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PRINTED: 07-24-2012

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: GREY FOX

ALTERNATE NAMES:

YAVAPAI COUNTY MILS NUMBER: 282C

LOCATION: TOWNSHIP 10 N RANGE 5 W SECTION 25 QUARTER E2
LATITUDE: N 34DEG 10MIN 50SEC LONGITUDE: W 112DEG 43MIN 30SEC
TOPO MAP NAME: YARNELL - 7.5 MIN

CURRENT STATUS: RAW PROSPECT

COMMODITY:
TUNGSTEN

BIBLIOGRAPHY:
DALE, V.B. TUNGSTEN DEPTS USBM IC 8078 1961
P 40
ADMMR GREY FOX FILE

Date Printed: 08/17/95

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION SUMMARY

Information from: **Charles Wright**

Company: Poorboy Mining

Address: P.O. Box 308
City, State ZIP: Congress, Arizona 85332
Phone:

MINE: **Grey Fox**

ADMMR Mine File: Grey Fox Mine file
County: **Yavapai**
AzMILS Number: **282c**

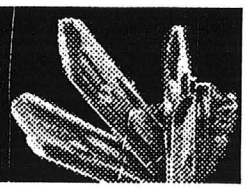
SUMMARY

Charles Wright visited the Department's office with a sample of vein material that included garnet, calcite, and fluorite. He reported that he had sent a similar piece to Cannon Microprobe of Seattle for analysis. Copies of the reports were made for the file.

Contrary to the reports of a potential skarn deposit in the paper work from Cannon Microprobe, it is doubtful the deposit is a skarn. Vernon Dale describes the occurrence in Dale, V.B., 1961, Tungsten Deposits of Gila, Yavapai, and Mohave Counties, Arizona US Bureau of Mines Information Circular IC 8078, page 40 as a vein deposit in schist. Although Cannon Microprobe's conclusion is reasonable based on a single hand specimen it points out the fallacy of describing a mineral deposit from a single sample, just as it is inappropriate to describe the value of an ore deposit from a single assay.

A review of AZMILS occurrences in the area indicate that Yavapai 282E, Wright Property is the same as Yavapai 282C, Grey Fox. Yavapai 282E has been deleted, its primary name and a.k.a.s have been added to 282C and a file made for Grey Fox Mine.

Ken A. Phillips, Chief Engineer Date: August 14, 1995



ELECTRON MICROPROBE ANALYSIS
of ORE SAMPLES

Charles Wright
Poorboy Mining
Box 308
Congress, AZ 85332

July 13,1995
Invoice 95-176

Description of Sample
Doubly polished calcite rich thin section containing unknown opaques.

Analytical Procedure
Prepare polished sections and virgin fracture surface samples for "Flooded Silica (sperrylite)" and one large (.8") polished section only for the "Hematite" sample.

Carbon coat and analyze in ARL SEMQ electron microprobe using six independent wavelength dispersive x-ray spectrometers pre set to the key emissions of Au, As, Sb, Cu, Ag and Pt. Use EDS x-ray spectrometer for qualitative compositional analysis.

Survey entire sample at 1000x and image with back scattered electrons using the scanning electron microscope image mode of the electron microprobe.

Instrument Operating Conditions
25KV accelerating voltage, 0.05 uA beam current.

RESULTS ----------

Crushed Ore

No precious metal bearing phases could be found, but numerous grains of pyrite, magnetite, bismuth oxide and occasional grains of scheelite (calcium tungstate) were found.

Both spessartine and andradite are present. One grain of ferberite (iron tungstate) was found.

The mineralogy is consistent with that of a weathered skarn deposit. Native bismuth is common in some skarns and is probably the original mineral from which the bismuth oxides have altered. Gold and silver are known to occur in such skarns, but there are no reports of platinum group metalls occurring in economic concentrations in skarns.

Bismuth should not interfere with the production of a fire assay bead. No volatile elements which might cause a fire assay problem were observed.

Hematite Bearing Hand Sample

This sample consists of coarsely crystallline quartz with late encrustations of thin reddish crystal plates of hematite. This type of hematite is known as specular hematite. Some hydrous iron oxides occur in voids between quartz crystals. The hydrous iron oxides may have formed fromt he oxidation of pyrite.

This type of mineralogical shows no particular association with precious metal bearing ore systems. It can form at the outer edges of skarn deposits.

CRYSTAL MESH OF BISMUTH OXICES.

