

Le Peintre des Peintres, Diego Velazquez's signature, has lain hidden on the Bevan Family painting under layers of paint, for over 300 years.

Diego

Then on July 18th 2007, Mark Allen Lanoue, an expert in the field of hyperspectral imaging, using highly spatial and spectral analysis discovered Velazquez's highly unusually configured signature of his first name, Diego (Highlighted in purple). The letter "o" is open ended and the letter "e" appears to be absent from the signature... this is the exact manner in which Velazquez wrote the letters "e-g-o".

11:32 AM 8/7/2006 Lights=Flood 100%a, Longpass=656, Bandpass=OFF, Mag=3.60
Auto Exposure (Integration=1.22, Iris=50%a, Gain=0dB), Brightness=Auto, Contrast=Auto, Imaged width = 102.22 mm

The "i" was not distinctly uncovered during this imaging session.. However, the dot over the "i" was clearly present in the spectral data.

Velazquez “ D”
housed at the
Biblioteca
Nacional



Velazquez “e-g-o” & dot
from “i” per the
renowned Carl Justi

The letters “e-g-o” revealed by hyperspectral
imaging techniques, on the Bevan Family
Painting, appear speckled throughout this
presentation, because the letters “e-g-o” are still
invisible to the human eye.

DIEGO VELAZQUEZ

OPINION: (Addendum)



Bevan Painting

Based upon further personal examination of the Bevan family’s painting using VNIR & SWIR hyperspectral analysis, it is my opinion that the name “Diego” recently revealed on the Bevan Family’s painting by SWIR and VNIR hyperspectral analysis was written by the same hand that wrote the same highly unusually configured letter “D” housed at the Biblioteca Nacional.

The letters “e-g-o” that have been revealed on the Bevan Painting are written in the same manner as the letters “e-g-o” that are illustrated on the hardcover of Carl Justi’s book entitled “Velazquez And His Times”.

The letter “o” is open ended and the letter “e” appears to be absent from the signature. However, upon close scrutiny the letter “e” is revealed to be a separate part of the letter “g” and in actuality forms part of the letter “g” on the Bevan painting, in the same manner as the letters “e-g” merged together in the signature referenced by Carl Justi. This hand writing is the exact manner in which Diego Velazquez wrote the letters “e-g-o”. This highly unusual hand writing of the letters “e”, “g”, & “o” in the name Diego is unique only to the signature of Diego Velazquez (see above left).

The original hyperspectral work was focused mainly on the primary name “Velazquez”, where the focus remained for the earlier part of my work. However, after uncovering the name “Diego” from the Bevan Family Painting, it became apparent that this discovery was extremely important to the authenticity of the Bevan Family Painting as being painted by Diego Velazquez.

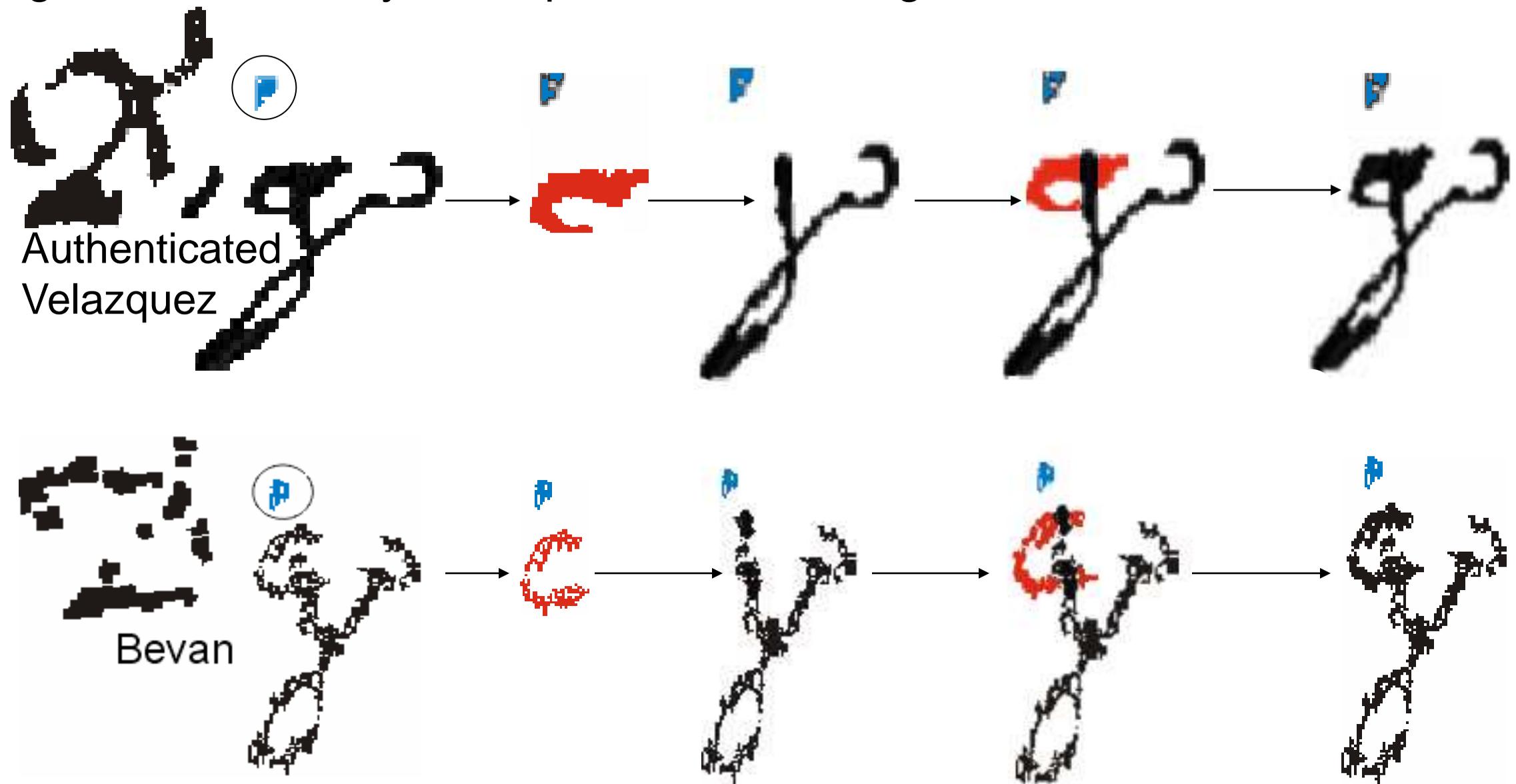
Signed By:

Mark Allen Lanoue : President & CEO, PhiLumina, LLC. Stennis Space Center, MS

Inducted into the NASA Space Technology Hall of Fame, in 2005

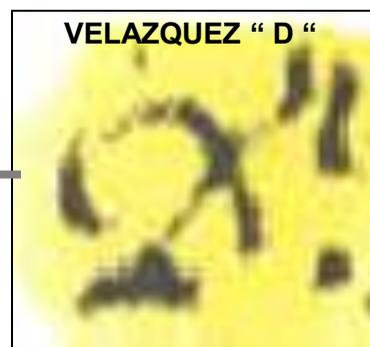
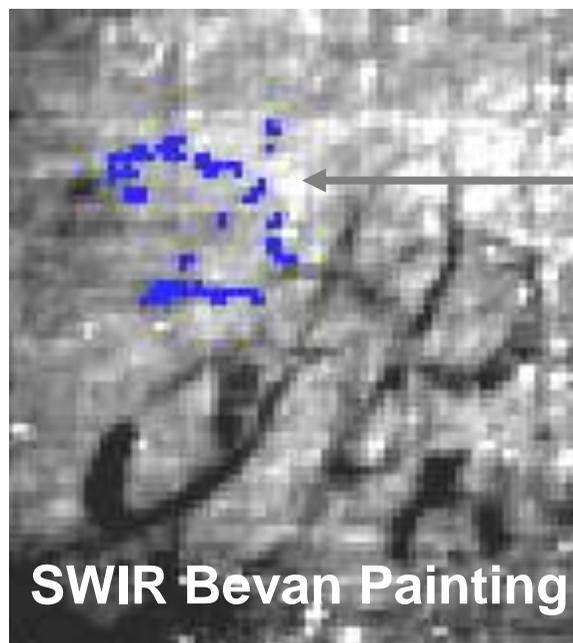
Date: Aug 30, 2007

The signatures below illustrate that the letter “e”, which appears to be absent from both signatures is revealed to be a separate part of the letter “g” and in actuality forms part of the letter “g”.

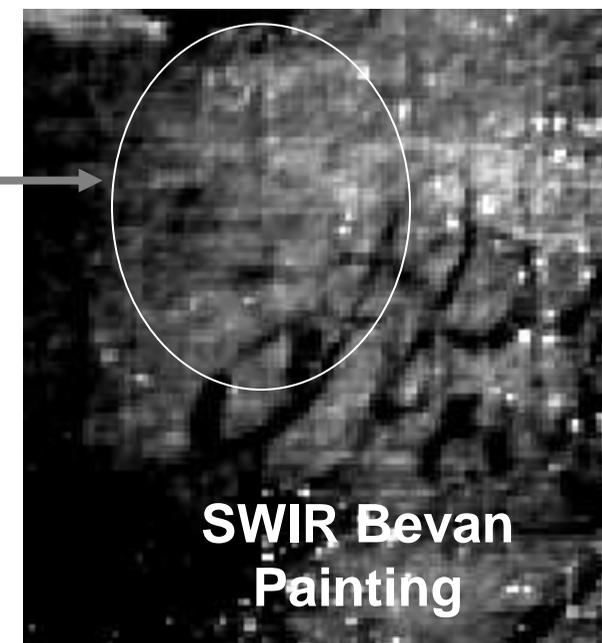


The letter “i” was not distinctly uncovered during this imaging session – only the dot (encircled) on top of the “i” was revealed, which has a similar brush stroke shape “” to that of Velazquez who located the dot of his “i” over the top of his “e” in a manner similar to the dot of the “i” being located over the “e” on the Bevan painting.

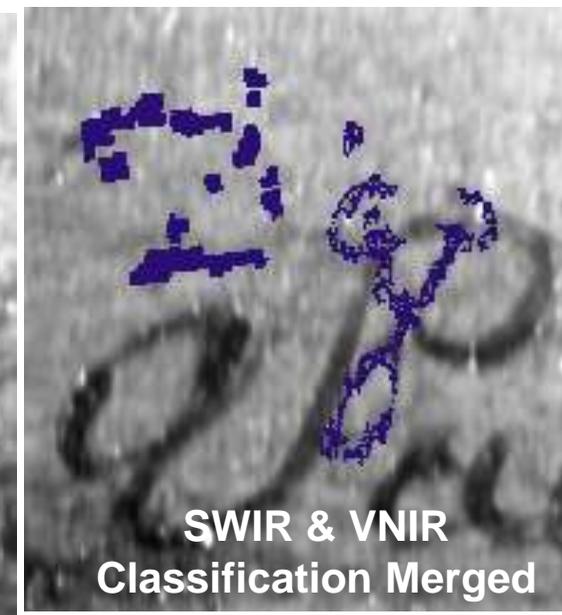
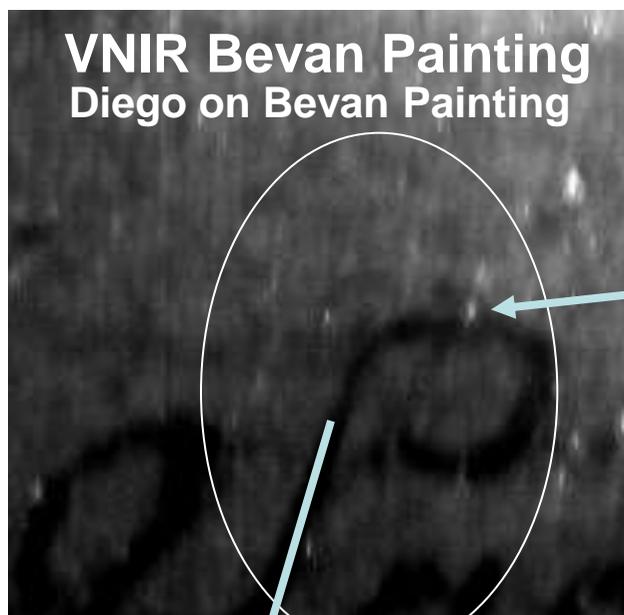
VELAZQUEZ SIGNED HIS NAME IN SEVERAL DIFFERENT WAYS:



Velazquez signature housed at the Biblioteca Nacional



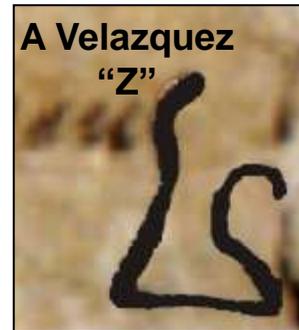
* images were taken of the Bevan Painting at various angles resulting in the letters appearing to be at varying angles.



The Velazquez "D" was uncovered from the Bevan painting via the use of SWIR hyperspectral processing. Whereas, the "e-g-o" and the unique dot from the "i" was uncovered from the Bevan painting using VNIR hyperspectral processing. The "D" was placed on the VNIR processed image in order to show alignment within the name "Diego".



**Velazquez "V" per
the renowned Carl
Justi**



**Housed at the Biblioteca
Nacional**



**Velazquez "Battle of Breda"
monogram housed at the Biblioteca
Nacional**

OPINION:

DIEGO VELAZQUEZ

Based upon my personal examination of the Bevan family's painting over a period of four (4) days, and my subsequent multispectral and hyperspectral analysis, it is my opinion that the letter "V" recently revealed on the Bevan Family's painting by SWIR and VNIR hyperspectral analysis was written by the same hand that wrote the same highly unusually configured letter "V" unique only to the signature of Diego Velazquez that is illustrated on the hardcover of Carl Justi's book entitled "Velazquez And His Times" (see Above).

Likewise, it is my opinion that the highly unusual configured letter "Z" unique only to the signature of Diego Velazquez recently revealed on the Bevan Family's painting by SWIR and VNIR hyperspectral analysis was written by the same hand that wrote the letter "Z" that is illustrated on the rare preparatory drawing (a sketch drawn in charcoal by Velazquez) Housed at the Biblioteca Nacional (see Above).

