



CONFIDENTIAL

**MAGNETIC FORCE MICROSCOPY (MFM)
MAGNETIC MEASUREMENTS AND EXTRAPOLATION
ANALYSIS OF PHYSICALLY STORED MAGNETISM FOR
REGULAR AND MENDEZIZED® COMMERCIAL 24 KARAT
GOLD BARS CONDUCTED IN TRIPLICATE.**

Date: April 7, 2014

Conducted for:

**Alejandro Mendez, Ph.D.
President & CEO
Mendezized Metals Corporation**

Prepared by:

A handwritten signature in black ink, appearing to read "G. Shekhawat".

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MENDEZIZED® COMMERCIAL 24 KARAT GOLD BARS



REGULAR 24 KARAT COMMERCIAL GOLD BARS



MFM (MAGNETIC FORCE MICROSCOPY) **MAGNETIC ANALYSIS REPORT**

Requester: Mendezized Metals Corporation
Analysis Date: April 7, 2014

Purpose:

The purpose of this analysis was to find with high precision the Magnetic measurements of three UnMendezized 24 Karat Commercial One Ounce Gold bars, manufactured by three different manufacturers; Credit Suisse bearing serial number 656079, Johnson Matthey bearing serial number A743622, and Engelhard bearing serial number 829483 compared to the Unique Mendezized® 24 Karat Commercial One Ounce Gold Bars 9999999999,9% pure, manufactured by Mendezized Metals Corporation bearing serial numbers 1001, 1002, and 1003. The secondary purpose of this analysis is to extrapolate the Magnetic measurements of the three UnMendezized 24 Karat Commercial One Ounce Gold Bars compared to the Unique Mendezized® 24 Karat One Ounce Gold Bars.

Experimental and Practical:

Magnetic analysis was carried out with the Bruker Dimension ICON Peak Force TUNA in air ambient conditions using a Magnetic conducting probe. The system is located at the Nanoscale Integrated Fabrication and Instrumentation Center (NIFTI) at Northwestern University. NIFTI has a fleet of high performance MFM for doing advanced microscopy and has been used every year by more than 400 users coming from various Universities and Industries. The NIFTI Center is considered one of the preeminent MFM and nanopatterning facilities in the nation. The instrument is new, calibrated to its highest performance and since the Magnetism of the Unique Mendezized® 24 Karat Commercial Gold Bars was very High a 1M-Ohm resistor was put between the sample and group path.

The UnMendezized 24 karat commercial Gold Ingots manufactured by three different manufacturers; Credit Suisse bearing serial number 656079, Johnson Matthey bearing serial number A743622, and Engelhard bearing serial number 829483 resulted as EXPECTED with Very LITTLE MAGNETISM and by logic with NO electrical energy pockets inside them. However, the presence of MILLIONS upon MILLIONS of MAGNETIC POCKETS completely INTERCONNECTED WITH ONE ANOTHER as clearly demonstrated by the Magnetic Atomic Images inside the Unique Mendezized® 24 karat commercial Gold Ingots bearing serial numbers 1001, 1002, and 1003 came as a complete SURPRISE to us. This is Undisputable PHYSICAL Prima Facie Atomic Evidence since Atoms cannot lie or deceive and clearly demonstrates that the MAGNETISM inside the Unique Mendezized® 24 karat commercial Gold Ingots bearing serial numbers 1001, 1002, and 1003. In this case we have **PHYSICAL AND TANGIBLE**



STORED MAGNETISM because the Unique Mendezized® 24 karat commercial Gold Ingots bearing serial numbers 1001, 1002, and 1003 are not ATTACHED or CONNECTED to any kind of MAGNETIC SOURCE. Additionally, the MAGNETIC measurements were conducted In Situ or at room temperature.

