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**ATOMIC FORCE MICROSCOPY (AFM)  
PICOELECTRICAL, NANO ELECTRICAL, MICROELECTRICAL  
ANALYSIS, EXTRAPOLATION ANALYSIS AND TOTAL  
CALCULATION OF PIEZOELECTRICAL PHYSICAL STORED  
ENERGY 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**

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**REGULAR 24 KARAT COMMERCIAL GOLD BARS**



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**AFM ELECTRICAL ANALYSIS REPORT**

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

**Purpose:**

The purpose of this analysis was to find with high precision the electrical measurements, electrical conductivity and electrical resistivity of 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 A743622, and Engelhard bearing serial number 829483 versus three VERY RARE Mendezized® One Ounce Commercial 24 Karat 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 AFM electrical measurements, electrical conductivity and electrical resistivity and Energy stored inside of the three UnMendezized commercial 24 Karat one ounce Gold bars versus the three very rare Mendezized® commercial 24 Karat one ounce Gold bars.

**Experimental and Practical:**

Electrical analysis was carried out with Bruker Dimension ICON Peak force TUNA in air ambient conditions using a conducting probe. The system is located at Nanoscale Integrated Fabrication and Instrumentation Center (NIFTI) at Northwestern University. NIFTI has fleet of high performance AFM 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 AFM and nanopatterning facilities in the nation. The instrument is new, calibrated to its highest performance and since the current of Mendezized® samples were very high, a 1 M-Ohm resistor was put between the sample and group path.

It will be good to state the following facts about electrical measuring units:

- 1 Amp = 1,000 Milliamps (one thousand parts of 1 Amp) symbol m
- 1 Amp = 1,000,000 Microamps (one million parts of 1 Amp) symbol u
- 1 Amp = 1,000,000,000 Nanoamps (one billion parts of 1 Amp) symbol n
- 1 Amp = 1,000,000,000,000 Picoamps (one trillion parts of 1 Amp) symbol p

**Detailed Analysis Report and Comparison:**

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**UnMendezized Johnson Matthey One Ounce Commercial Gold Bar 24 Karat 999,9% pure bearing serial number A74362:**

Electrical Conductivity Measurements are: Ramp Bias: -800mV to 800mV  
-100 pA to 150pA

Electrical Resistivity Measurements are: 2.44 x 10<sup>-8</sup> Ohm-M

**UnMendezized Credit Suisse One Ounce Commercial Gold Bar 24 Karat 999,9% pure bearing serial number 656079:**

Electrical Conductivity Measurements are: Ramp Bias: -800mV to 800mV  
-100pA to 160pA

Electrical Resistivity Measurements are: 2.42 x 10<sup>-8</sup> Ohm-M

**UnMendezized Engelhard One Ounce Commercial Gold Bar 24 Karat 999,9% pure bearing serial number 829483:**

Electrical Conductivity Measurements are: Ramp Bias: -2V to 2V  
-25pA to 150pA

Electrical Resistivity Measurements are: 2.44 x 10<sup>-8</sup> Ohm-M

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**Mendezized® Metals Corporation One Ounce Commercial Mendezized® Gold Bar 24 Karat 9999999999,9% pure bearing serial number 1001:**

Electrical Conductivity Measurements are: Ramp Bias: -800mV to 800mV  
-1uA to 400 uA

Electrical Resistivity Measurements are: 1.19 x 10<sup>-13</sup> Ohm-M



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**Mendezized® Metals Corporation One Ounce Commercial Mendezized® Gold Bar 24 Karat 9999999999,9% pure bearing serial number 1002:**

Electrical Conductivity Measurements are: Ramp Bias: -2V to 2V  
-1uA to 420 uA

Electrical Resistivity Measurements are:  $1.21 \times 10^{-13}$  Ohm-M

**Mendezized® Metals Corporation One Ounce Commercial Mendezized® Gold Bar 24 Karat 9999999999,9% pure bearing serial number 1003:**

Electrical Conductivity Measurements are: Ramp Bias: -2V to 2V  
-1uA to 410 uA

Electrical Resistivity Measurements are:  $1.24 \times 10^{-13}$  Ohm-M

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The Estimated Average **ELECTRICAL 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 versus the three Very Rare 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 **ELECTRICAL 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 versus the very rare Three 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 very rare 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 are **MORE ELECTRICALLY CONDUCTIVE** and HAVE **LESS**



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**ELECTRICAL RESISTIVITY** versus 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 fact that we ALSO used commercial UnMendezized Gold Bars from THREE different MANUFACTURERS of Precious Metals; Credit Suisse, Johnson Matthey and Engelhard to conduct these AFM Electrical measurements on a BLIND TEST BASIS makes these INCREDIBLE results more VALID because the Electrical measurements obtained from the Commercial Gold bars manufactured by these three different precious metals manufacturers which produce and refine almost 75% of all precious metals worldwide were within a tight RANGE of less than 1% difference which makes these results statistically VALID. Furthermore, the AFM Electrical measurements obtained with the Three Very Rare Mendezized® Commercial Gold Bars produced by Mendezized Metals Corporation were also in a tight RANGE of less than 1% difference which also makes these results statistically VALID, and Supports conclusively that the **INDUSTRIAL APPLICATION of the MENDEZIZATION® PROCESS with PRECIOUS METALS like 24 Karats Commercial Gold Bars Produces CONSISTENT RESULTS on a COMMERCIAL SCALE BASIS.** We must state that for the first time in HUMAN HISTORY a **HIGHLY PURIFIED PRECIOUS METAL** in this case **MENDEZIZED® GOLD** can **STORE ENERGY INSIDE** and **EMIT ENERGY from INSIDE** or better put **SOLID MASS CAN STORE ENERGY INSIDE** like the SUN does because the SUN is a **HIGHLY PURIFIED GASEOUS MASS** composed of 70% HYDROGEN and 28% HELIUM (two hydrogen atoms link together) that **EMITS THERMAL ENERGY** that is SENT to EARTH inside the SUN'S RAYS. The Very Rare and Highly Purified Mendezized® 24 Karat Commercial One Ounce Gold Bars bearing serial numbers 1001, 1002, and 1003 are **DOING EXACTLY the SAME** but instead of using **THERMAL ENERGY** like the SUN are using **ELECTRO MECHANICAL ENERGY** also known as **PIEZO ELECTRICITY.**