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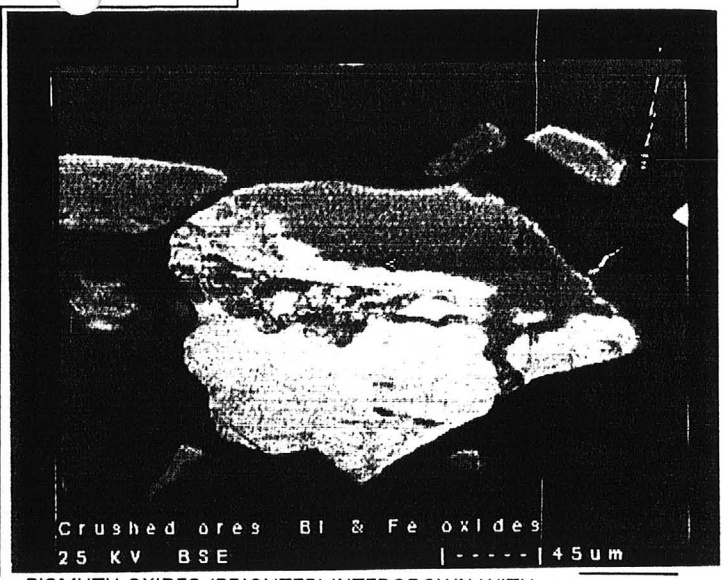

BISMUTH OXIDES (BRIGHTER) INTERGROWN WITH IRON OXIDES (DARKER).

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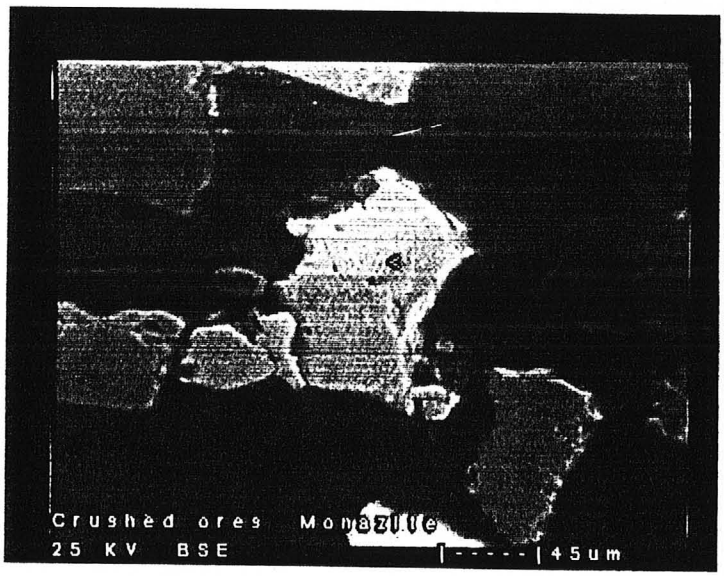

MONAZITE (CERIUM LANTHANUM PHOSPHATE)

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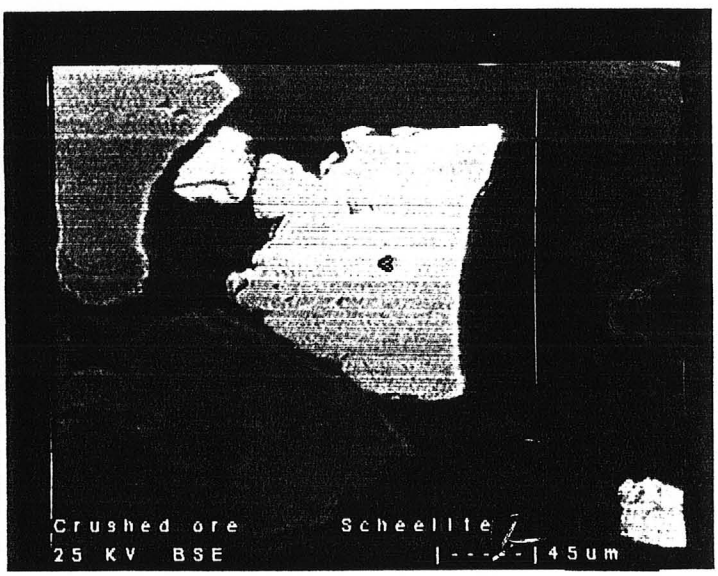

SCHEELITE (CALCIUM TUNGSTATE)

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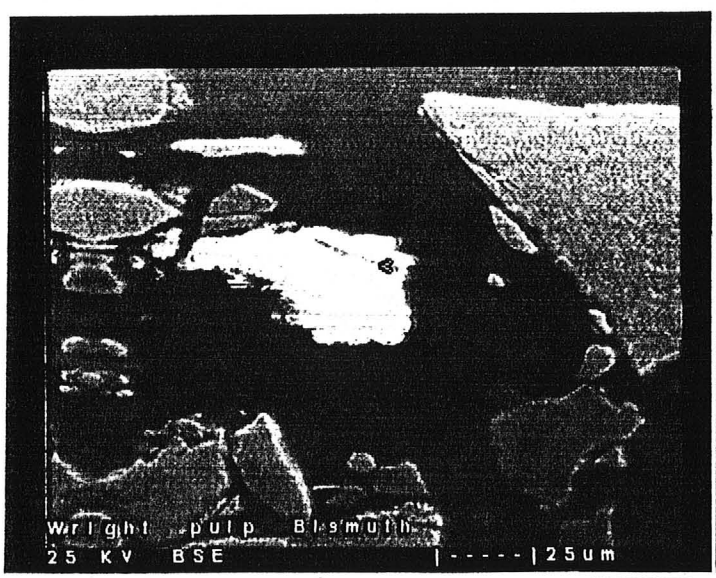

BISMUTH OXIDES WITH SPESSARTINE GARNET GRAINS AND SOME PYRITE GRAINS..