The Estimated Average **MAGNETIC CONDUCTIVITY** between the three UnMendezized One Ounce Commercial 24 Karat Gold bars, manufactured by three different manufacturers; Credit Suisse bearing serial number 656079, Johnson Matthey bearing serial number A74362 and Engelhard bearing serial number 829483 compared to the three Unique Mendezized® 24 Karat One Ounce Commercial Gold Bars 9999999999,9% pure, manufactured by Mendezized Metals Corporation bearing serial numbers 1001, 1002, and 1003 is **5 ORDERS of MAGNITUDE GREATER** in favor of the three Mendezized® 24 Karat One Ounce Commercial Gold Bars.

The Estimated Average **MAGNETIC RESISTIVITY** between the three UnMendezized One Ounce Gold bars, manufactured by three different manufacturers; Credit Suisse bearing serial number 656079, Johnson Matthey bearing serial number A74362 and Engelhard bearing serial number 829483 compared to the Three Unique Mendezized® One Ounce Commercial Gold Bars 9999999999,9% pure, manufactured by Mendezized Metals Corporation bearing serial numbers 1001, 1002, and 1003 is **5 ORDERS of MAGNITUDE LOWER** in favor of the three Unique Mendezized® Commercial 24 Karat One Ounce Gold Bars. THEREFORE, Mendezized® One Ounce Commercial 24 Karat Gold Bars 9999999999,9% pure, manufactured by Mendezized Metals Corporation bearing serial numbers 1001, 1002, and 1003 have **GREATER MAGNETIC CONDUCTIVITY** and HAVE **LESS MAGNETIC RESISTIVITY** compared to the UnMendezized Commercial 24 Karat One Ounce Gold bars, manufactured by three different manufacturers; Credit Suisse bearing serial number 656072, Johnson Matthey bearing serial number A74362, and Engelhard bearing serial number 829483.

The Magnetic Force Microscope (MFM) is a type of **Atomic Force Microscope**, where a sharp magnetized tip scans a magnetic sample; the tip-sample magnetic interactions are detected and used to reconstruct the magnetic structure of the sample surface. Many kinds of magnetic interactions are measured by MFM, including **magnetic dipole-dipole interaction**. MFM scanning often uses non-contact AFM (NC-AFM) mode. The scanning method when using an MFM is called the "lift height" method. When the tip scans the surface of a sample at close distances (< 10 nm), not only magnetic forces are sensed, but also atomic and electrostatic forces. The lift height method helps to enhance the



magnetic contrast through the following: First, the topographic profile of each scan line is measured. That is, the tip is brought into a close proximity of the sample to take AFM measurements. The magnetized tip is then lifted further away from the sample. On the second pass, the magnetic signal is extracted. Magnetic Force Microscopy (MFM) can be used to image various magnetic structures including domain walls (Bloch and Neel), closure domains, recorded magnetic bits, etc. Furthermore, motion of domain wall can also be studied in an external magnetic field.

Magnetic Force Microscopy (MFM) images of various materials can be seen in thin films, nanoparticles, nanowires, permalloy disks and recording media. The popularity of MFM originates for several reasons like the sample does not need to be electrically conductive; measurements can be performed at ambient temperature, in ultra high vacuum (UHV), in liquid environment, and at different temperatures; measurement is nondestructive to the crystal lattice or structure; long-range magnetic interactions are not sensitive to surface contamination; no special surface preparation or coating is required; deposition of thin non-magnetic layers on the sample does not alter the results; detectable magnetic field intensity, H , is in the range of 10 A/m; detectable magnetic field, B , is in the range of 0.1 gauss (10 microteslas); typical measured forces are as low as 10^{-14} N, with the spatial resolutions as low as 20 nm.

