

## X-MET<sup>®</sup> for mining Fast, on-site ore analysis!

Simple GPS  
pairing  
for real time  
mapping



Choice of two, incredibly fast, XRF analyzers for on-site ore exploration and mine mapping



Ore exploration • On-site excavation control •  
Mine mapping • Process monitoring •  
Environmental control

## Oxford Instruments – Pioneer in Hand Held XRF Mining Analysis

- Over 30 years of experience in portable XRF for mining and alloy applications. First X-MET analyzer introduced 1976.
- Development started back in 70's in Outokumpu mining company
- Separated from Outokumpu 1994 to Metorex International
- Metorex bought by Oxford Instruments year 2005
- Only company who manufactures all the key components for HHXRF analyzers in house: X-Ray tube (US), Detectors (Finland)
- Thousands of X-MET installations around the world on all continents



## XRF - strengths



- Fast and reliable results obtained in seconds
- Only brief training in analyzer operation is required
- Fully portable: analysis can be made directly on the field
- Preliminary screening can be done even without sample preparation (drill cores, powders)
- Totally non-destructive method. (The same sample can be sent to laboratory for confirmation of the results)



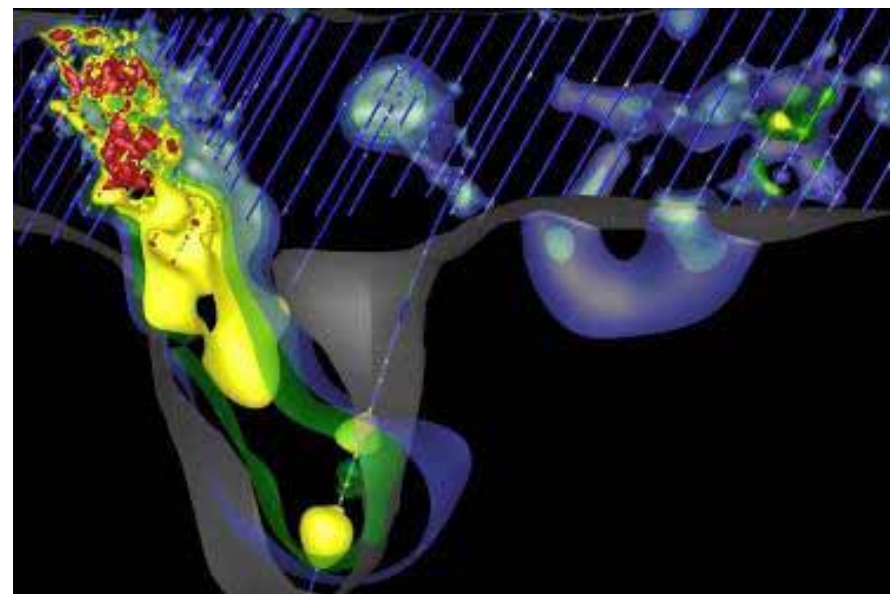
## **X-MET5100/5000 for:**

- Ore exploration
- Excavation control
- Grade control
- Ore trading
- Environmental control



# Minimize the need for laboratory analysis

- Find the limits of ore deposits immediately instead of waiting for lab results, save time
- Minimize the need for laboratory analysis - significant savings in analysis costs
- Fast analysis gives a possibility to make quick decisions



## **X-MET - for rugged use – any place, any time**



- Small size, battery operated and lightweight analyzer is easy to carry to even the most severe locations
- Analyzer has a shoulder strap and optional pistol holster for convenient carrying



## Rugged and reliable tool

- IP54 (NEMA 3) approved. Superior dust and moisture protection
- High-strength environmentally sealed housing
- Withstands all weather conditions from -10°C to +50°C and rough treatment
- Minimal service costs and down time
- CE, cCSAus certified
- Leaking radiation less than 1 uSv on any surface. Tested by radiation safety authorities
- 2 year Instrument warranty; including X-ray tube and detector, excluding consumables (e.g. battery)



## Highly accurate ore analysis

- Single-shot analysis of all important elements in ore exploration:  
**Fe, Cu, Cr, Zn, Pb, Mn, Ni, Co, Mo, Ta, W, Sn, U etc.**
- Reliable **Al, Si, P, S** analysis of prepared samples.  
No need for vacuum or He attachments (**X-MET5100**)
- Element range: K-U (**X-MET5000**), Al-U (**X-MET5100**)
- Advanced automatic matrix correction with type standards.
- Rapid analysis with typical measurement times of  
15-60 seconds - **X-MET5000**  
5-20 seconds - **X-MET5100**  
depending on the element, concentration and required precision.

Analyze any sample type  
Including:

- Drill cores
- Rocks
- Concentrates
- Powders
- Sands
- Vegetation
- Liquids etc.



# X-MET5100 – On top of the range



X-MET5100 combines Oxford Instruments' ground-breaking

- **Silicon Drift Detector (SDD)** with
- a powerful **45kV X-ray tube**

- This cutting edge technology delivers five times faster measurement speed, much better detection limits and significant accuracy improvement over Si-Pin systems.