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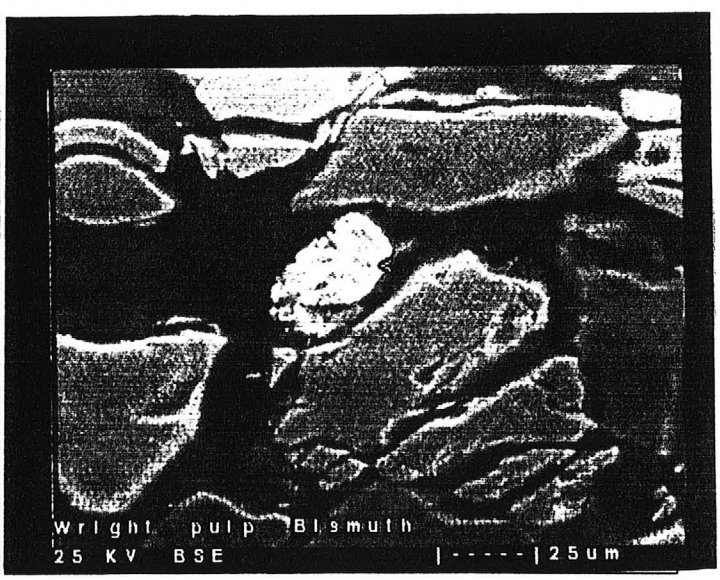

BISMUTH OXIDES WITH PYRITE GRAINS.

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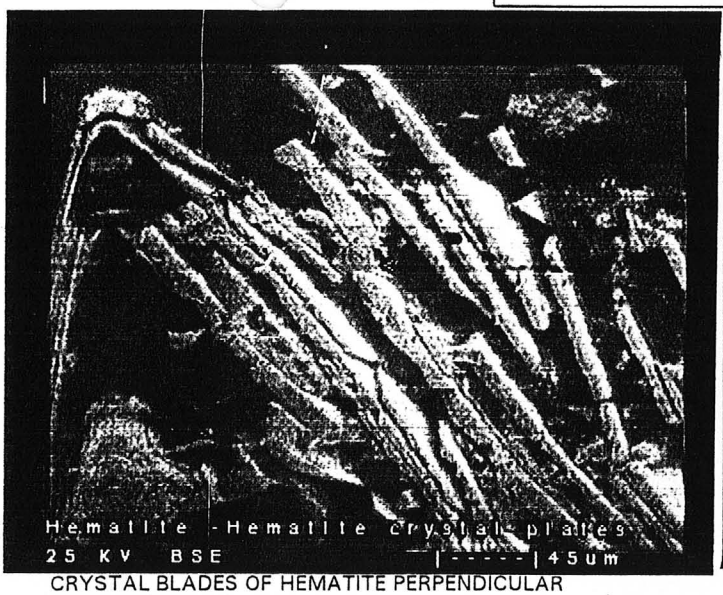

CRYSTAL BLADES OF HEMATITE PERPENDICULAR TO THEIR BROAD AXIS..

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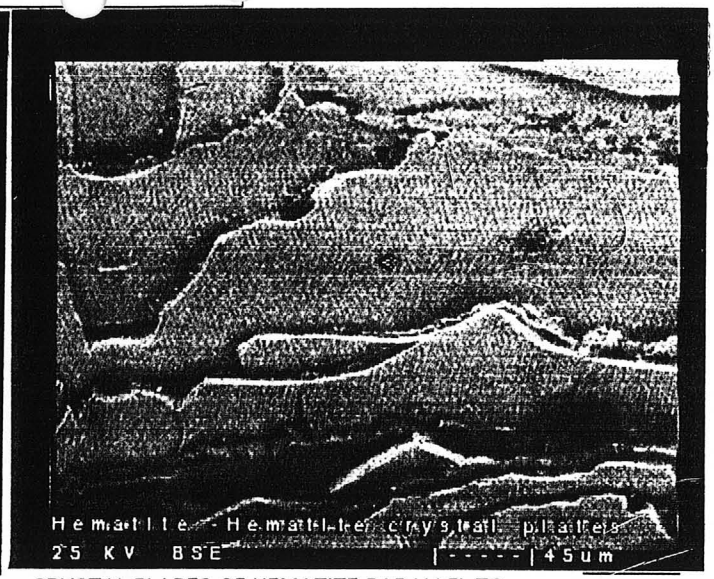

CRYSTAL BLADES OF HEMATITE PARALLEL TO THEIR LONG AXES.