We would use the following scientific and forensic formula to calculate the **PHYSICAL AMOUNT of REAL ELECTRO MECHANICAL ENERGY** also known as **PIEZOELECTRICITY that is PHYSICALLY STORED** inside the very rare Three Mendezized® One Ounce Commercial Gold Bars 9999999999,9% pure, manufactured by Mendezized Metals Corporation bearing serial numbers 1001, 1002, and 1003 and also the **very LITTLE non-piezoelectrical energy;** in this case it would be **chemical electrical Energy** which is stored inside the UnMendezized Commercial 24 Karats 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.



1. There are one hundred trillion nanometers (10/14) inside an square centimeter (cm<sup>2</sup>) represented as a number like this: 100,000,000,000,000
2. There is 1 sextillion nanometers (10/21) inside a cubic centimeter (cm<sup>3</sup>) represented as a number like this: 1,000,000,000,000,000,000,000
3. The worldwide official weight for one Troy ounce of Gold is 31.1 grams. Therefore, to convert the 1 cubic centimeter of gold into Troy ounce of Gold we must multiply 19.32 X 61% more = 31.10 grams which is the official weight of one Troy ounce of Gold. We then also multiply the amount of 1 sextillion nanometers (10/21) X 61% to make into nanometers per Gold ounce = 1.610 sextillion nanometers represented as a number like this: 1,610,000,000,000,000,000,000
4. We then divide the 1.610 sextillion nanometers by 25 nanometers which is the area that the atomic nano probes use to measure electrical conductivity, magnetism, thermal conductivity and piezo electricity and then we would have 64,400 quadrillion areas of 25 nanometers represented as a number like this: 64,400,000,000,000,000,000
5. We then multiply the 64,400 quadrillion 25 nanometers areas for the amount of current registered by the atomic probe per one 25 nanometer area (picoamps, nanoamps, microamps, milliamps) and then divide that result by the relevant scale to convert into actual amperes (amps).
6. That amount in amps we multiply by 2 volts to convert into watts, and those results we divide by 1,000 to convert into Kilowatts and that amount of Kilowatts we multiply by \$ 0.05 cents which is the wholesale amount of one Kilowatt of Electricity.

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**UnMendezized Johnson Matthey One Ounce Commercial Gold Bar 24 Karat 999,9% pure bearing serial number A74362:**

**Electrical Conductivity Measurements are:** 150 Picoamps X 64,400 quadrillion areas of 25 nanometers = 9.660 Sextillion Picoamps divided over one trillion to convert into actual Amperes = 9,660,000 Amperes X 2 Volts to convert into Watts = 19,320,000 Watts divided by 1,000 to convert into Kilowatts = 19,320 thousand Kilowatts X \$0.5 cents national average price per industrial Kilowatt of electricity in the United States = \$966.00 U.S. dollars.





**UnMendezized Credit Suisse One Ounce Commercial Gold Bar 24 Karat 999,9% pure bearing serial number 656079:**

**Electrical Conductivity Measurements are:** 160 Picoamps X 64,400 quadrillion areas of 25 nanometers = 1.0304 Sextillion Picoamps divided over one trillion to convert into actual Amperes = 10,304,000 Amperes X 2 Volts to convert into Watts = 20,608,000 Watts divided by 1,000 to convert into Kilowatts = 20,608 thousand Kilowatts X \$0.5 cents national average price of industrial Kilowatt of electricity in the United States = \$1.030.40 U.S. dollars.

**UnMendezized Engelhard One Ounce Commercial Gold Bar 24 Karat 999,9% pure bearing serial number 82948:**

**Electrical Conductivity Measurements are:** 150 Picoamps X 64,400 quadrillion areas of 25 nanometers = 9.660 Sextillion Picoamps divided over one trillion to convert into actual Amperes = 9,660,000 Amperes X 2 Volts to convert into Watts = 19,320,000 Watts divided by 1,000 to convert into Kilowatts = 19,320 thousand Kilowatts X \$0.5 cents national average price per industrial Kilowatt of electricity in the United States = \$966.00 U.S. dollars.

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**Mendezized® Metals Corporation One Ounce Commercial Mendezized® Gold Bar 24 Karat 9999999999,9% pure bearing serial number 1001:**

**Electrical Conductivity Measurements are:** 400 Microamps X 64,400 quadrillion areas of 25 nanometers = 2.5760 Sextillion Microamps divided over one billion to convert into actual Amperes = 25,760,000,000,000 Amperes X 2 Volts to convert into Watts = 46,944,000,000,000 Watts divided by 1,000 to convert into Kilowatts = 46,944,000,000 Kilowatts X \$0.5 cents national average price per industrial Kilowatt of electricity in the United States = \$2,576,000.000.00 U.S. dollars.

**Mendezized® Metals Corporation One Ounce Commercial Mendezized® Gold Bar 24 Karat 9999999999,9% pure bearing serial number 1002:**

**Electrical Conductivity Measurements are:** 420 Microamps X 64,400 quadrillion areas of 25 nanometers = 2.7048 Sextillion Microamps divided over one billion to convert into actual Amperes = 27,048,000,000,000 Amperes X 2 Volts to convert into Watts = 54,096,000,000,000 Watts divided by 1,000 to convert into Kilowatts = 54,096,000,000 Kilowatts X \$0.5 cents national average price per industrial Kilowatt of electricity in the United States = \$2,704,800.000.00 U.S. dollars.