The Bevan Family painting is notable in that it contains a monogram that is remarkably similar to the Velazquez monogram Housed at the Biblioteca Nacional (see Above).

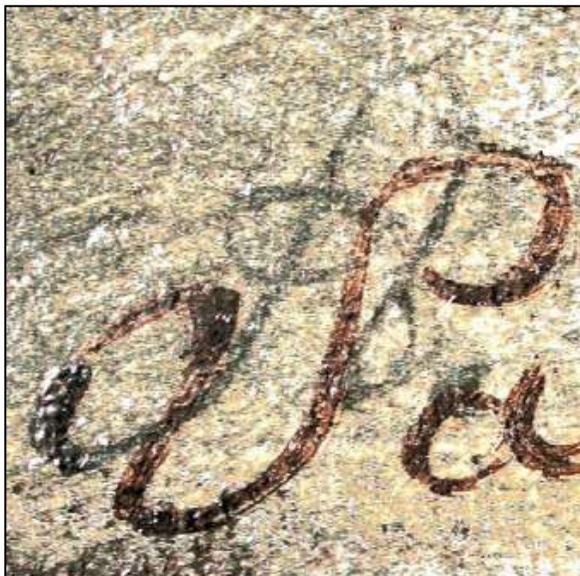
Signed By: Mark Allen Lanoue

Date: July 11, 2007

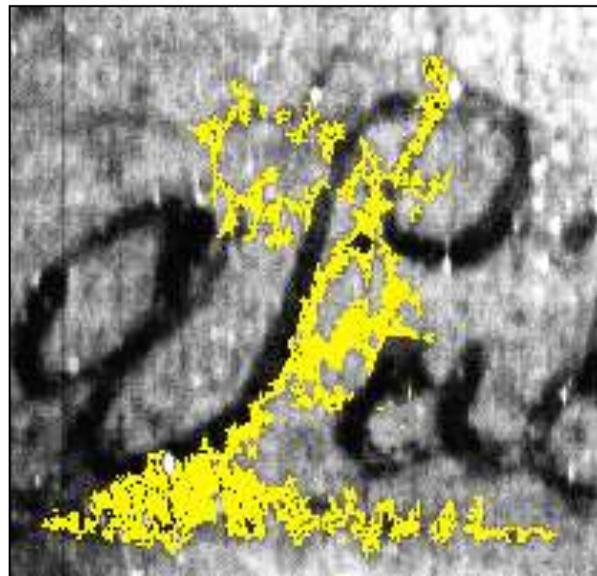
Mark Allen Lanoue : President & CEO, PhiLumina, LLC., Stennis Space Center, MS

Inducted into the NASA Space Technology Hall of Fame, in 2005

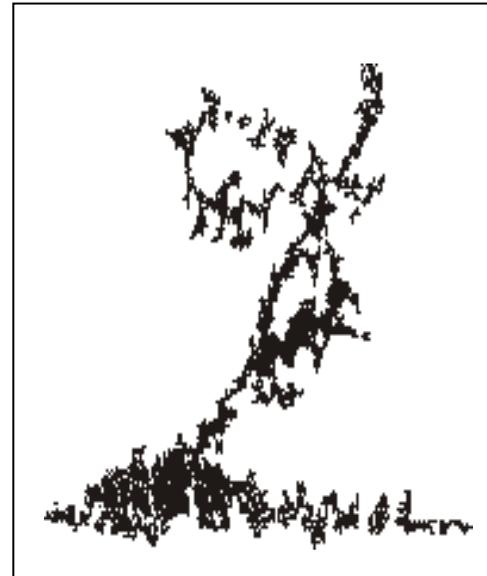
Monogram Research & Features



Original Photo,
Bevan Painting



VNIR PCA CLASSIFIED
MONOGRAM on Bevan Painting



VNIR PCA CLASSIFIED
extracted from Bevan Painting



Battle of BREDA
Velazquez Monogram

The image on the left is a picture taken of the Bevan family Painting over the area of the Monogram where the top half of the Monogram is now quite visible, due to the process of pentimenti. The second image from the left shows a classification of the monogram (classified in yellow) on the Bevan Family Painting, which was uncovered using hyperspectral VNIR imaging, analysis, and processing procedures. This classification shows what is already visible on the original photo on the left (taken of the Bevan Painting) and the lower part of the monogram later revealed by Mark Lanoue through hyperspectral imaging techniques. The third image from the left is the classified area extracted from the Bevan Painting showing the classified Monogram in its entirety. The image on the right is an enlarged image, which is a copy of Velazquez's monogram of his preparatory sketch for his "Battle of Breda" painting.

Uncovering Closely Matched Spectra Through Data Rotation & Texture Analysis of the Bevan Family Painting (Using Short Wave Infrared & VNIR Hyperspectral Imaging)

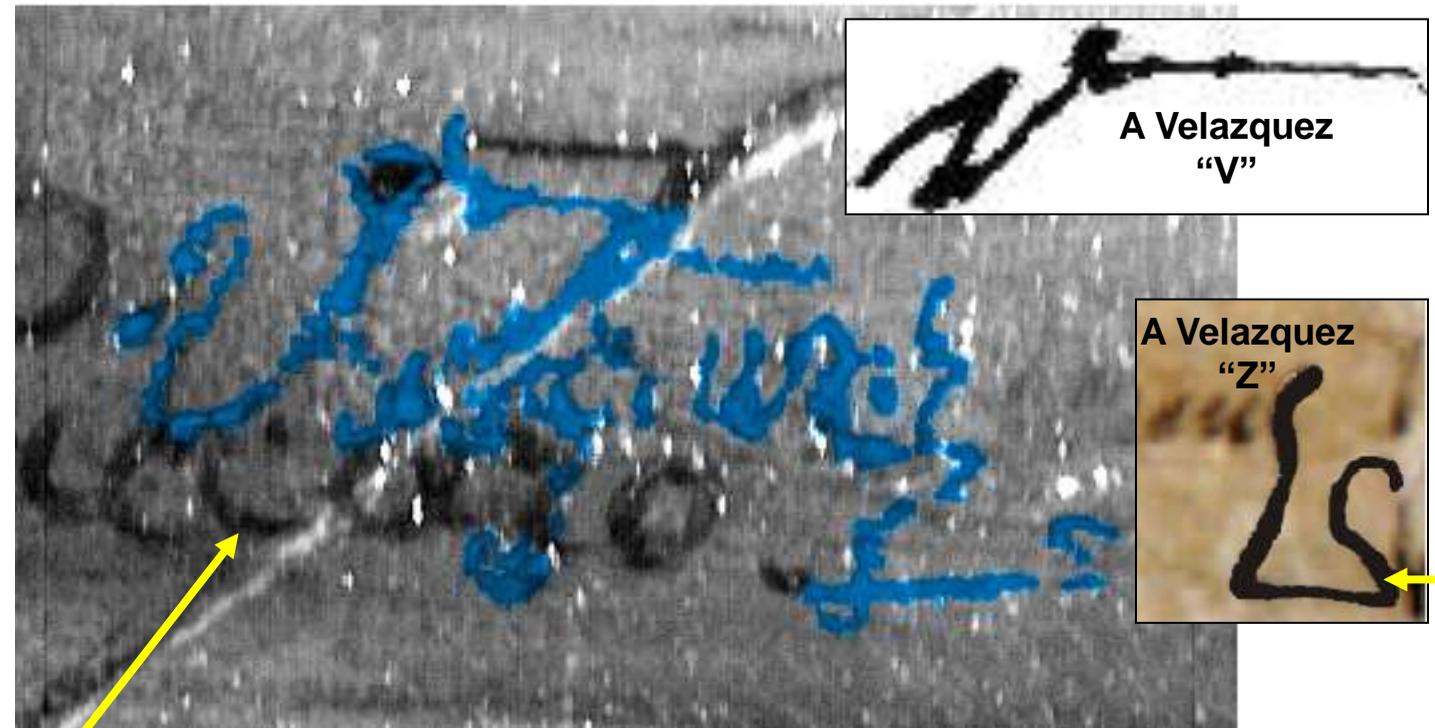
A grow technique using the same value response was used to create the BLUE images. These were not hand drawn, but were generated by image processing techniques using hyperspectral imaging technology. The “V” & the “Z” representations came from the SWIR data, which had to be re-sampled to the VNIR resolution.

