

LFM Moisture Analyser Success at BHP Billiton Iron Ore

LFM

Moisture Analyser

BHP Billiton has invested in multiple LFM Moisture Analysers from Intalysis as part of an ongoing project to measure and control the moisture content in its Marra Mamba ore.

“Moisture control is a key objective in our operations. Intalysis’ LFM gives us accurate, on-line measurements that enable us to successfully implement our moisture control strategy.”

**Mr John Groves,
Senior Process Engineer**



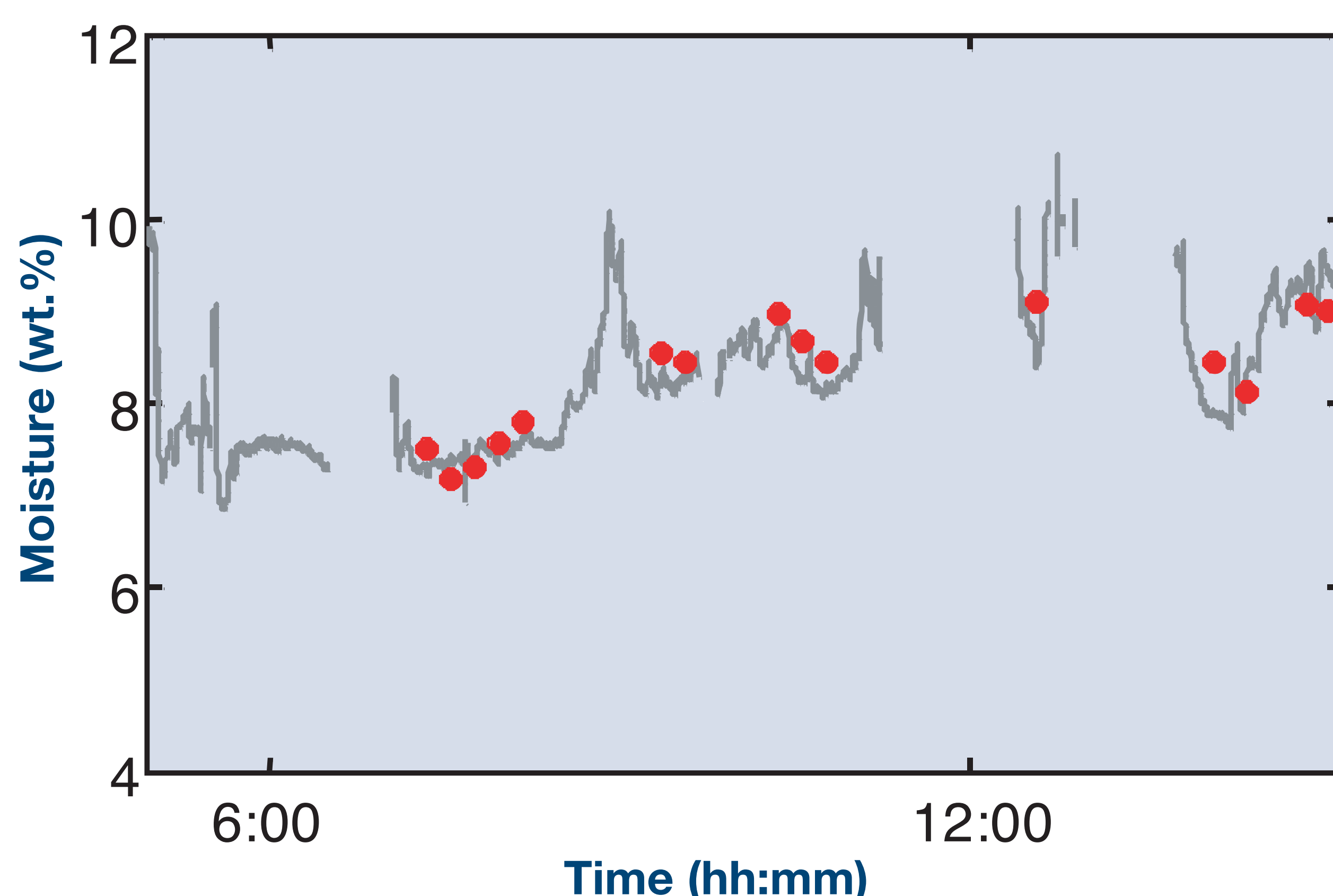
LFM Pilbara Moisture Analyser operating at Whaleback Mine.

The physical properties of some Marra Mamba ores can present bulk handling challenges over and above those experienced with other ores. Careful handling is essential to avoid excessive dust or stickiness.