**Mendezized® Metals Corporation One Ounce Commercial Mendezized® Gold Bar 24 Karat 9999999999,9% pure bearing serial number 1003:**

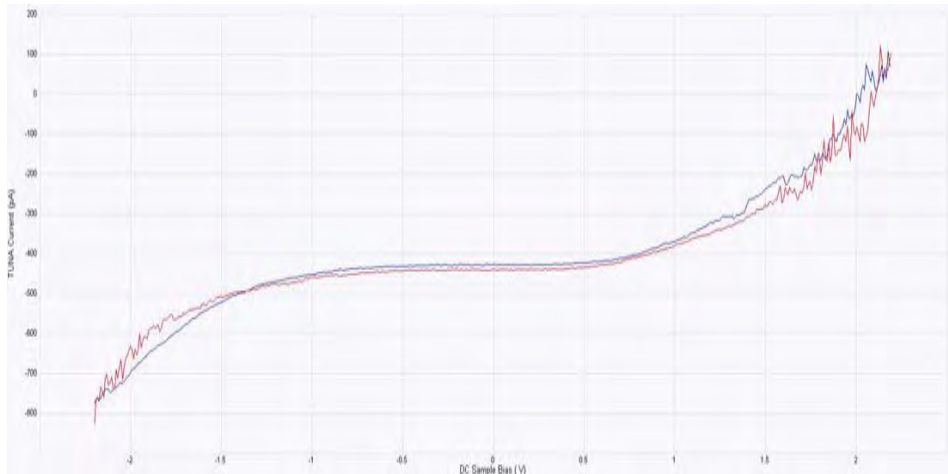
**Electrical Conductivity Measurements are:** 410 Microamps X 64,400 quadrillion areas of 25 nanometers = 2.6404 Sextillion Microamps divided over one billion to convert into actual Amperes = 26,404,000,000,000 Amperes X 2 Volts to convert into Watts = 52,808,000,000,000 Watts divided by 1,000 to convert into Kilowatts = 52,808,000,000 Kilowatts X \$0.5 cents national average price per industrial Kilowatt of electricity in the United States = \$2,640,400.000.00 U.S. dollars.

There is one issue that requires further clarification. It is possible to store billions of amperes of energy at LESS than 2 VOLTS in any device as long as it is in a Direct Current (DC) FORM. An Alternate Current (AC) Form DOES NOT EXIST in NATURE. AC was created by man. In ANY FORM 60 Amps of AC would be sufficient to electrocute a person. The total SOLAR ENERGY absorbed by Earth's atmosphere, oceans and land masses is approximately 3,850,000 exajoules (EJ) per year. Comparing the TOTAL ENERGY the WORLD used in the year 2012, the SUN delivered more ENERGY in one HOUR than the WORLD USED in ONE YEAR. Yet, the EARTH did not burn down because this Solar Thermal Energy is delivered to the Earth in a Direct Current Form at less than 2 VOLTS. This is the same FORMAT USED to STORE the ELECTRO MECHANICAL ENERGY or PIEZOELECTRICITY at less than 2 VOLTS which explains WHY there can be SO MUCH ENERGY STORED INSIDE the Mendezized® 24 Karat Commercial One Ounce Gold Ingots bearing serial numbers 1001, 1002, and 1003.

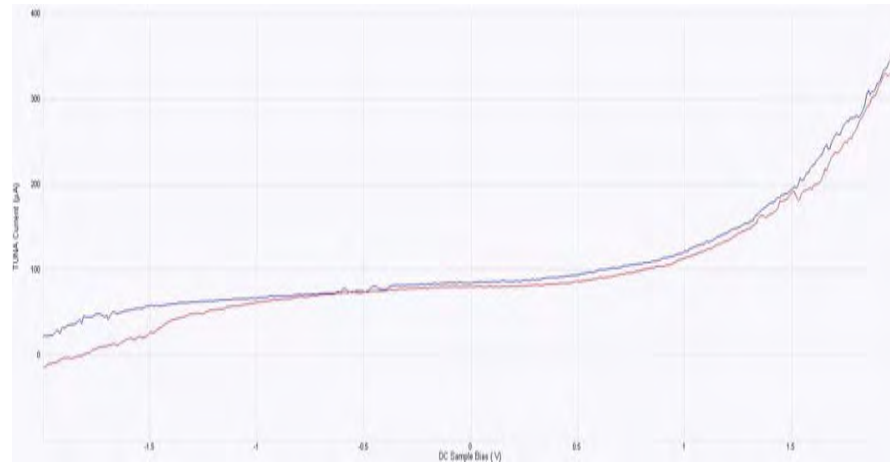
**We must also EMPHASIZE that we did the SAME AFM Electrical measurements described above 15 MONTHS AGO here at NIFTI. The AFM Electrical readings are CONSISTENT 15 MONTHS LATER which demonstrates that the PHYSICAL ELECTRO MECHANICAL PIEZOELECTRICAL ENERGY REMAINED PHYSICALLY STORED INSIDE the Unique Mendezized® Commercial One Ounce Gold Bars bearing serial numbers 1001, 1002, and 1003. This CREATES an INCREDIBLE TANGIBLE FACT for the COMMERCIAL MONETARY VALUE of the ELECTRO MECHANICAL PIEZOELECTRICAL ENERGY STORED INSIDE the Very Rare and Unique Mendezized® 24 Karat Commercial One Ounce Gold Bars bearing serial numbers 1001, 1002, and 1003.**