The spectrally classified signature represented in BLUE is not solid, but appears speckled with its letters somewhat indistinct, due to the fact that much of the signature is still partially hidden.

The false signature above is the signature that was used to obliterate the original Velazquez signature shown in BLUE, which was uncovered using SWIR & VNIR hyperspectral imaging technology.

**** The letters “ e – l – a – z ” in the above signature uncovered from the Bevan Family painting are still partially hidden, due to the fact that they are concealed by covering paint.**

Created by: Mark Allen Lanoue



Actual Classification of a Velazquez signature uncovered during Processing of the Bevan Painting

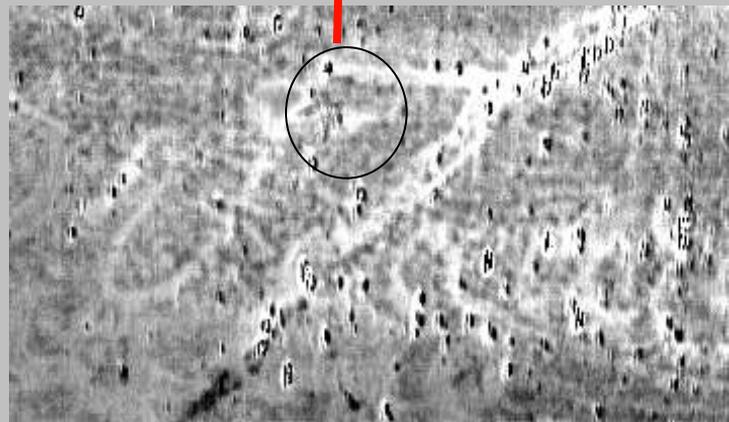
Original Control Signature
Per Carl Justi

Per Biblioteca Nacional

VELAZQUEZ "V" UNCOVERED ON BEVAN PAINTING



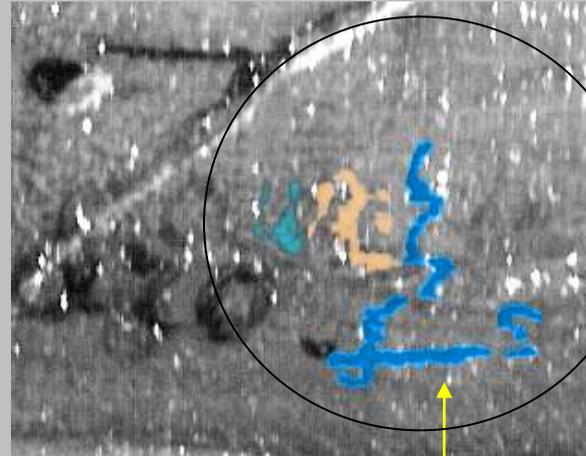
Represented in Red is the "V" uncovered in the painting that is being analyzed for a hidden signature matching that of Velazquez as per Carl Justi.



Principle Component Analysis of the Bevan Painting

Notice the distinct brush stroke pattern circled in the images derived from the Bevan Painting . This is without doubt the same brush mark as that found in the Velazquez "V" shown above in black.

VELAZQUEZ "u & e" UNCOVERED ON BEVAN PAINTING



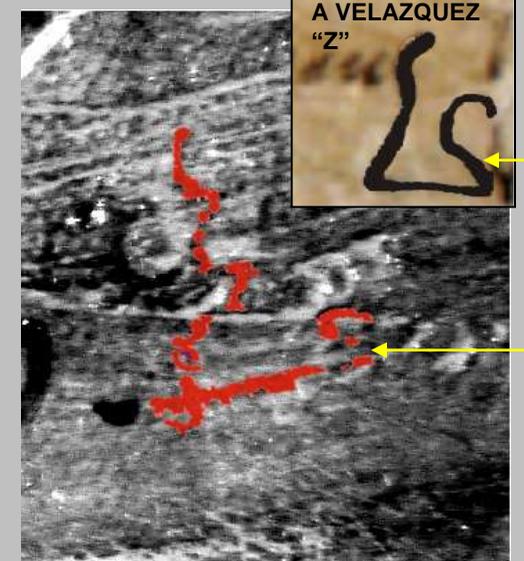
Represented in Cyan is the "u" & in off-white is the "e" uncovered in the painting that is being analyzed for hidden signatures and details matching that of Velazquez's work.



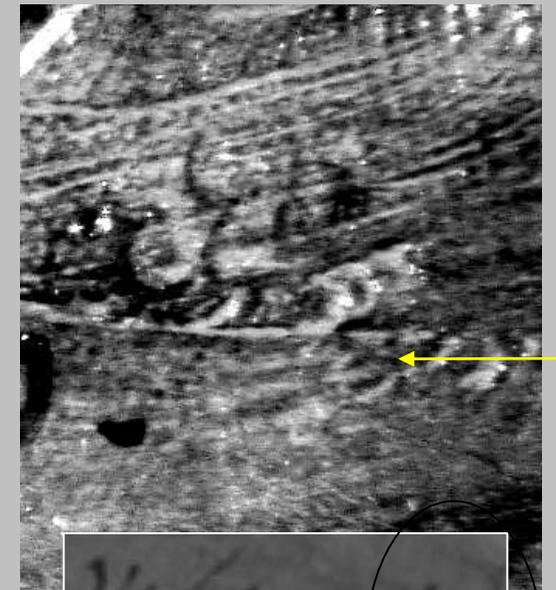
As per Carl Justi

** The images of the "Z" (in blue and red) were taken at different angles by Mark Allen Lanoue.

VELAZQUEZ "Z" UNCOVERED ON BEVAN PAINTING

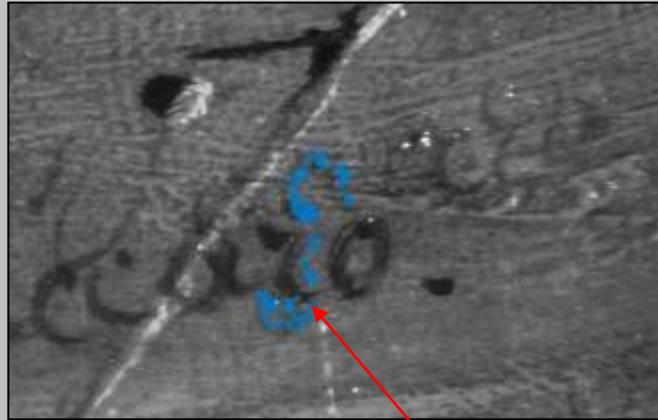


Represented in RED is the "Z" uncovered in the Bevan Family painting that is being analyzed for hidden signatures matching that of Velazquez's work.