MFM images are indicative of magnetic domains on the surface and bulk. While doing MFM, we get three sets of images; one is simple topography that indicates the surface structure and simultaneous phase and amplitude images (they are almost identical). Phase and amplitude images tell the magnetic domain structure in the sample. The current sets for the Unique Mendezized® 24 karat commercial Gold Ingots bearing serial numbers 1001, 1002, and 1003 shows perfectly aligned magnetic domains (tracks) on the surfaces which are very compact indicating a very packed magnetic field on the sample. This concurs with the Atomic Electrical Measurements for the SAME Unique Mendezized® 24 karat commercial Gold Ingots bearing serial numbers 1001, 1002, and 1003 that are 5 ORDERS of MAGNITUDE HIGHER. The Unique Mendezized® 24 karat commercial Gold Ingots bearing serial numbers 1001, 1002, and 1003 are like a MAGNETIC FIELD WAREHOUSE packed with MAGNETISM in them. The Magnetic Images and Measurements have been repeated at multiple locations with reproducibility. The measurements are done with a conducting probe coated with Co/Ni. Simultaneous acquisition of topography (surface images) and MFM images gives a very clear indication of the differences in these two images. Phase images show the direction of the magnetic domain while amplitude images shows its magnitude. Remember that the tip sample interaction area is well below 25 nm, so considering the area; the magnetic storage density is very high. We have confirmed that these samples demonstrate strong electro-magnetic effects. In summary these Atomic Magnetic

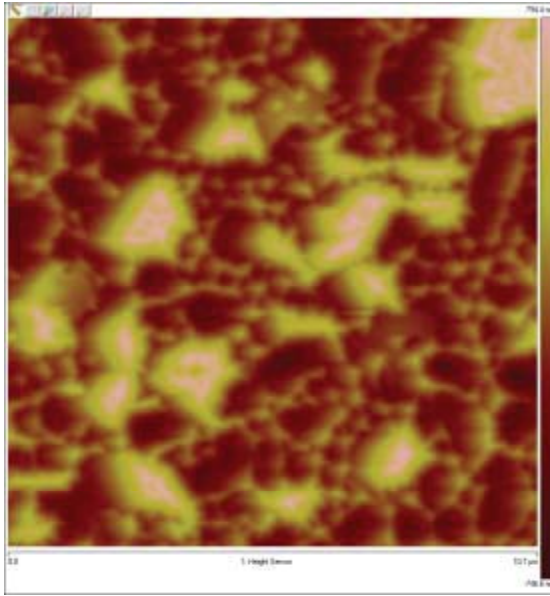


Measurements CONFIRM once again the SUPER PROPERTIES of the Unique Mendezized® 24 karat commercial Gold Ingots bearing serial numbers 1001, 1002, and 1003 because ELECTRICITY AND MAGNETISM ALWAYS go TOGETHER. Therefore, we could not have had one without the other confirming the same 5 orders of magnitude higher confirmed with the Atomic Electrical Measurements described in the AFM report.

Height (Surface Structure)

MFM of Commercial Gold Bar-JM

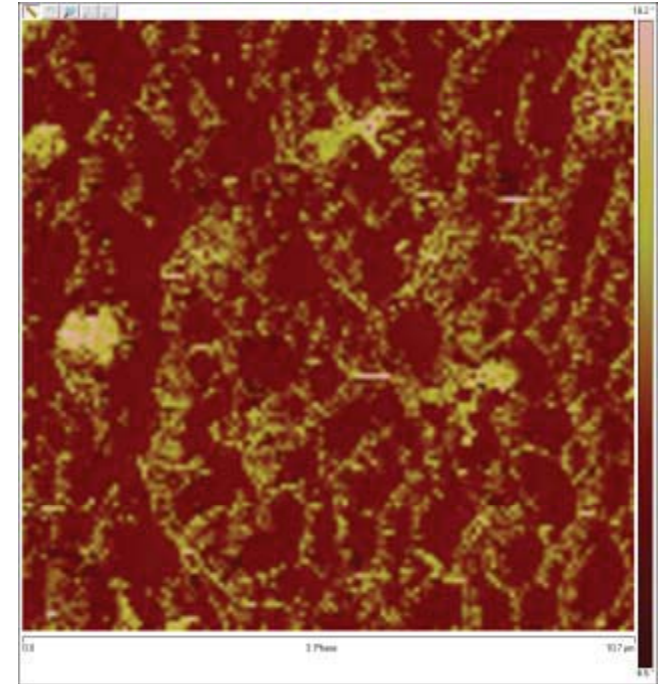
Magnetic Phase



NO Magnetic Tracks →

→
This just normal phase image and just a reflection of height image.