## Electrical Conductivity Data of Commercial Gold Bars Regular & Mendezized®

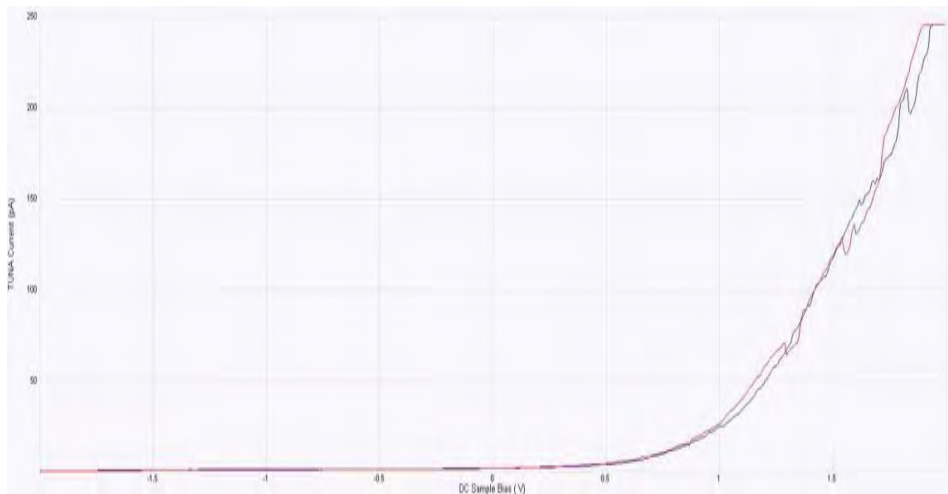
Regular Gold UnMendezized Johnson Matthey Serial number A74362



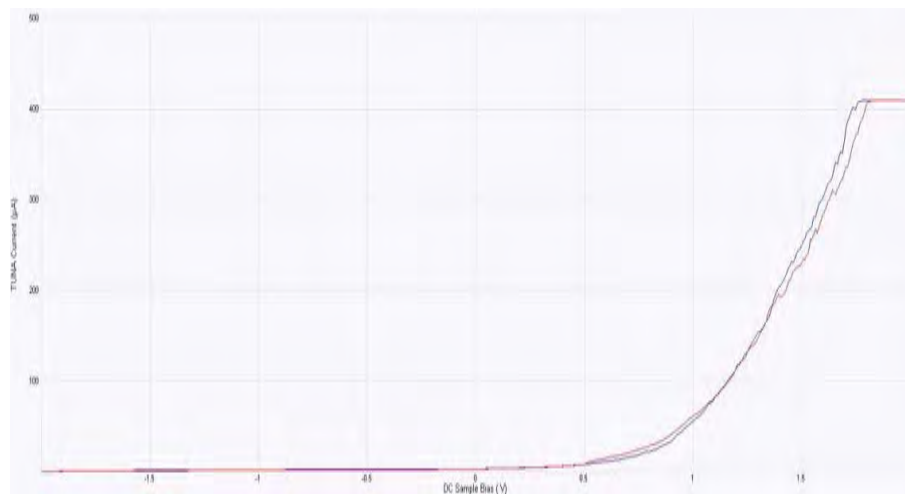
Regular Gold Mendezized® Serial no. 1001



