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!
The Revolutionary Jps System

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 was also published as a feature article in the September 2012 issue of **International Mining Magazine** (http://www.im-mining.com/).

• A 14-page White Paper on the world’s first Jps install 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 is available from the Locata website.

• We thank Leica for their consent to show some of their JPS slides, and publish the results shown 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

LocataNet now running with:

- 1 Semi-permanent fixed LocataLite site
- 15 mobile trailers
- 38 Locata receivers installed and running on Drills, Shovels, Dozers… 40 more ordered

Management Mandate: All high-precision machines in both pits to be fitted with Jps

Leica Jps Production Version
“Accuracy Results – Remarkable” (Leica)

Trajectory comparison between Leica System 1200 GNSS Receiver and Locata Rover

Comparison to high-precision GPS.
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Comparison to high-precision GPS.

RMS Error (95%)

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

Contains NovAtel GPS/ Glonass + Locata receivers
World first: GPS+Locata receiver

Operational at mines since Oct 2012
LocataLite: Leica integration

Now Fully Operational!
Jps with Locata - operational

World-first Installation: Newmont Boddington Gold, WA
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
Using Locata, Drill 3 worked 46 extra hours in April. At $1,100/hr the benefits mount QUICKLY.
**Operational Performance?**

**Outcome?**

Spectacular Locata performance

**Typical Daily (over 1 Week) Performance in Mine**
Results for the mines?

Leica Global Technology Launch: 24 Sept 2012

QUOTE FROM LEICA WHITE PAPER – INTERNATIONAL MINING MAG - SEPT 2012

“In fact, with Locata fitted to all 10 drills (for this period) the additional productivity given these results is on the order of $1,000,000 per month”
"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
“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
Just 3 months post-launch...

Mining Magazine 2012 Product of the Year
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