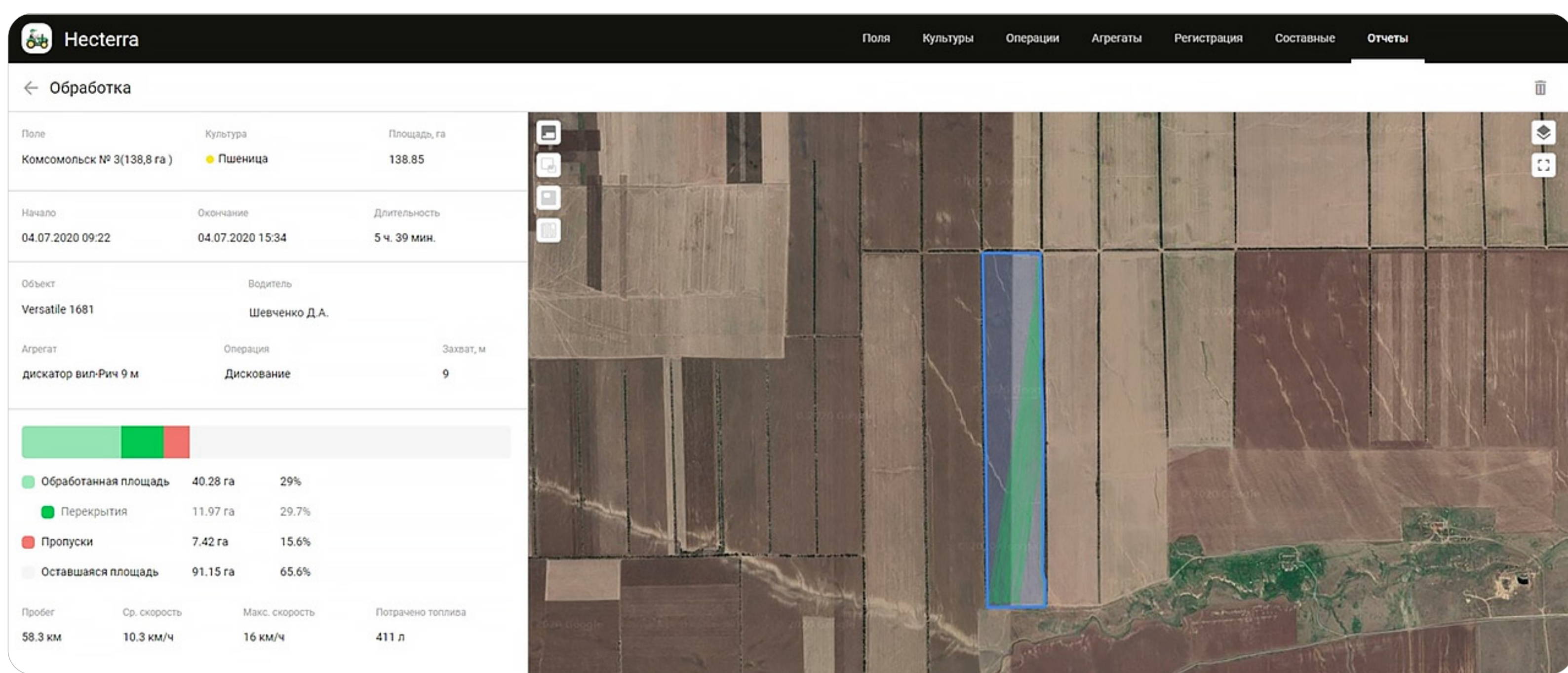
ON THE CULTIVATION REGISTRATION PAGE, THE CLIENT MONITORS THE QUALITY OF THE WORK, FOR EXAMPLE, IF THERE WERE ANY OMISSIONS AND HOW MANY

RESULTS

The GPS monitoring system and the app for field works control help the enterprise avoid unreasonable fleet use and the costs it entails. The automation solution revealed the weaknesses of the workflow and allowed analyzing employees' performance.

15% FUEL SAVINGS

The reports on fuel use all the way from the storage to the fields help reduce fuel costs. The savings amount up to $1,000 per day for 90+ agricultural vehicles.

PERFORMANCE IMPROVEMENT

The total fleet mileage decreased by 5%, the total number of operating hours – by 4%. The reports show all the details on the work of agricultural machinery and drivers and provide data for assessing the quality of field operations.

AUTOMATION AND CONTROL

Managers can access the app via a smartphone and instantly see what the farm resources are spent on, and how the machinery is used.

IMPLEMENTED PRODUCTS

WIALON HOSTING   HECTERRA