Regular Gold UnMendezized Credit Suisse Serial number 656079

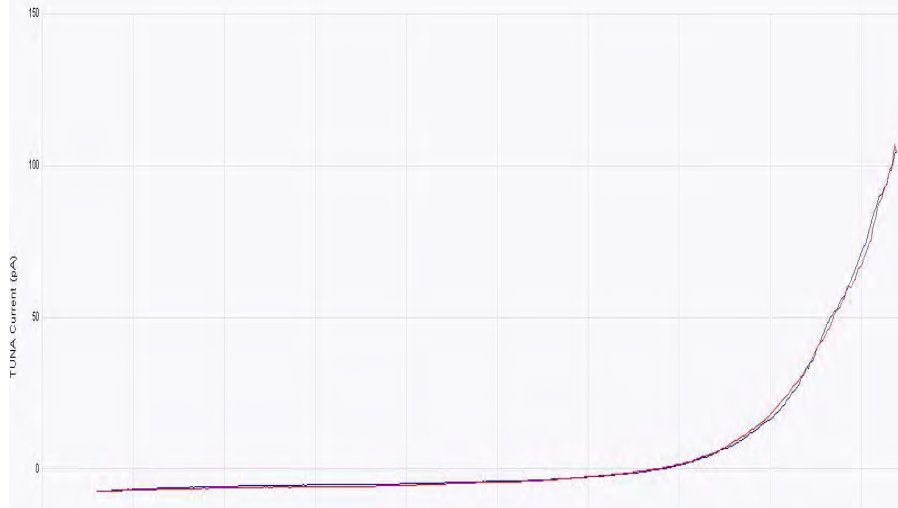


Regular Gold Mendezized Serial no. 1002

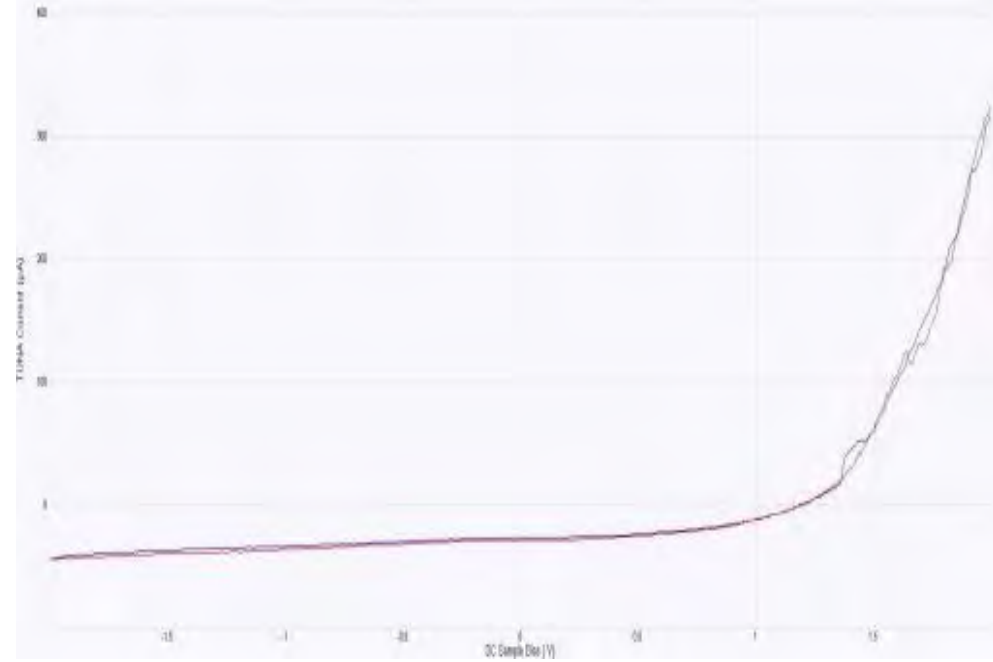


## Electrical Conductivity Data of Commercial Gold Bars Regular & Mendezized®

Regular Gold UnMendezized Engelhard  
Serial number 829483

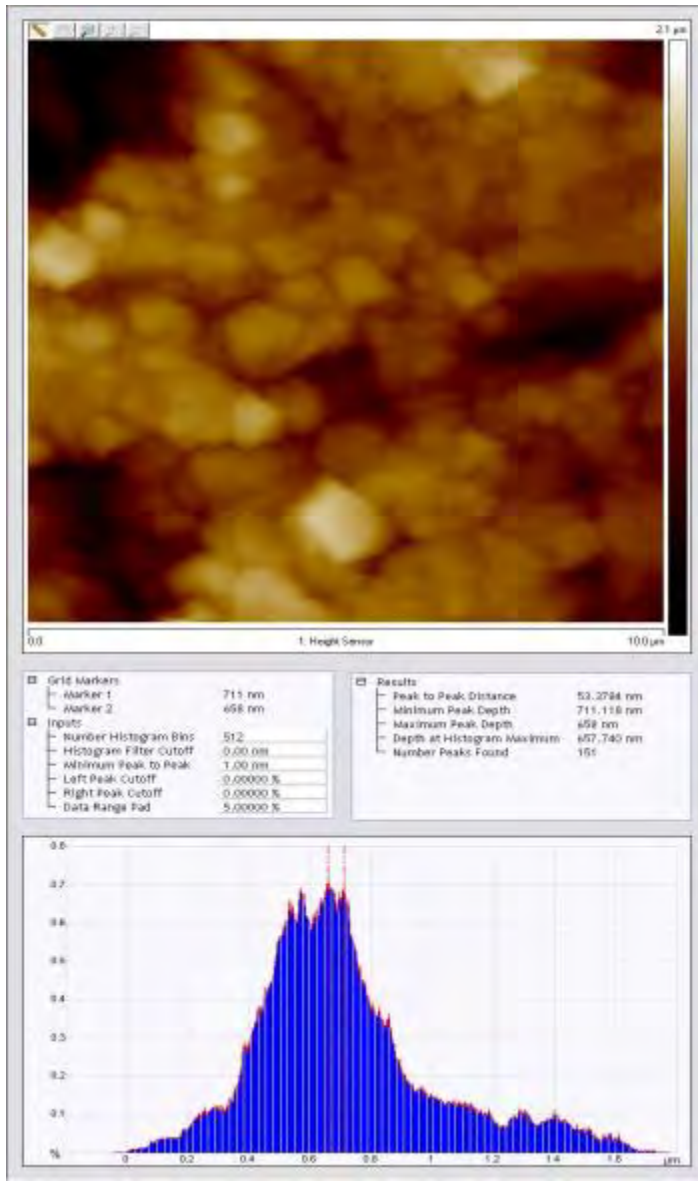


Mendezized® Gold Bar Serial no. 1003



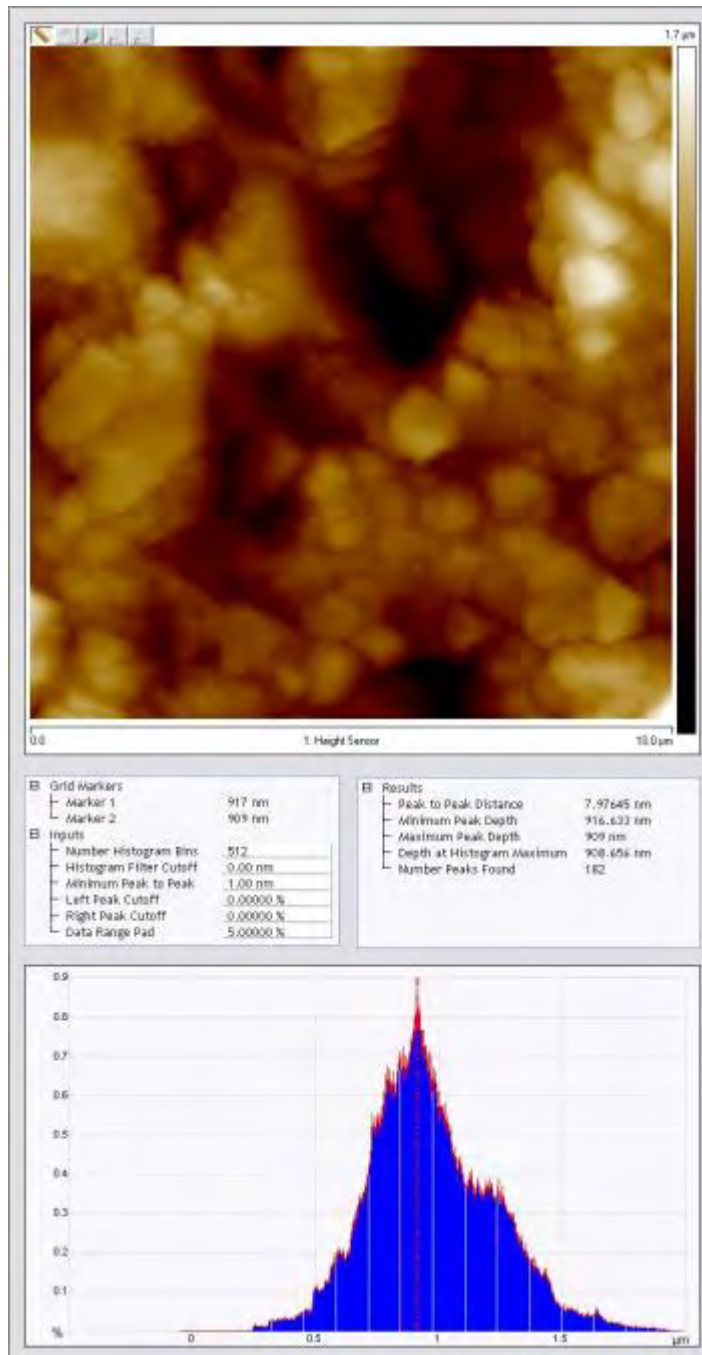
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**UnMendezized Johnson Matthey Gold Bar Serial number A74362**



