XRF vs Lab Assay Results

Previously, we posted pictures of the NVH Project tunnel #3 samples from the 310 vein. This vein and the samples, showed XRF results for **Zn @ 20-48%**. Lead also showed nice numbers with a few spot areas of **Ag as high as .3%**. With our Niton XRF, we took readings from small spot areas of the samples. On like lab processing where the "total" sample is processed including the accompanying gangue, using an XRF gives us a good look at the potential grade of the sample minus the gangue.

Saving Money By Sending Specific Samples Into The Lab

We have found that we can save thousands of dollars by presorting samples prior to sending in for assay by using spot checks on our samples. Having our Niton XRF recently sent in for an equipment check and recalibration, we were confident in the results we were sorting. *(Handheld XRF units are not simply a click and shoot instrument. One needs to look at spectral bands for any potential over-laps such as in the case of gold and tungsten. W k bands overlap with Au L bands. Other elements have overlapping bands, so looking at band peaks is learned through the amount of time put into learning how the technology works)* Let's compare the XRF readings with the Lab results. In this sample, the XRF showed Ag @ 0.332%, Pb @ 41% and Zn @ .223%....

Assay numbers from the whole sample done at American Analytical in Osburn, Idaho, showed with gangue and other elements included:

American Analytical Assay
Ag/Silver @ .1650%
Pb/Lead @ 16.7%
Zn/Zinc @ 8.4%

Niton XRF Spot Scan
Ag/Silver @ 0.332%
Pb/Lead @ 41%
Zn/Zinc @ .223%

The split sample on the left shows in side 1 Zinc/sphalerite and etc. On side 2 we see MoS_2. The sample on the right showed the Mo to be 5% on the xrf...Paste material) When the material was all prepped and assayed, the compared results are as follows: (Remember, the XRF results are only a few spot samples)

American Analytical Assay
Ag/Silver @ .00738%
Pb/Lead @ .6860%
Zn/Zinc @ 21.400%
Mo/Moly @ .3090%

Niton XRF Spot Scan
Ag/Silver @ .054%
Pb/Lead @ 1.25%
Zn/Zinc @ 30.18%
Mo/Moly @ 5%

In Conclusion: There are different techniques and reasons for using an XRF before sending samples in for assay. At NVH Project we are using the instrument for presorting samples, as a "pathfinder tool" and determining which samples will give us the best interpretive data when sent to the lab. We are using it for Qualitative vs Quantitative results. Also we are able to save a tremendous amount of money sending in a limited amount of samples vs a large number. We are very pleased with the process, our Niton XRF and our Latest RESULTS.