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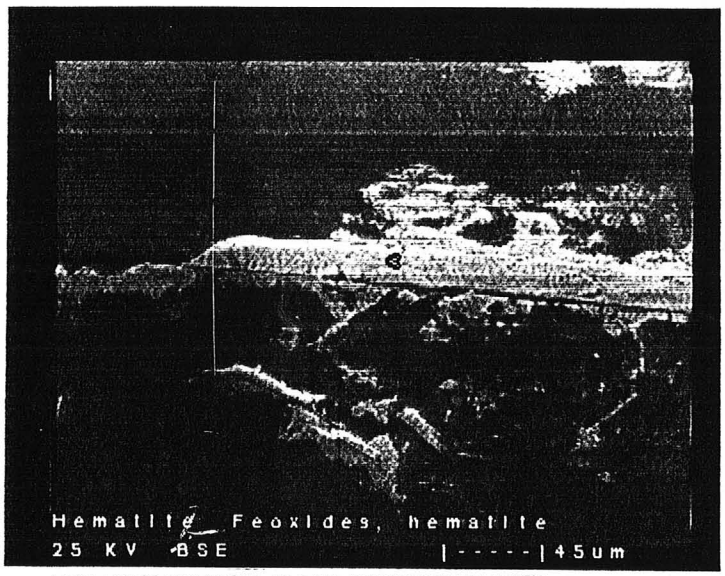

HEMATITE CRYSTAL BLADE OVERGROWN WITH IRON HYDROXIDES.

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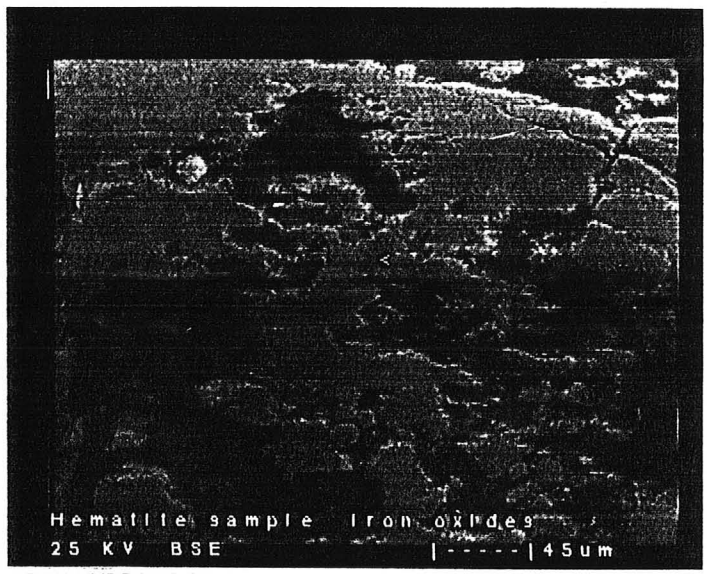

IRON HYDROXIDES.

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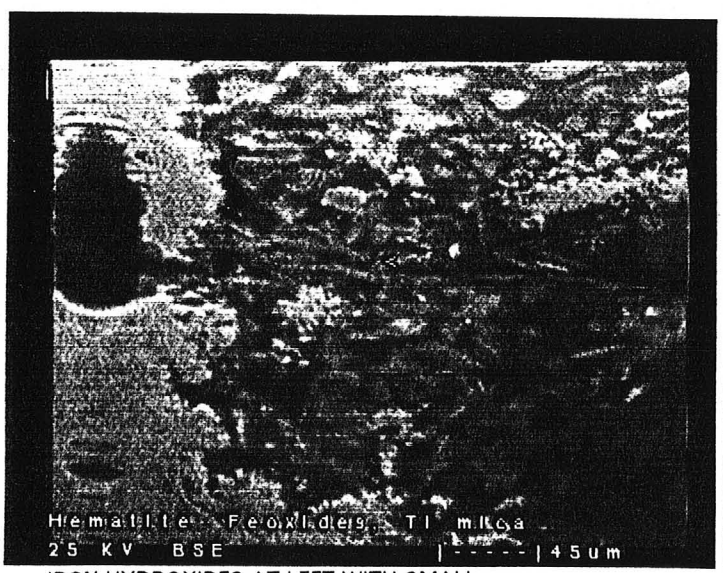

IRON HYDROXIDES AT LEFT WITH SMALL CRYSTALS OF A TITANIUM BEARING MICA.

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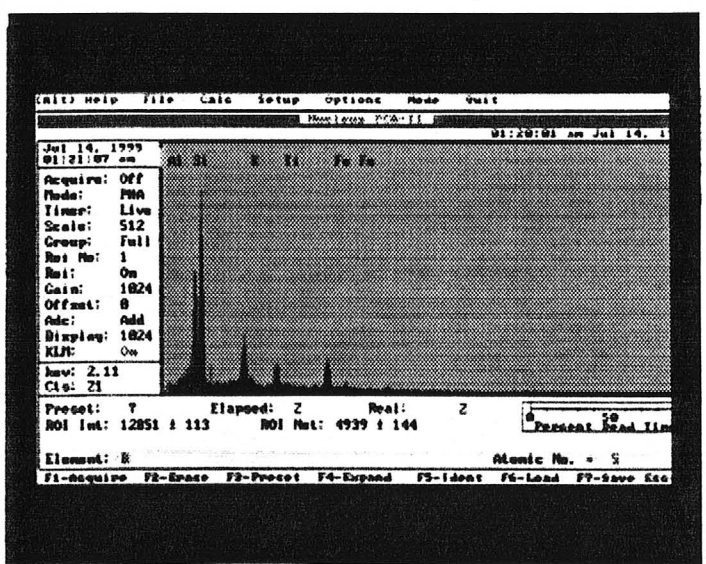

X-RAY SPECTRUM OF MICA CRYSTALS SHOWN AT LEFT.