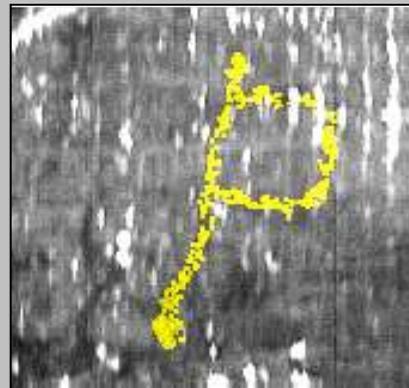


Original Control Signature as per Biblioteca Nacional

VELAZQUEZ “ q “ UNCOVERED ON BEVAN PAINTING



This Letter “ q “ was not hand drawn.



The letter “ P “ uncovered from the Bevan Family painting is shown above and was not hand drawn. Art Price (As shown below) shows the letter “ P “ following the signature of Velazquez depicting that the painting was painted in 1650. Likewise, the Bevan Family painting shows a letter “ P “ immediately following the signature of Velazquez.

p 1650
As Per Art Price

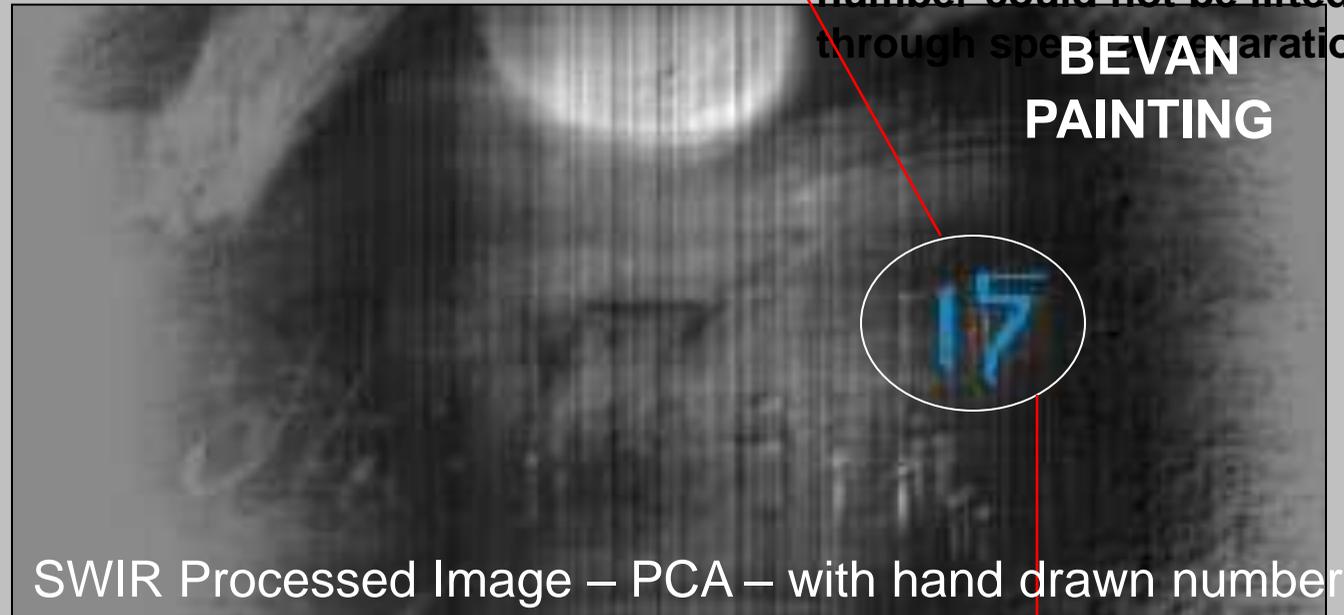
VELAZQUEZ NUMBER “ 15 “ UNCOVERED ON BEVAN PAINTING



Authentic Velazquez Signature

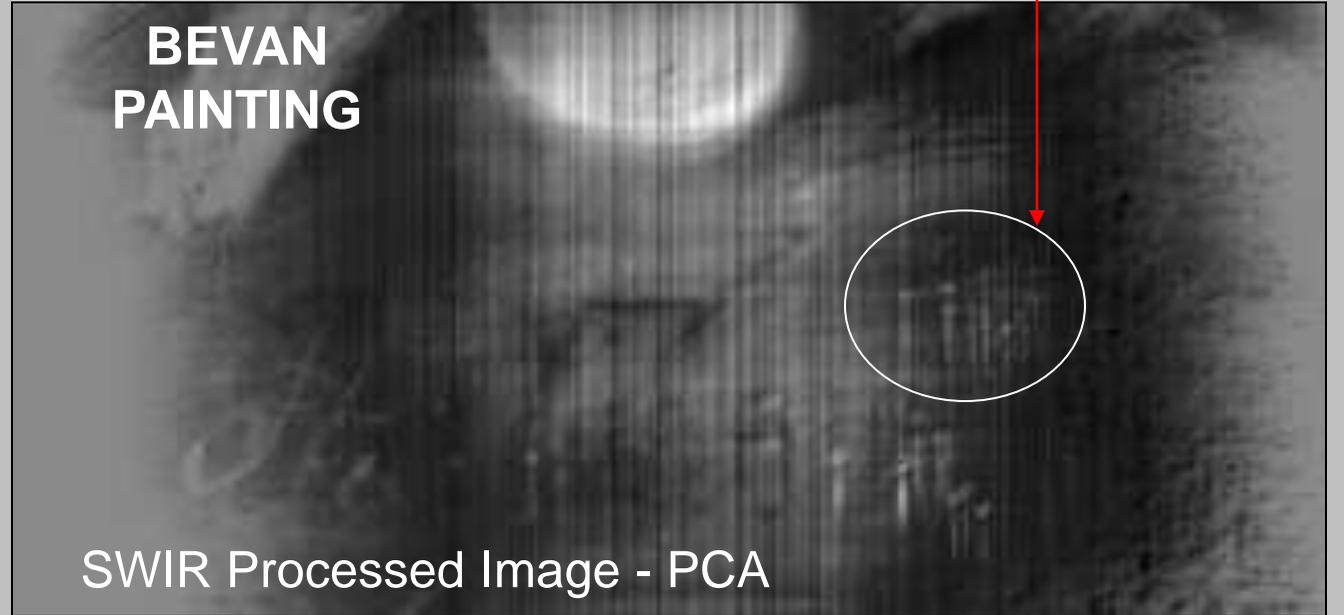
Notice the number “ 15 “ found in the SWIR data that matches the proximal location of the number “ 16 “ in the Velazquez signature. The number “ 15 “ was hand drawn on the SWIR image, due to the fact that the number could not be lifted through spectral separation.