**The surface has very large surface roughness and height variation is right from 0.4 micron to 1.5 micron. In summary it is way too high which would not allow the Gold Atoms to be organized and to form a perfect Hexagonal grid like the Mendezized® Gold Atoms.**

## UnMendezized Credit Suisse Gold Bar Serial number 656079

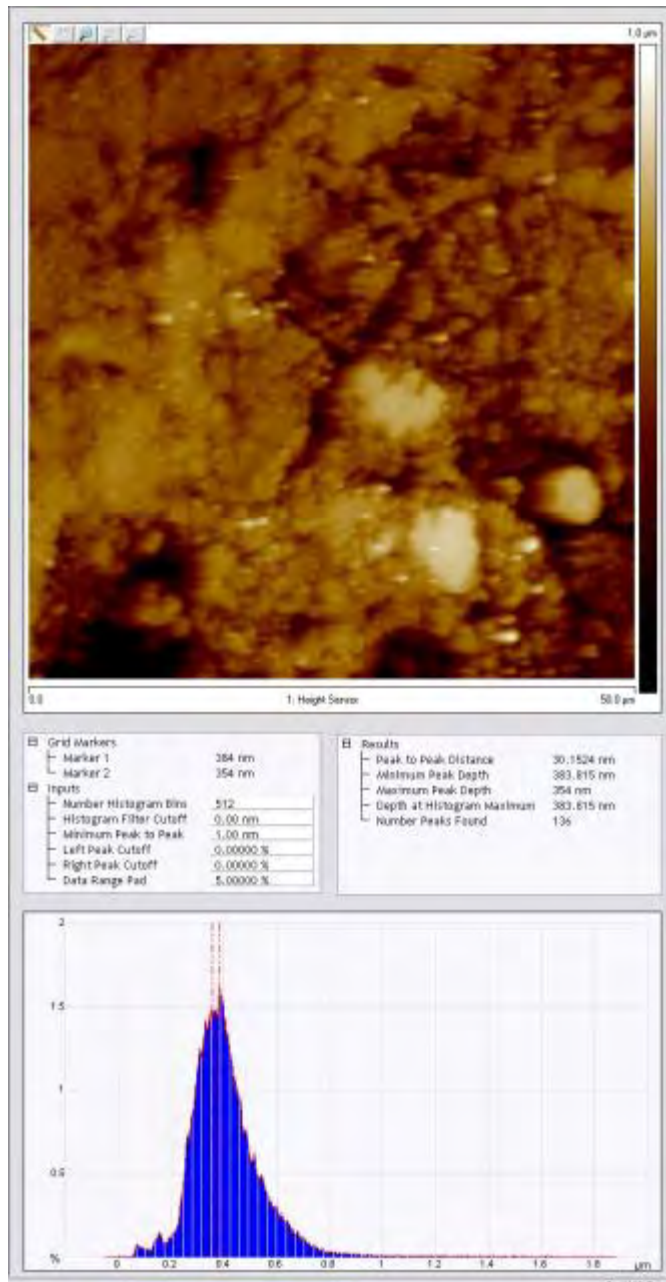


**The surface has very large surface roughness and height variation is right from 0.4 micron to 1.6 micron. In summary it is way too high which would not allow the Gold Atoms to be organized and to form a perfect Hexagonal grid like the Mendezized® Gold Atoms.**

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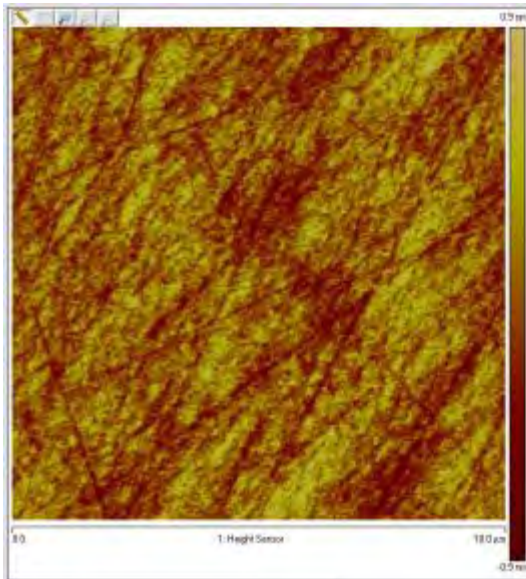
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**UnMendezized® Engelhard Gold Bar Serial number 829483**



**The surface has very large surface roughness and height variation is right from 0.4 micron to 1.5 micron. In summary it is way too high which would not allow the Gold Atoms to be organized and to form a perfect Hexagonal grid like the Mendezized® Gold Atoms.**

## Mendezized® Very Rare Gold Bar Serial Number 1001



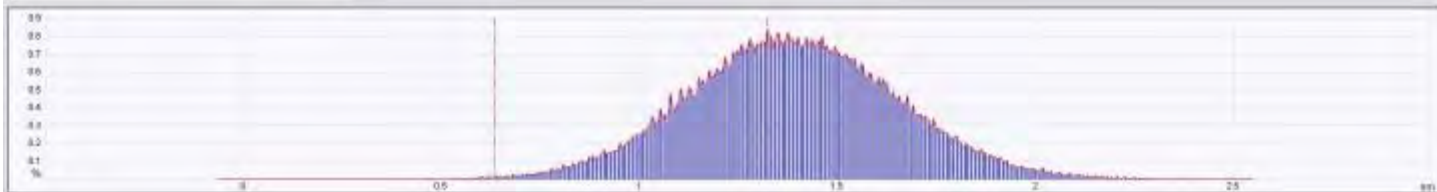
**The sample surface is atomically smooth never seen before in any metal structure. It has atomic level of flatness between 0.5 nm to 1.2 nm which is amazing.**