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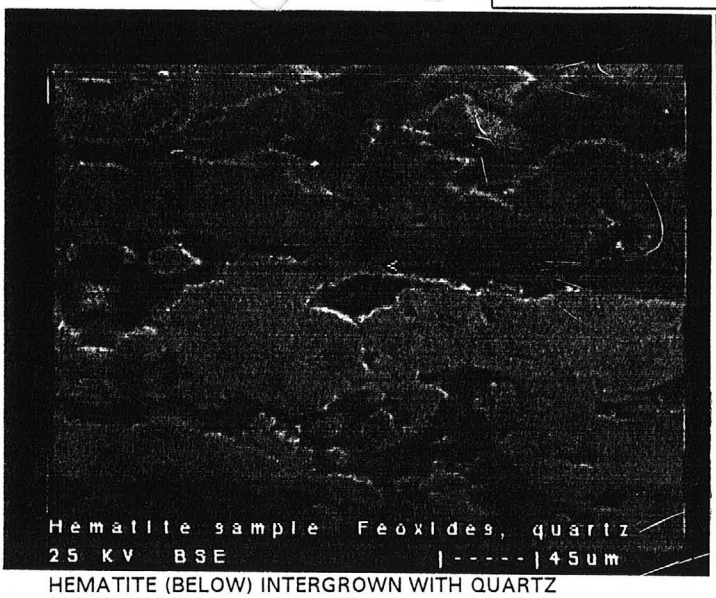
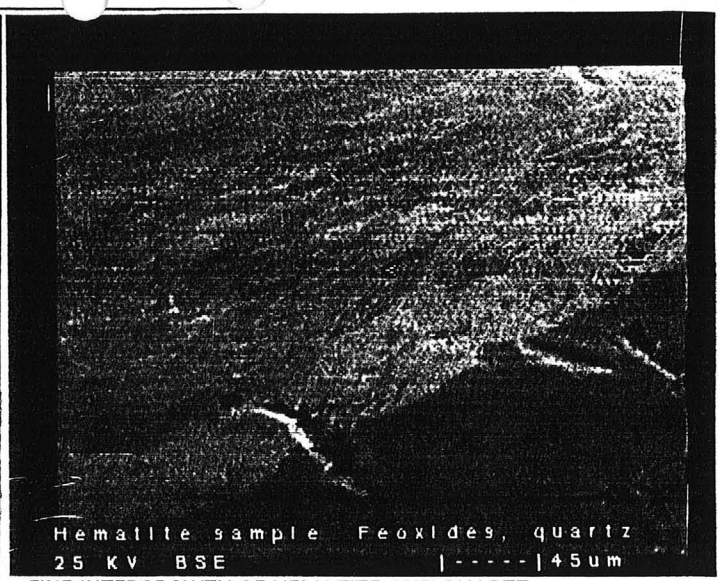


HEMATITE (BELOW) INTERGROWN WITH QUARTZ (ABOVE).



FINE INTERGROWTH OF HEMATITE AND QUARTZ WITH PURE QUARTZ BELOW.

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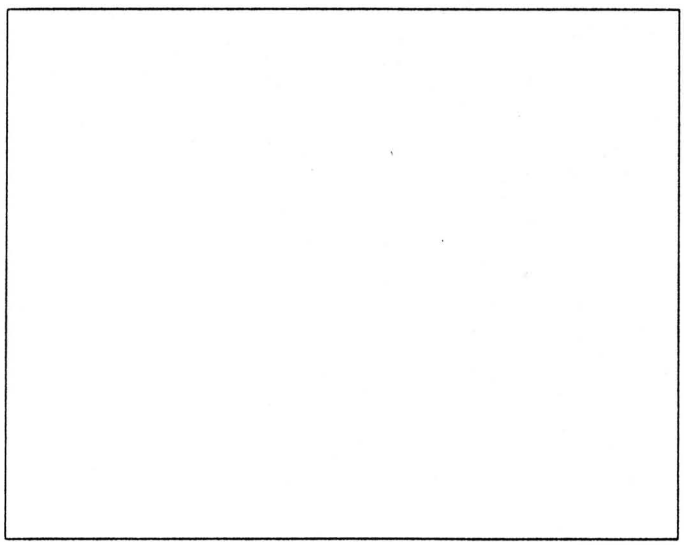

