Leica Geosystems launched the world’s first “Powered by Locata” system for mining in September 2012. It brings completely new capabilities to machine automation.
The Revolutionary Jps System

Completely new capabilities for mines

- Leica Geosystems Mining has developed their all-new Jigsaw Positioning System (Jps) over a 4 year period, working with Locata to integrate our technology directly into their pro, survey-grade GPS/Glonass receivers.

- Leica’s Swiss engineers have added Locata signals to their Core Algorithm Library (CAL), using Locata deep in their Kalman Filter as “another constellation” - giving the world its first true GPS+Locata receiver.

- This GPS+Locata receiver is the first device to show the power of GPS 2.0 - Locata’s vision of the future of positioning where “satellite+terrestrial” signals are combined to produce a better, more robust GPS.

- Real-world operational mine results? Spectacular!
Leica call Locata "a game changer"

- **Leica** launched the **JPS – Powered by Locata** Fleet Management System in September 2012 at the **International MINExpo Convention** in Las Vegas.
- The global launch also featured as a major article in the September issue of **International Mining Magazine** (http://www.im-mining.com/).
- A 14-page White Paper on the world’s first Jps installation at the **Newmont Boddington Gold Mine** in Western Australia has been produced by Leica. It details the development, deployment and operational results at the mine - it will be available after the launch.
- We thank Leica for their consent to show some of their JPS presentation slides, and publish the results below.
Leica Geosystems Locata-enabled GNSS Augmentation for Mining

Craig Robertson – Mining Division, Hexagon Geosystems
Leica Jps
How does it work?
Leica production version now installed & operational in 2 pits at Newmont’s Boddington Gold Mine in Western Australia

As of Sept 2012 LocataNet running with:
- 4 Semi-permanent fixed LocataLite sites
- 8 mobile trailers
- Locata receivers installed and running on 10 Drills and 2 Shovels

All high-precision machines in both pits will be fitted with Jps in the near future
“Accuracy Results – Remarkable” (Leica)

Trajectory comparison between Leica System 1200 GNSS Receiver and Locata Rover

Comparison to high-precision GPS.

- Horizontal: 2.4 cm
- Vertical: 6.7 cm
World first: GPS+Locata receiver

Contains 2 NovAtel GPS + 2 Locata receivers
World first: GPS+Locata receiver

Operational at mines since April 2012

Drill Rig, Boddington Gold Mine, Western Australia

Leica Jps GPS+Locata Receiver
LocataLite: Leica integration

Now Being Deployed!

Jps LocataLite

Jps Tower with Antenna Array

Jps Trailer with power source

Jps LocataLite Module
Jps with Locata - operational

World-first Installation: Newmont Boddington Gold, WA
Jps with Locata - operational

World-first Installation: Newmont Boddington Gold, WA
Jps with Locata - operational

World-first Installation: Newmont Boddington Gold, WA
Jps with Locata – development team

World-first Installation: Newmont Boddington Gold, WA
“Look, it’s really simple.
If Locata had not invented the technology to help fix the GPS issues in a deep pit scenario I may as well have gone back home, started breeding pit ponies and sharpened up the picks and shovels…
Open Cut Mines, just like everyone else that depends heavily on satellite navigation, are already hitting the wall at the outer limits of GPS technology”

John Carr, Boddington Gold FMS
Using Locata, Drill 3 worked 46 extra hours in April 2012. At $1,100/hr the benefits mount quickly.
Typical **Daily (over 1 Week)** Performance in Mine

**Operational** Performance?

Outcome?

Spectacular Locata performance
Results for this mine?

QUOTE FROM LEICA WHITE PAPER – SEPT 2012:

“In fact, if Locata had been fitted to all 10 drills during April and May the additional productivity given these results would have been on the order of $1,000,000”
Leica Quotes...

“They said it couldn’t be done. They were wrong”

“Locata... is a fundamentally new technology”

“It’s a game changer”
Worldwide Leica Jps Launch

LAS VEGAS CONVENTION CENTRE
September 24-26, 2012
Las Vegas, Nevada
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