All these images are obtained simultaneously

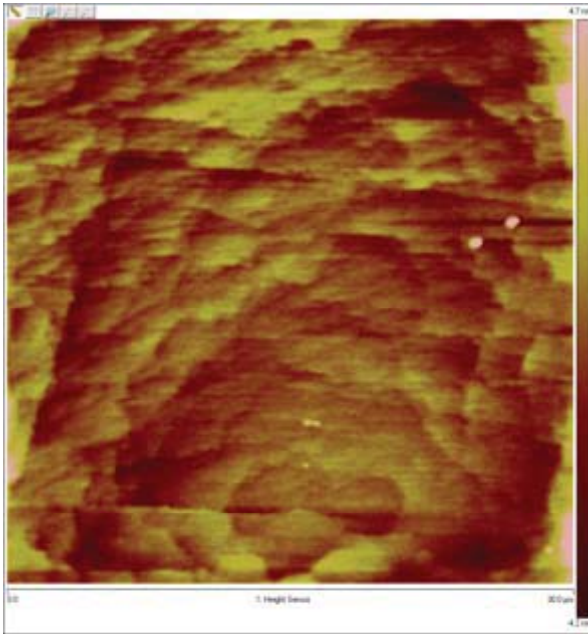


NO MFM RESPONSE on NORMAL GOLD because NORMAL PRECIOUS METALS are NOT supposed to be Magnetic.

Height (Surface Structure)

MFM of Commercial Gold Bar-SUISSE

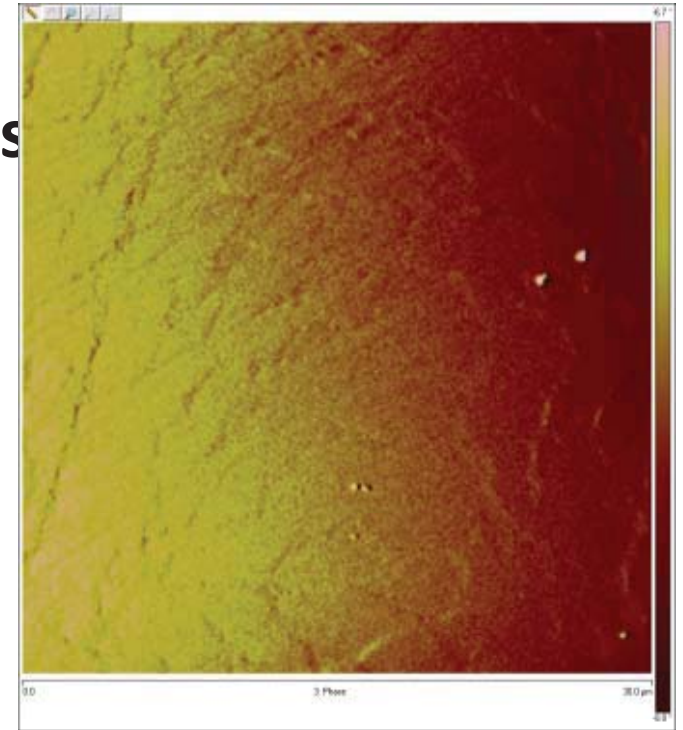
Magnetic Phase



NO Magnetic Tracks

This just normal phase image and just a reflection of height image.