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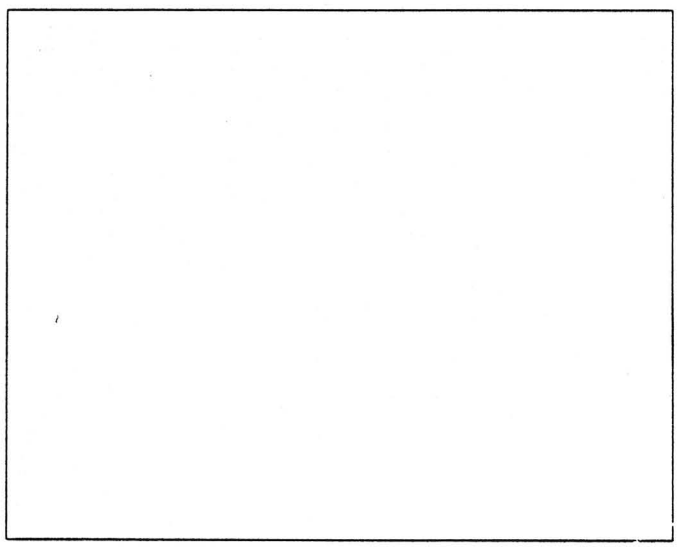

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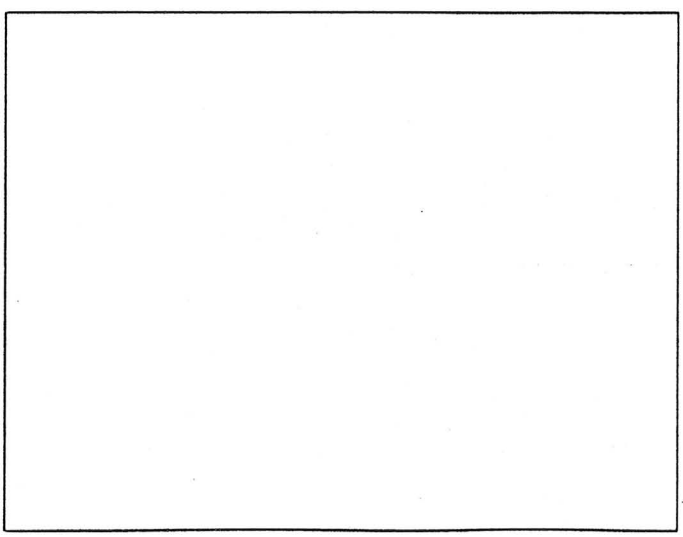

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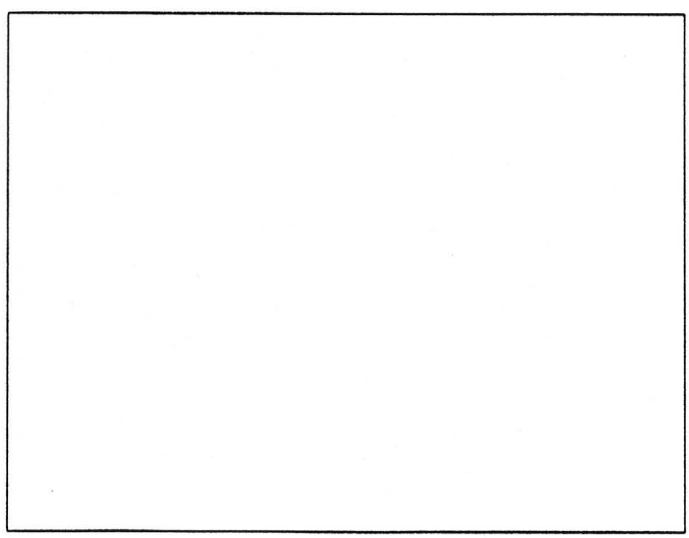

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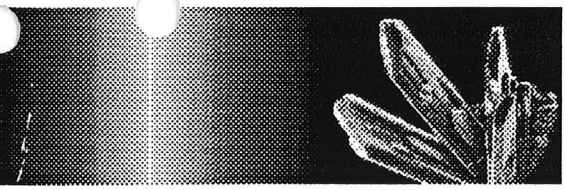


ELECTRON MICROPROBE ANALYSIS
of HEAD ORE SAMPLES

Invoice 95-136

Charles Wright
Box 308.
Congress, AZ

April 29, 1995

Description of Samples
Small sulphide bearing rock fragments in plastic bag.

Purpose of Analysis
Determine ore and gangue mineralogy..

Analytical Procedure, Electron Microprobe Analysis
Prepare polished section from the most sulphide rich rock fragment.

Qualititative microanalysis of sample using six WDS x-ray spectrometers and an energy dispersive x-ray spectrometer in an ARL SEMQ electron microprobe. Sample imaged using TV rate BSE detector and visual light optics. Image brightness of features is roughly proportional to density. That is to say that metallic minerals will appear brighter than nonmetallics. Gold and PGM minerals will display as very bright features on a darker background.

Analytical Procedure, X-Ray Diffraction Analysis (Not Applicable to this Job)
Prepare powder diffraction mounts from a portion of the bulk sample which has been completely pulverized to less than 100 microns. Scan from 5 to 60 degrees two theta in a modernized GE - XRD-6 diffractometer. Compare peak heights in samples to peak heights for the same minerals in prepared standards to determine the concentrations of minerals in the samples.

Probe Operating Conditions
Accelerating voltage = 15kv, Beam Current = 50 na

X-Ray Diffractometer Operating Conditions
35 KV, 10 mA, 2 degrees two theta/minute.