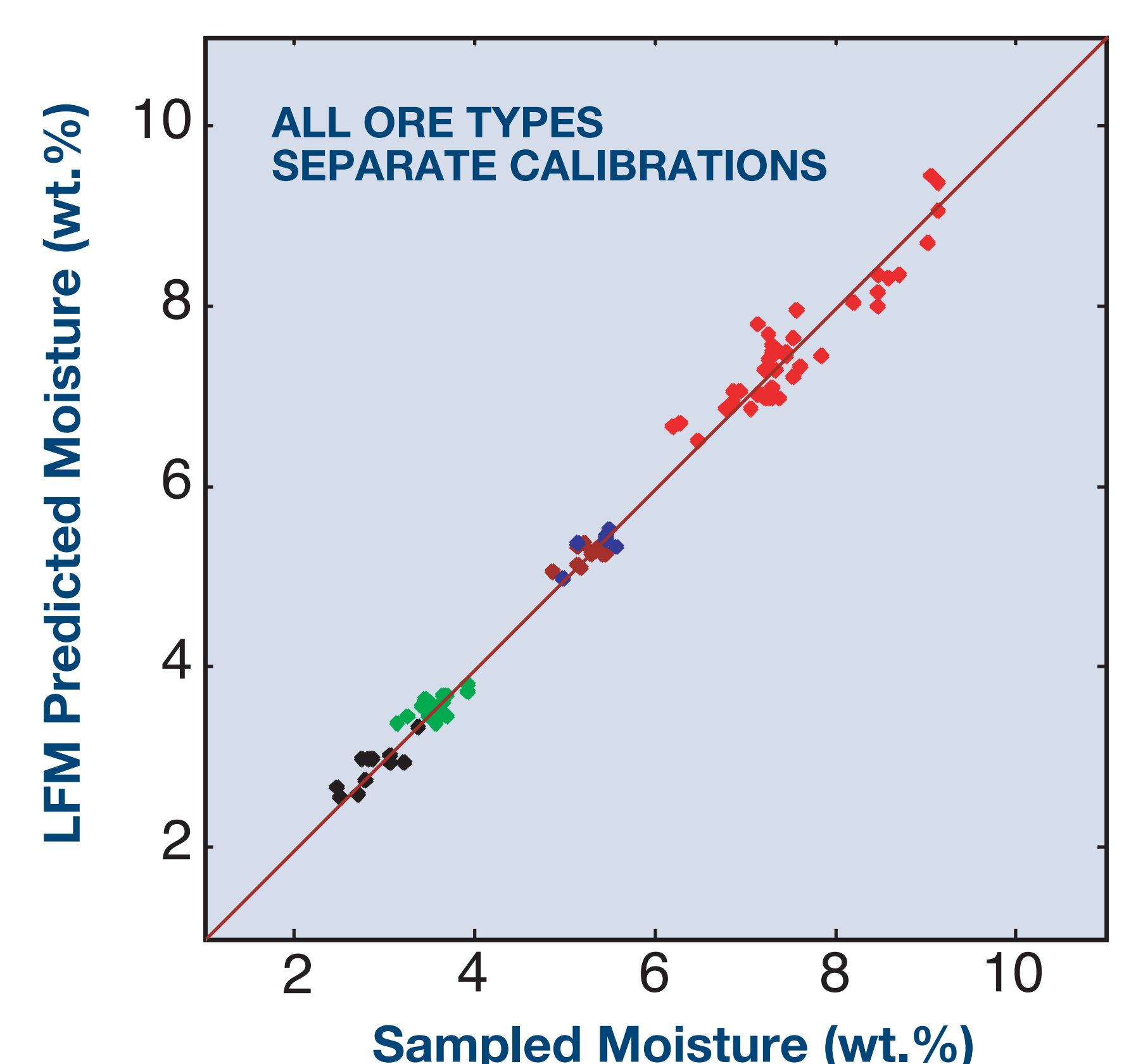
For BHP Billiton’s Iron Ore operations, the optimum moisture control strategy is to add small amounts of water – often. The LFM Moisture Analyser is being used to help implement this strategy. Initial trials

were conducted on Marra Mamba ore types. The team then extended the trials to include traditional hematitic and pisolitic ores.

The LFM Moisture Analyser provided feedback on moisture content within minutes, achieving accuracies of +/- 0.3% (one standard deviation). BHP Billiton Iron Ore has since placed orders for multiple LFM Moisture Analysers.



Graph showing the high correlation between LFM-measured moisture content of iron ore (grey trace) and carefully controlled moisture sampling (red dots). The gaps indicate periods during which the conveyor was not loading.



A key feature of the LFM moisture analyser is its ability to handle different calibrations for different ore types as illustrated in the graph above. Each group of coloured dots in the graph above represents a specific ore type, measured using a different calibration curve. The curve may be ‘switched’ using the LFM plant interface.