All these images are obtained simultaneously

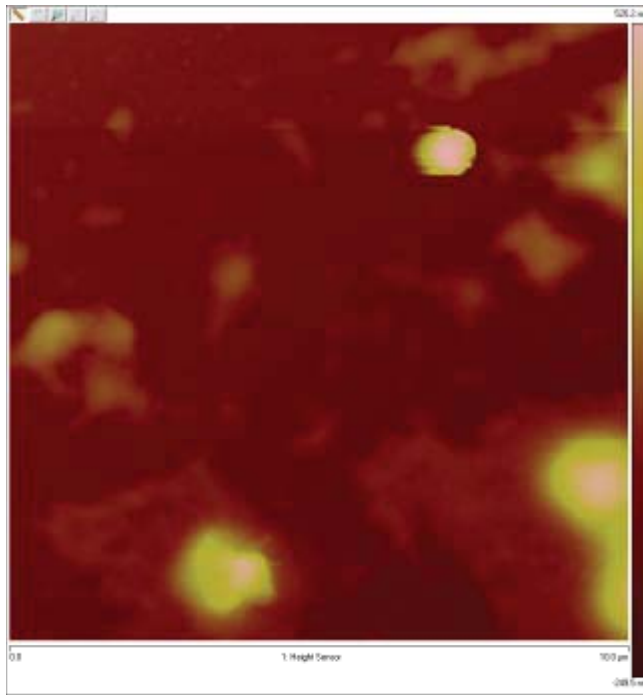


**NO MFM RESPONSE on NORMAL GOLD
because NORMAL PRECIOUS METALS
are NOT supposed to be Magnetic.**

Height (Surface Structure)

MFM of Commercial Gold Bar-EM

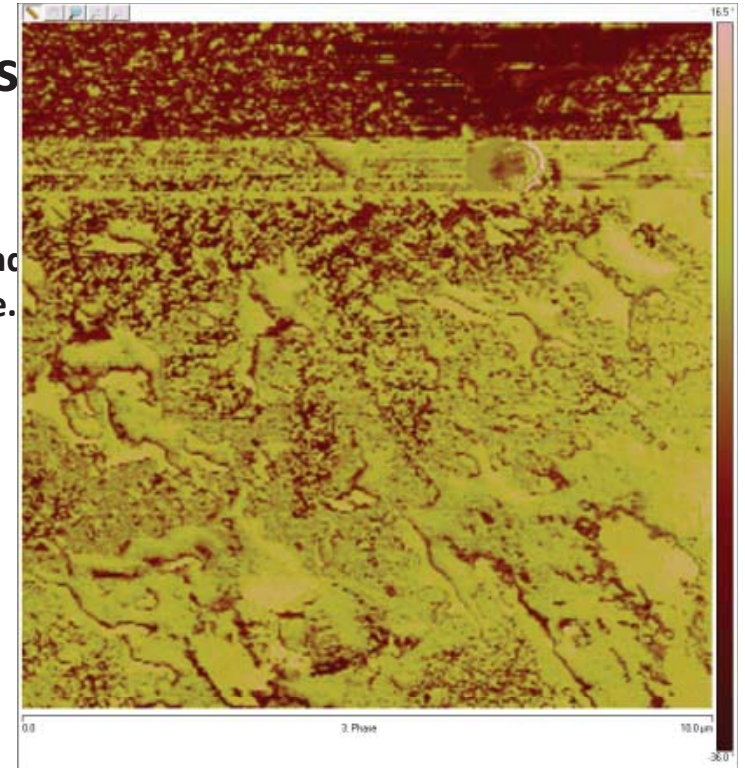
Magnetic Phase



NO Magnetic Tracks →

This just normal phase image and just a reflection of height-image.