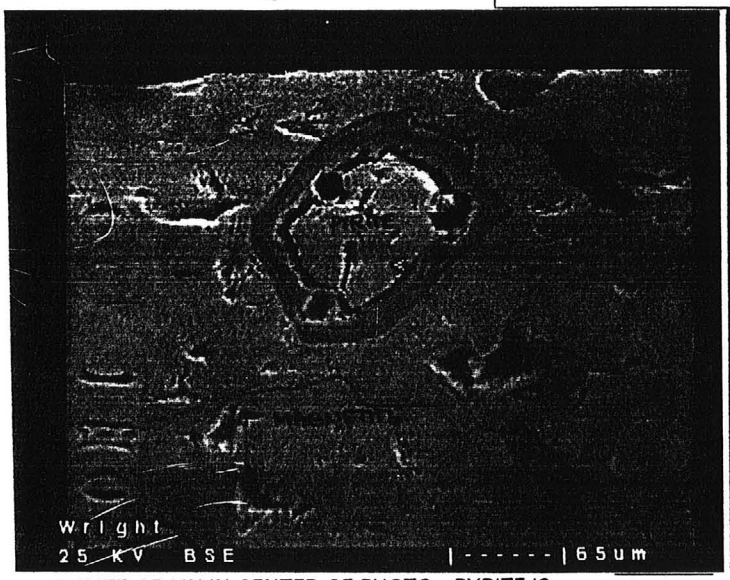
RESULTS ----------

A single 0.75" x 1.0" sample was surveyed using x-ray microanalysis and back scattered electron imaging in a scanning electron microscope / electron microprobe. The mineralogy encountered included pyrite, goethite (hydrous iron oxide), magnetite, grossular garnet, fluorite, epidote and hisingerite. No precious metal bearing minerals could be located. No non ferrous base metal bearing minerals could be located.

The host rock for the sulphide mineralization is a grossular garnet tactite or "skarn". It is also known as contact rock. This type of rock occurs when prolonged heating of a limestone by a nearby granitic magma recrystallizes the calcium carbonate of the limestone into a calcium silicate rock.

This particular skarn shows features of a variety of skarn known as a "retrograde skarn". Grossular garnet and late-formed magnetite are the characteristics shared by your sample and the retrograde skarn type. Some important gold deposits are found in retrograde skarns (Battle Mountain, Nevada). Gold bearing retrograde skarns should show bismuth tellurides and arsenopyrite and chalcopyrite even if gold can not be found in a particular small sample. These minerals were not found in this sample..

I am not aware of any important occurrences of platinum group elements in this type of geological environment.



PYRITE GRAIN IN CENTER OF PHOTO. PYRITE IS RIMMED WITH IRON HYDROXIDE (GOETHITE) AND IS ENCLOSED IN MAGNETITE.

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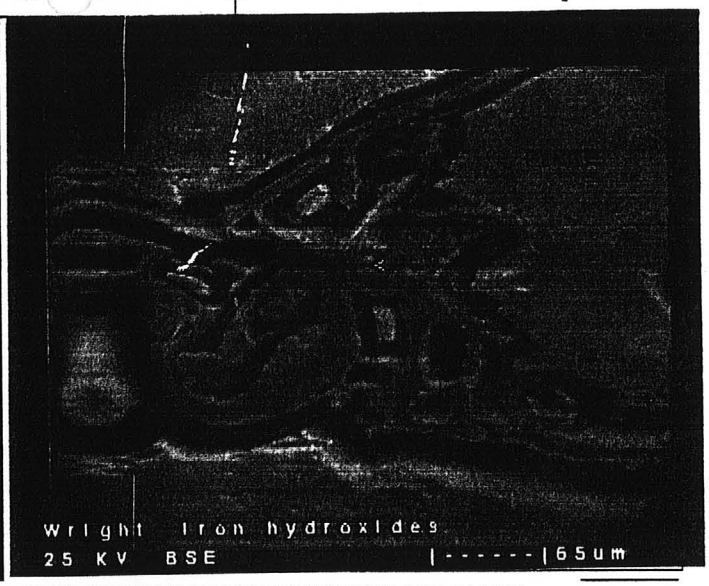

IRON HYDROXIDE "BOXWORK" FORMING ALONG FRACTURES IN PYRITE.

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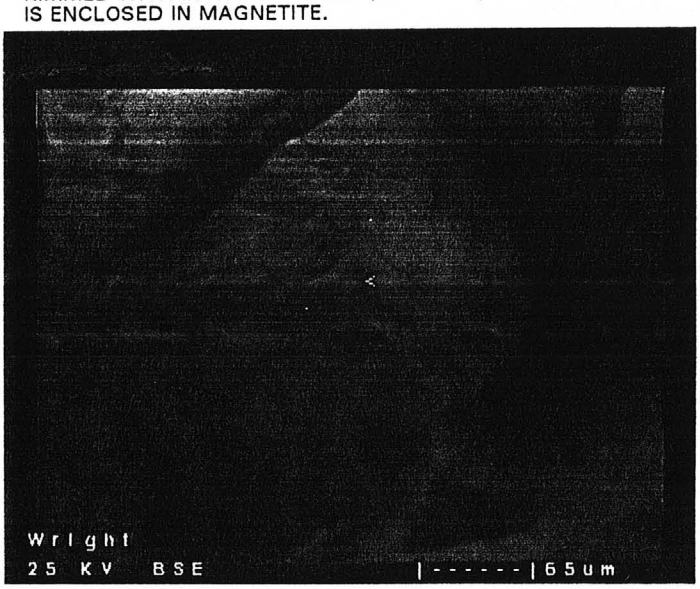

FLUORITE CRYSTAL.