BEVAN PAINTING



SWIR Processed Image – PCA – with hand drawn number

BEVAN PAINTING



SWIR Processed Image - PCA

A Focus On the Bevan Family Painting Which Shows the Unique Features Pertaining to Diego Velazquez



Notice the “Out Of Focus” Technique used in the painting portrayed in the overall painting. This is a technique that Velazquez mastered and used in many of his paintings.

A signature, shown in purple, unique only to that of Diego Velazquez.

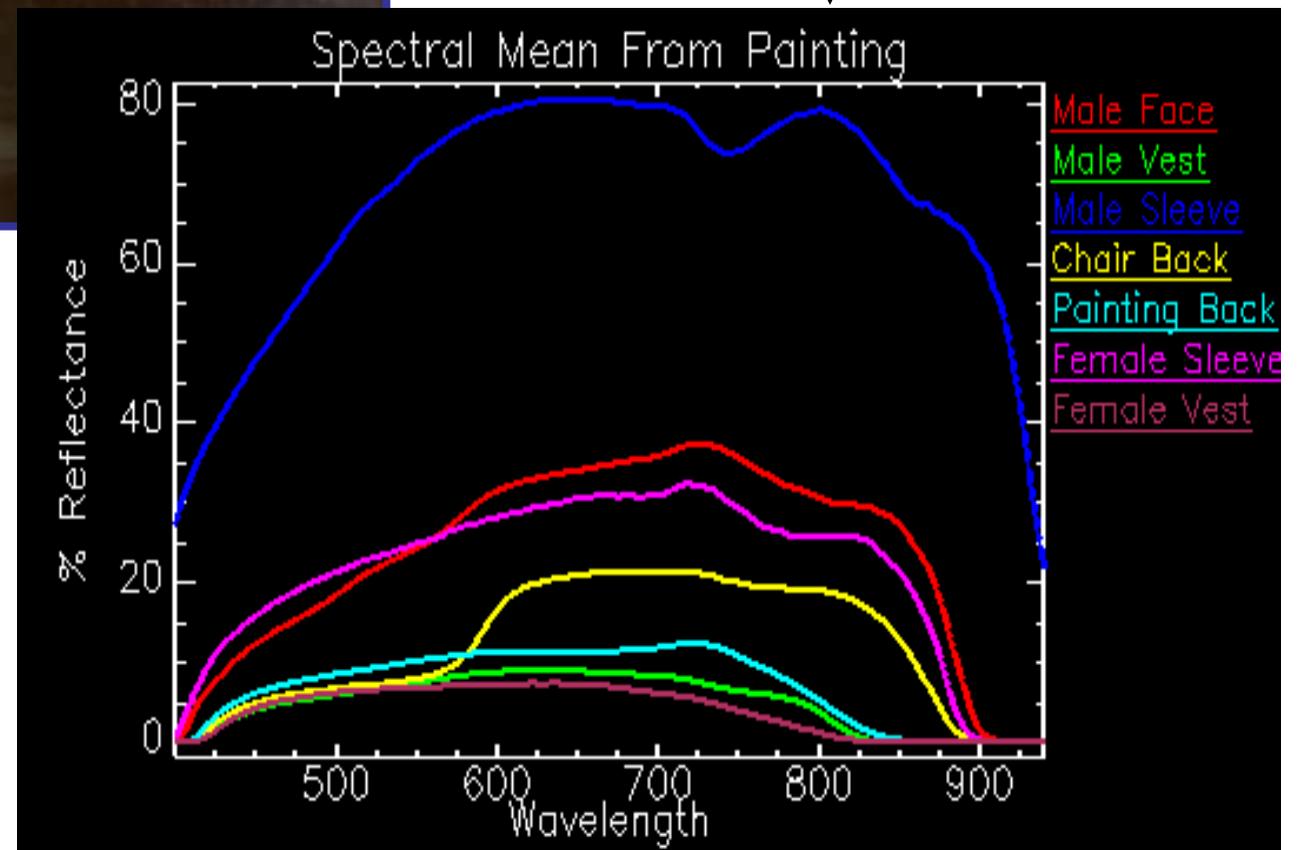


Some Spectral Analysis of Paint Pigments from the Bevan Family's Painting



Spectra gathered from several hue locations on the Bevan Family Painting.

I have been retained by the Bevan Family to conduct color, hue, pigment and ink analysis using hyperspectral imaging and analysis, which is currently on-going.



Created by: Mark Allen Lanoue

SUPPLEMENTAL

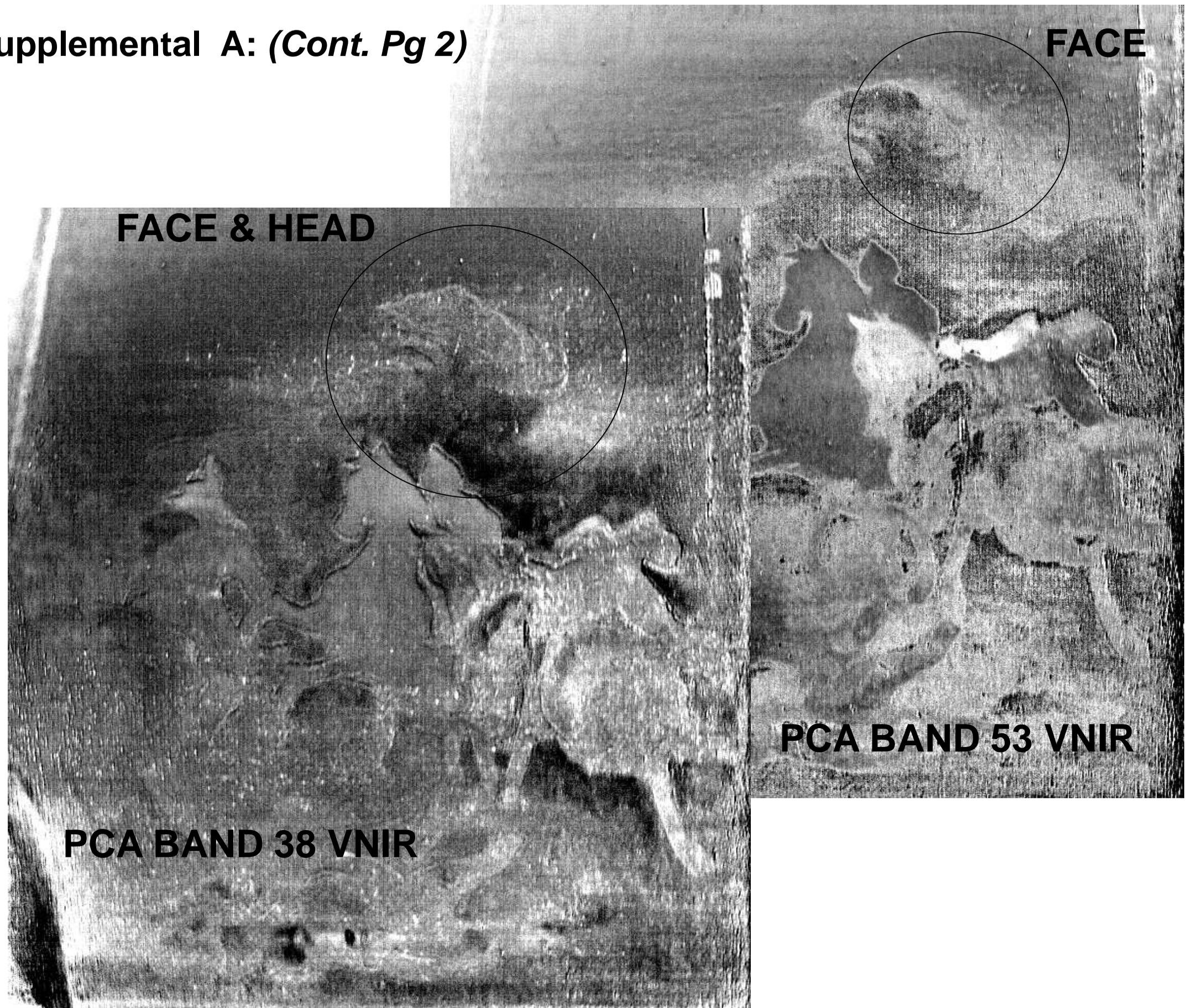
The following pages are filled with interesting findings during my image analysis of the Bevan Family Painting. There are others. However, these immediately stand out without further processing and cannot be seen by the naked eye.