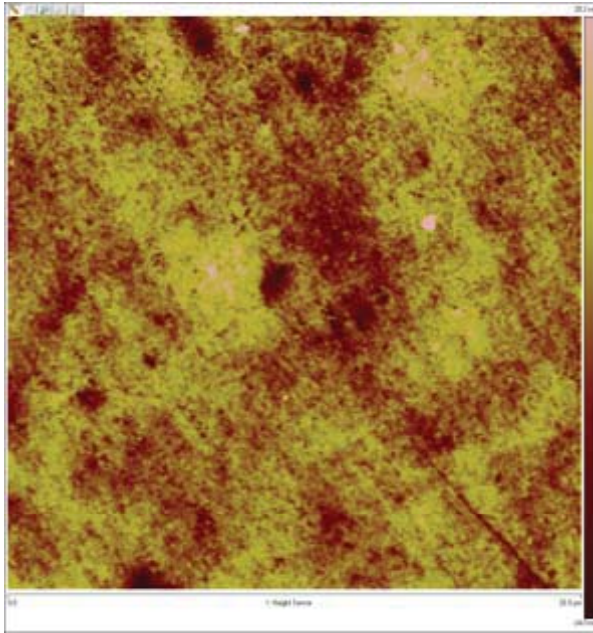
All these images are obtained simultaneously



NO MFM RESPONSE on NORMAL GOLD because NORMAL PRECIOUS METALS are NOT supposed to be Magnetic.