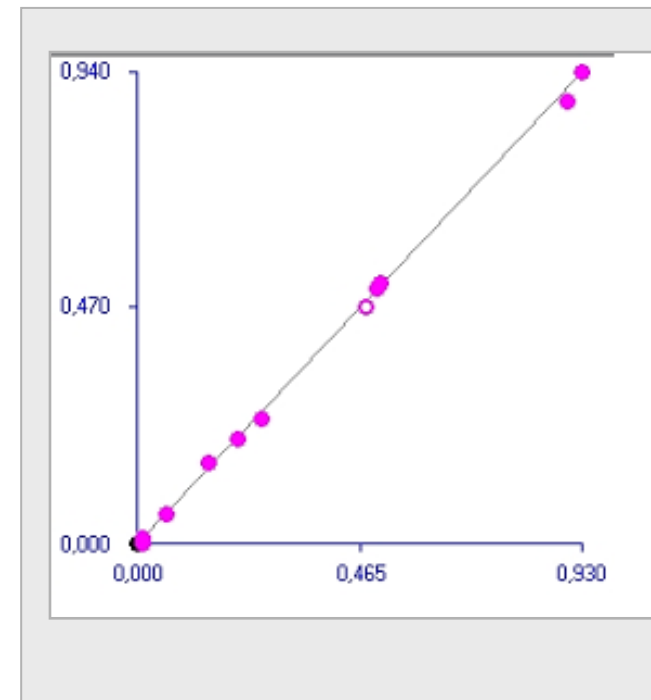
## X-MET5000 vs. X-MET5100

### Key Performance Characteristics

| Mining  |           |           |
|---|-----------|-----------|
|   | X-MET5000 | X-MET5100 |
| X-ray tube  | 40kV      | 45kV      |
| Detector  | PentaPIN  | SDD       |
| Analysis speed examples (required measurement time)                     |           |           |
| Screening, %-level analysis   | 15-60s    | 5-15s     |
| ppm level analysis  | 60-120s   | 15-60s    |
| Detection limit examples, 60s measurement time, SiO <sub>2</sub> matrix |           |           |
| Pb  | 17ppm     | 5ppm      |
| As  | 8ppm      | 3ppm      |
| Cr  | 66ppm     | 34ppm     |
| Ni  | 18ppm     | 6ppm      |

# Maximize flexibility with choice of analysis modes

- **Fundamental Parameter Calibrations**
  - Universal calibration to measure over 30 elements between AI-U (X-MET5100) and K-U (X-MET5000), regardless of concentration
  - Four Optimized FP calibrations for different matrices (X-MET5100). Automatic matrix detection and calibration selection.
  - Fast and easy to use with wide range of ore types
- **Optional user friendly Empirical Calibration software for unbeatable accuracy when standard samples are available**
  - Create own calibrations with optional PC software package
  - Unlimited amount of calibrations can be stored in **X-MET** memory



## Short learning curve

- Intuitive user interface makes it possible to learn basic functions in a few minutes
- No special education or knowledge required
- Our network of specialists is ready to provide comprehensive training for the more advanced features of the analyzer, including calibration

| Main Menu [MINING]         |               |
|----------------------------|---------------|
| Name Sample                |               |
| Display Spectra            |               |
| Select Method              | Settings      |
| Output Settings            | Result Format |
| Measurement Time:0 seconds |               |
| EXIT                       |               |



## GPS integration for real-time ore exploration and mine mapping

**X-MET** with GPS pairing simplifies the task of mine mapping, it can be easily paired with a Bluetooth™ equipped GPS receiver, and configured to automatically store longitude and latitude coordinates along with the analysis data.

- Simple GPS integration, compatible with most Bluetooth GPS receivers
- Automatic storage of location coordinates with assay data
- Quick and simple import into external mapping software



Nokia LD-3W



Trimble  
ProXT

Google earth

## GPS – Analysis results with location data



## User interface in >10 languages

User Interface is available in:

- **English**
- **French**
- **German**
- **Italian**
- **Japanese**
- **Korean**
- **Polish**
- **Portuguese**
- **Russian**
- **Simplified Chinese**
- **Traditional Chinese**
- **User customizable language**



## Easy reporting - time saving and trouble-free

- Results and spectra can be stored on a SD memory card (min 2 GB card included in delivery)
- Data can be downloaded to a PC using either
  - Memory card reader (Standard accessory)
  - Microsoft® Active Sync over the USB cable
  - Wirelessly, using the built-in Bluetooth® capability
  - Practically unlimited number of results can be stored for future processing
- Optional PC Report Generator for easy and versatile formatting of final QC reports
- Results are saved in .txt files which can be opened with virtually any software e.g. Microsoft Excel®
- Two Identical memory cards included





## **Bench-Top Stand – from hand held to benchtop in seconds!**

### **Advantages:**

- Improved measurement precision
- Detection limits are optimised with bench-top stand due to simpler use of longer measurement times
- Optimized accuracy
- More comfortable operation

### **Designed for testing:**

- Bagged soil and mining samples
- Prepared powder samples
- Sample cups
- Small rocks



## Our global network provides support in local languages

- Technical phone support
- Factory trained personnel
- Training services
- Application support
- Global spare parts warehousing
- Re-certifications and recalibrations
- Post warranty local service contracts



# X-MET Distribution in Australia

## Contact Details:

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