Supplemental A: *(there are 4 pages associated with supplemental A)*



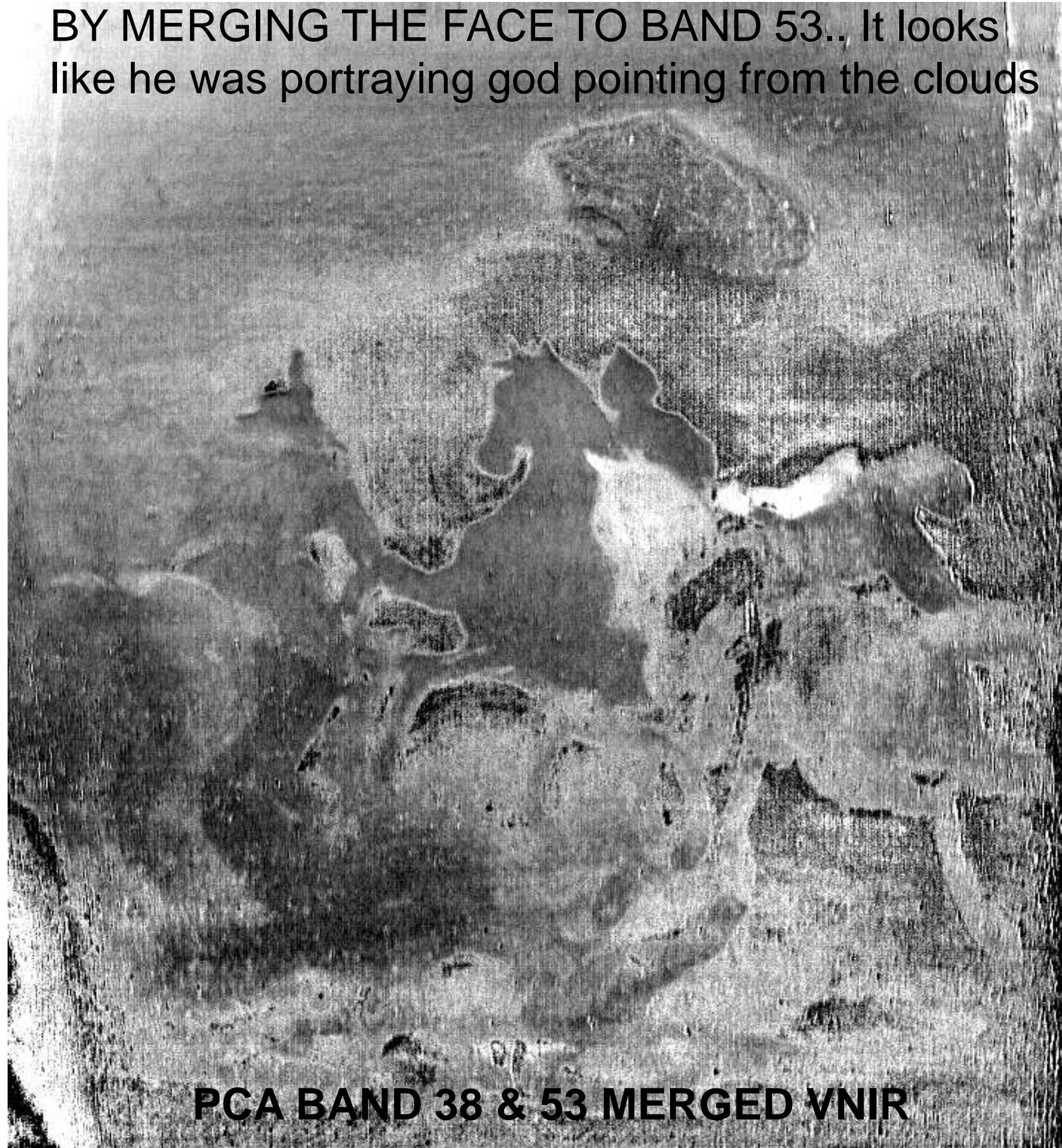
All the images shown on the following pages are derived from this image of a painting within the Bevan Painting

Supplemental A: (Cont. Pg 2)



Supplemental A: (Cont. Pg 3)

BY MERGING THE FACE TO BAND 53.. It looks like he was portraying god pointing from the clouds



Created by: Mark Allen Lanoue

Supplemental A: (Cont. Pg 4)