Height (Surface Structure) MFM of Mendezized® Gold Bar-1001

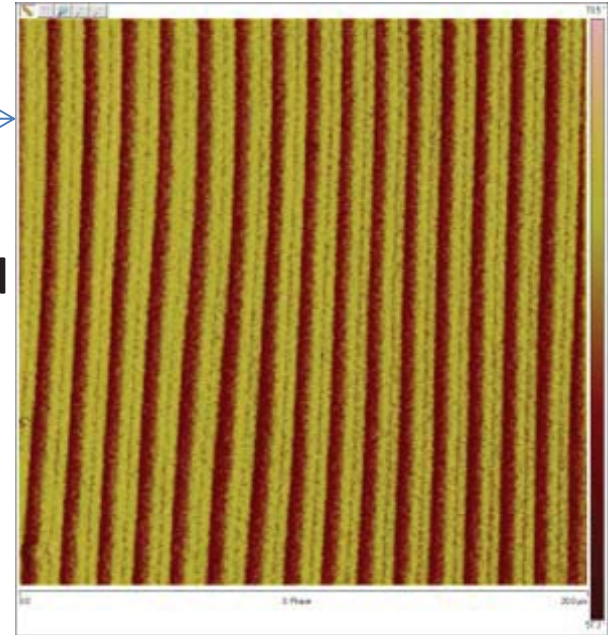
Magnetic Phase



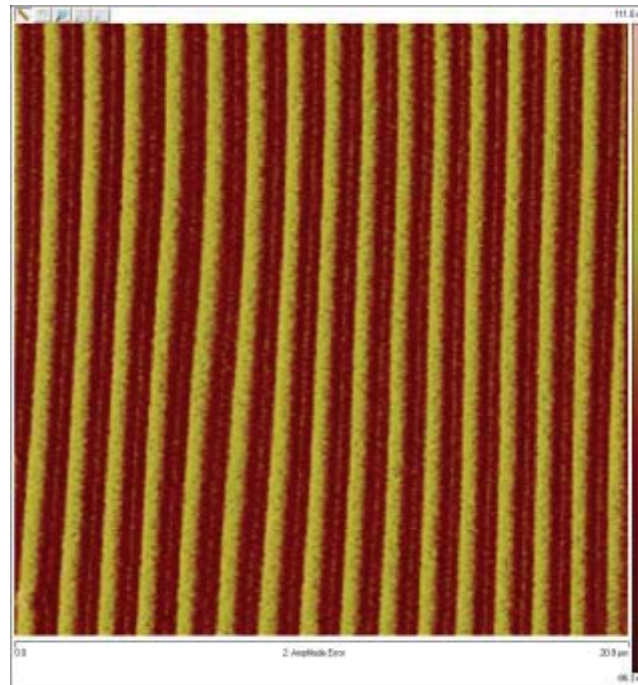
Magnetic Tracks →

Magnetic Tracks are aligned perfectly. →

All these images are obtained simultaneously



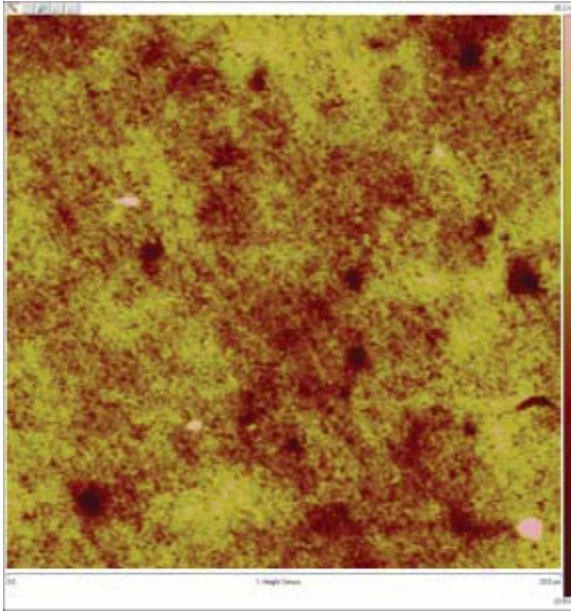
Magnetic Amplitude



Height (Surface Structure)