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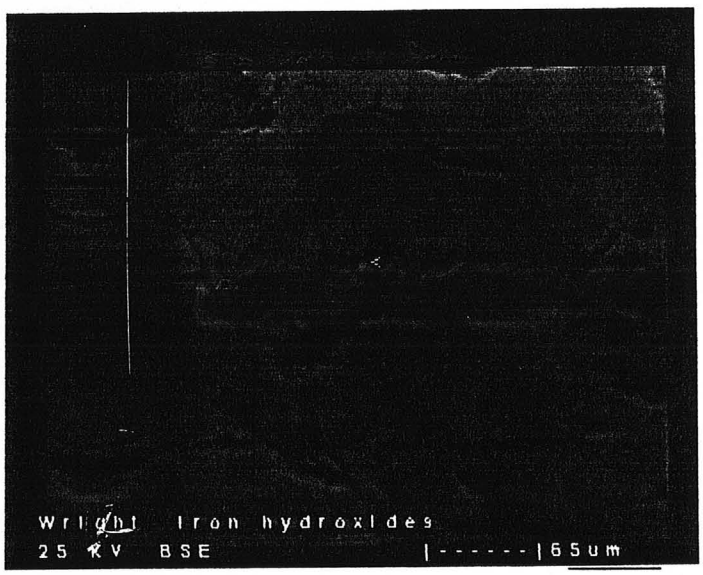

IRON HYDROXIDES IN CENTER OF PHOTO. SURROUNDING MATERIAL IS MAGNETITE.

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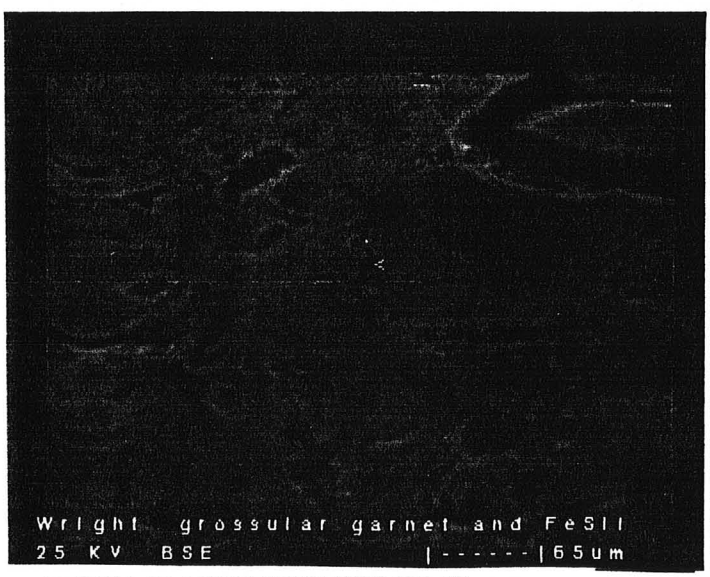

GROSSULAR GARNET WITH VEINLETS OF HISINGERITE (HYDROUS IRON SILICATE).

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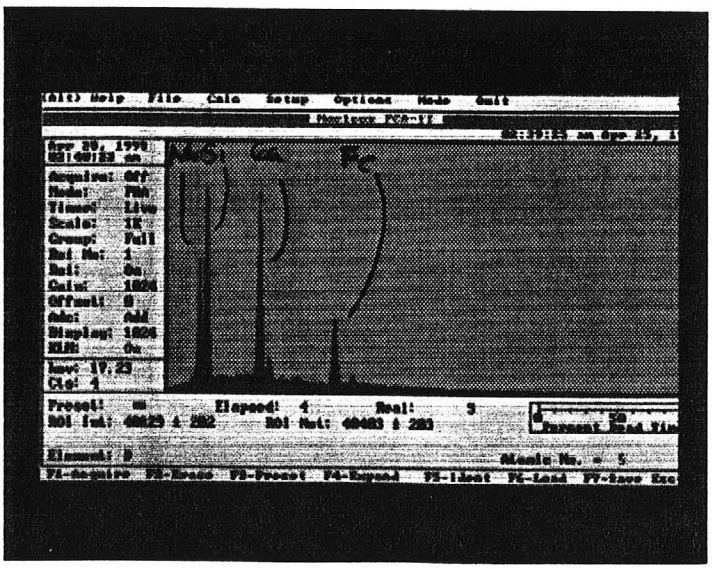

X-RAY SPECTRUM OF GARNET GRAINS SHOWN AT LEFT.

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WRIGHT SAMPLE