Grid Markers	
Marker 0	0.633 nm
Marker 1	1.32 nm

Inputs	
Number Histogram Bins	512
Histogram Filter Cutoff	0.00 nm
Min Peak to Peak	2.00 nm
Left Peak Cutoff	0.00000 %
Right Peak Cutoff	0.00000 %
Data Range Pad	5.00000 %
X Axis	Relative

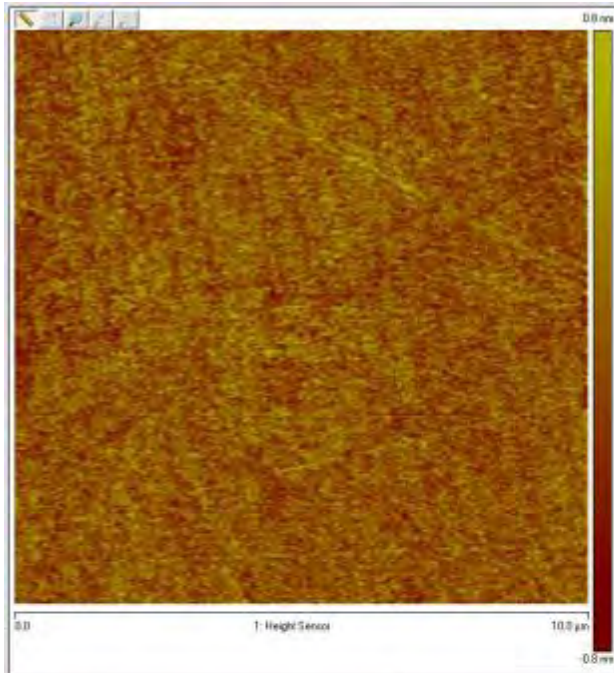
Results	
Peak to Peak Distance	0.00000 nm
Minimum Peak Depth	0.632051 nm
Maximum Peak Depth	1.32 nm
Depth at Histogram Maximum	1.32119 nm
Number Peaks Found	2





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## Mendezized® Very Rare Gold Bar Serial Number 1002



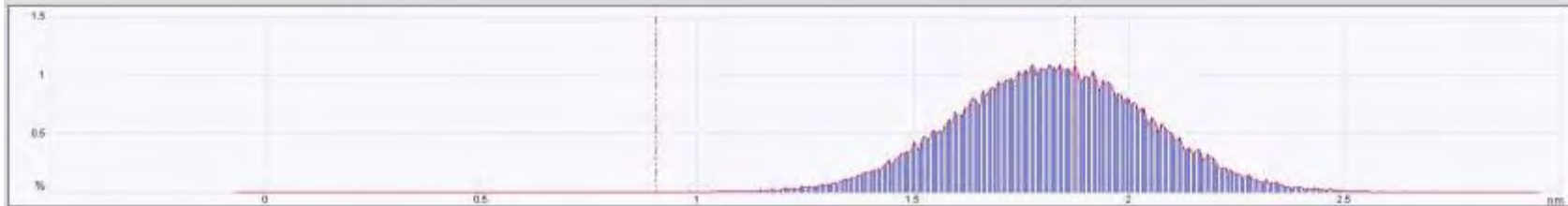
**The sample surface is atomically smooth never seen before in any metal structure. It has atomic level of flatness between 0.5 nm to 1 nm which is amazing.**

Grid Markers	
Marker 0	0.904 nm
Marker 1	1.87 nm

Inputs	
Number Histogram Bins	512
Histogram Filter Cutoff	0.00 nm
Min Peak to Peak	2.00 nm
Left Peak Cutoff	0.00000 %
Right Peak Cutoff	0.00000 %
Data Range Pad	5.00000 %
X Axis	Relative

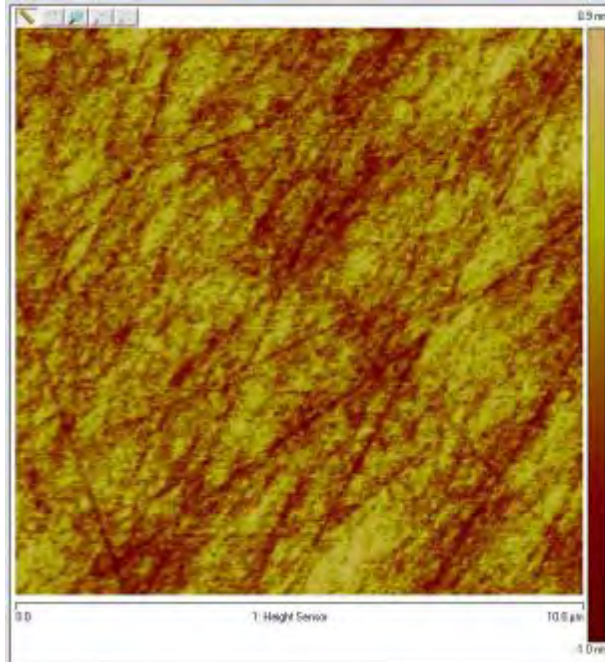
Results	
Peak to Peak Distance	0.00000 nm
Minimum Peak Depth	0.904287 nm
Maximum Peak Depth	1.87 nm
Depth at Histogram Maximum	1.67465 nm
Number Peaks Found	2



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# Mendezized Very Rare Gold Bar Serial Number 1003