MFM of Mendezized® Gold Bar-1002

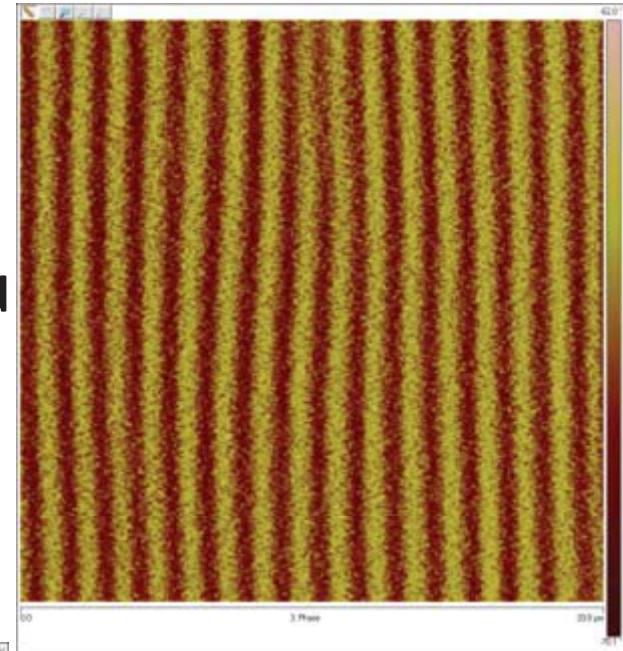
Magnetic Phase



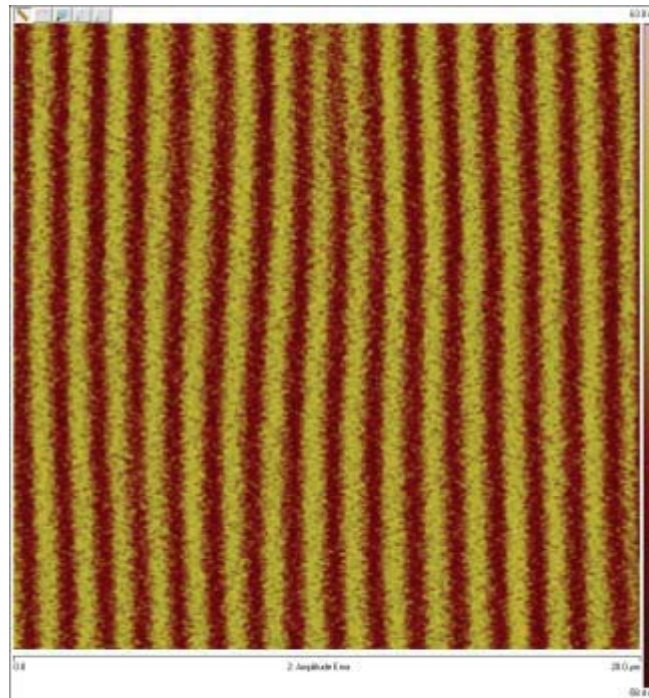
Magnetic Tracks

Magnetic Tracks are aligned perfectly. →

All these images are obtained simultaneously



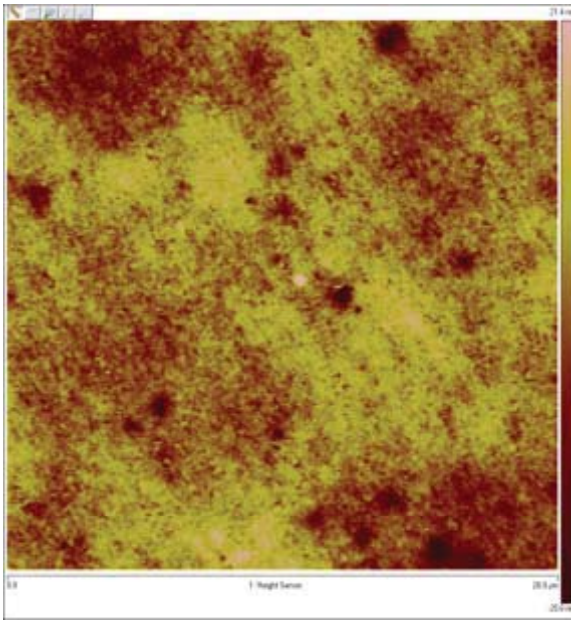
Magnetic Amplitude



Height (Surface Structure)

MFM of Mendezized® Gold Bar-1003

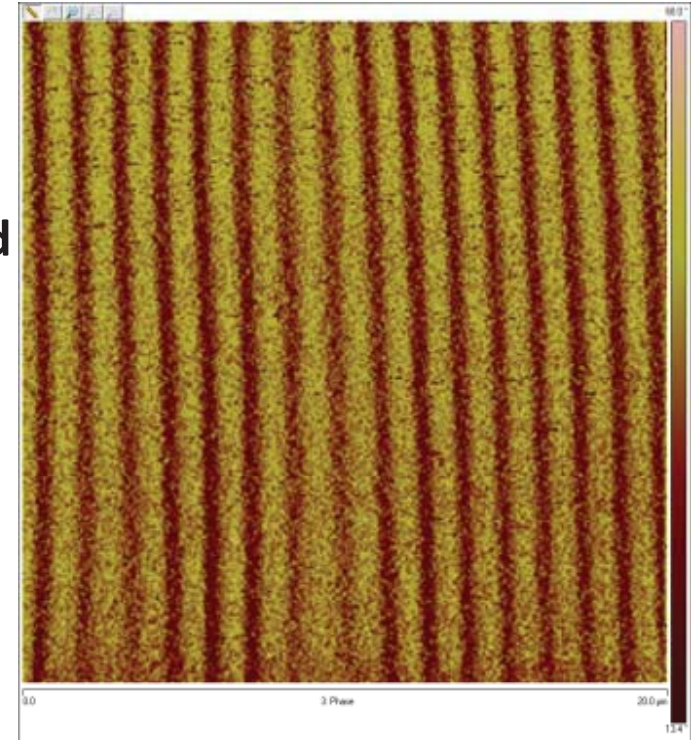
Magnetic Phase



Magnetic Tracks →

Magnetic Tracks are aligned perfectly. →

All these images are obtained simultaneously



Magnetic Amplitude