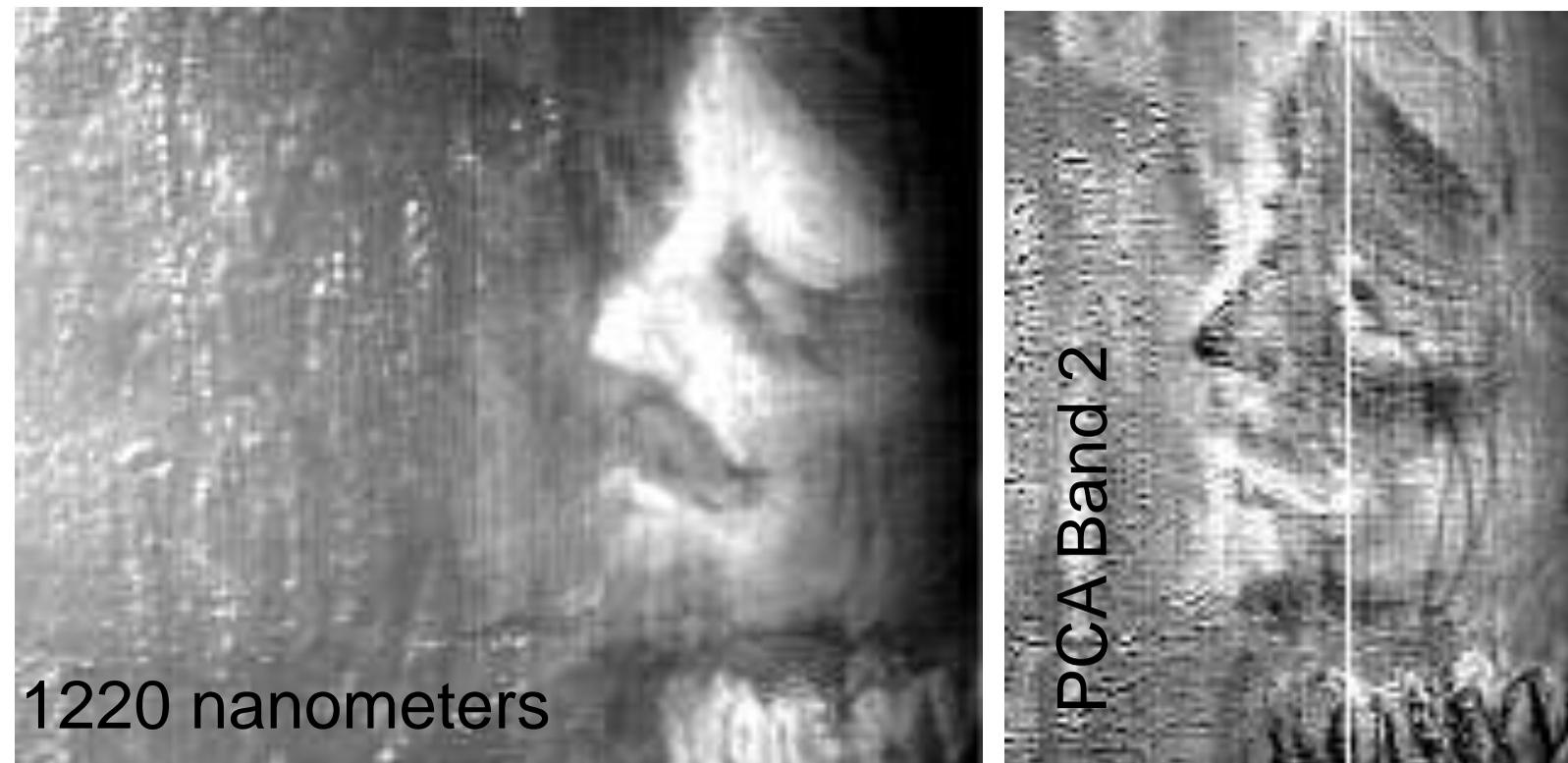
WRITING

PCA BAND 38 & 53 MERGED VNIR

Created by: Mark Allen Lanoue

Supplemental B:

Interesting images uncovered using Hyperspectral Imaging & Analysis

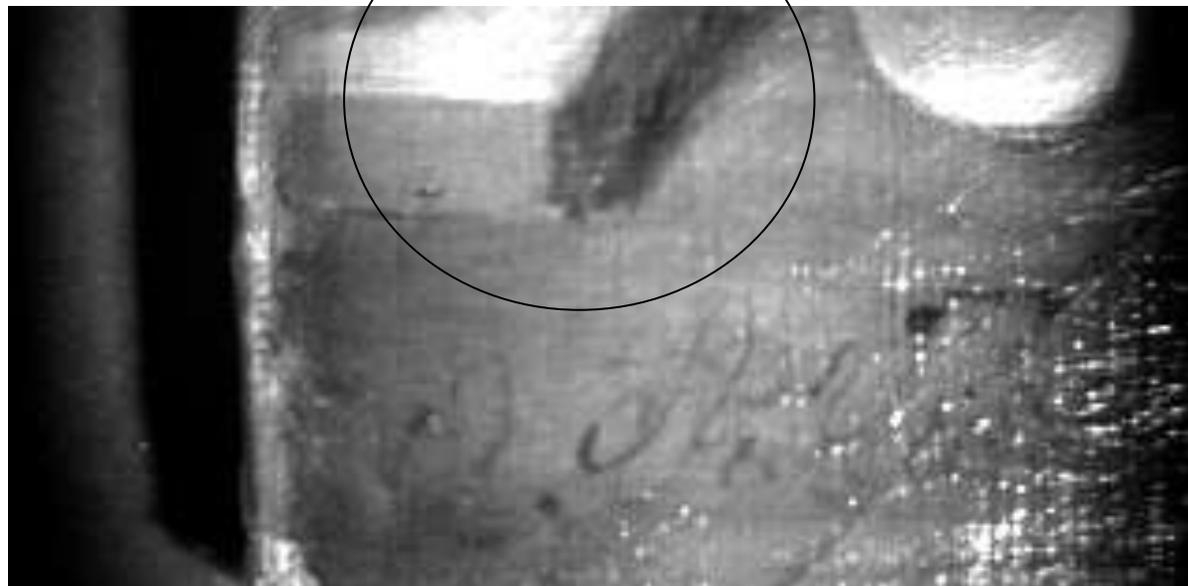
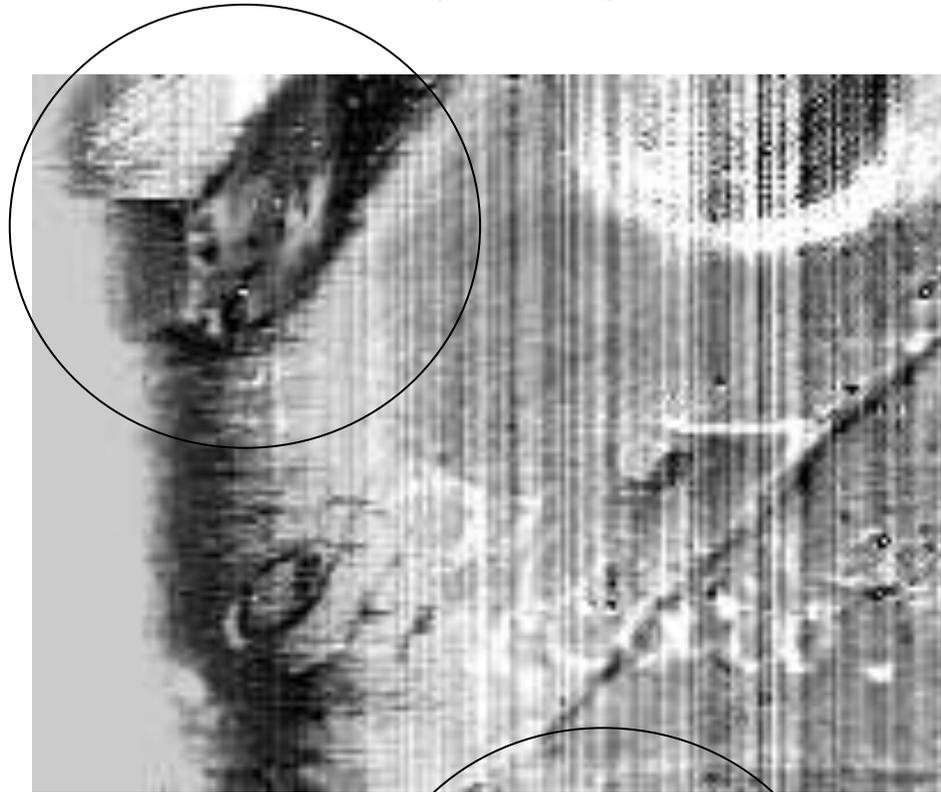


There was also the use of hidden images and symbols throughout the painting.

Created by: Mark Allen Lanoue

Supplemental C:

Interesting images uncovered using Hyperspectral Imaging & Analysis



There was also the use of hidden images and symbols throughout the painting.

Created by: Mark Allen Lanoue