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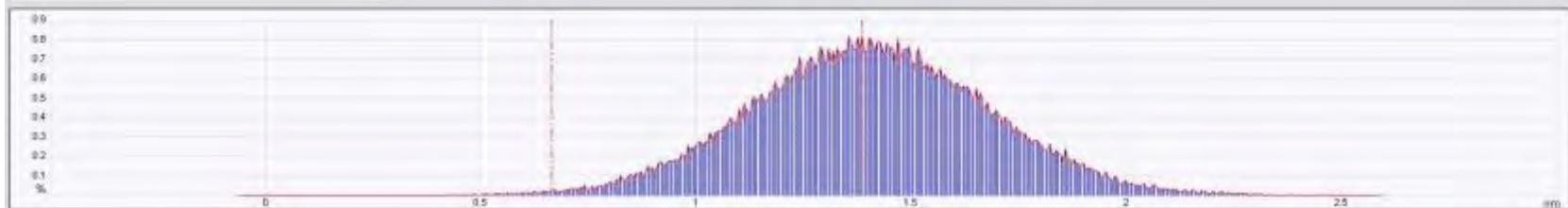


**The sample surface is atomically smooth never seen before in any metal structure. It has atomic level of flatness between 0.5 nm to 1.1 nm which is amazing.**

Grid Markers	
Marker 0	0.664 nm
Marker 1	1.39 nm

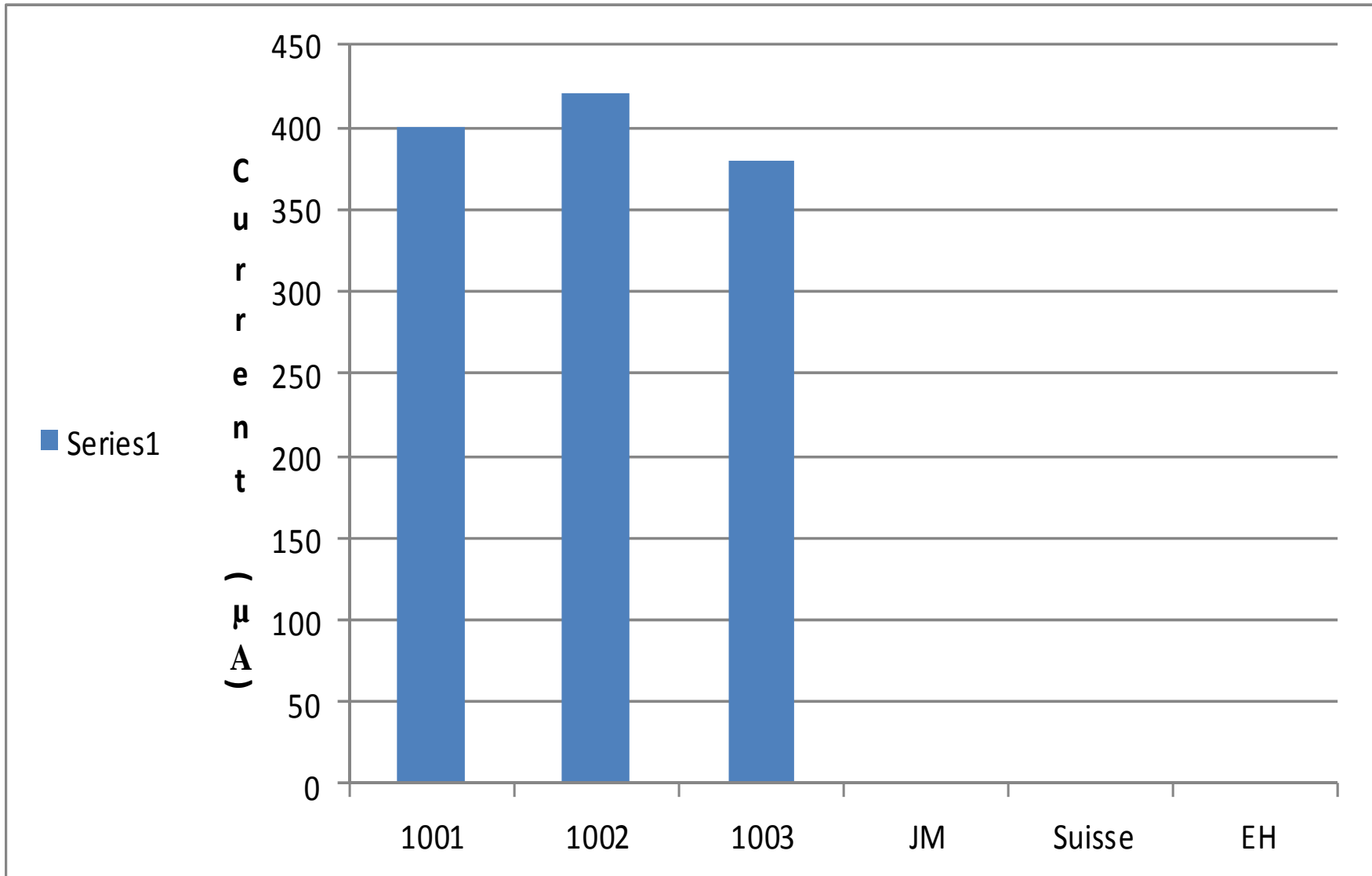
Inputs	
Number Histogram Bins	512
Histogram Filter Cutoff	0.00 nm
Min Peak to Peak	2.00 nm
Left Peak Cutoff	0.00000 %
Right Peak Cutoff	0.00000 %
Data Range Pad	5.00000 %
X Axis	Relative

Results	
Peak to Peak Distance	0.00000 nm
Minimum Peak Depth	0.463609 nm
Maximum Peak Depth	1.39 nm
Depth at Histogram Maximum	1.38519 nm
Number Peaks Found	2



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**Regular and Mendezized® Gold Bars current**



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**Resistivity of UnMendezized Gold is about  $2.44 \times 10^{-8}$  ohm-m**  
**Resistivity of Mendezized® Gold is about  $2.44 \times 10^{-13}$  ohm-m**

