

Lab #21, adds .1% mineral oil to flux as a dusting oil.

Lab #22, half of flux then carbon, 6 gms. silica and 6 gms. niter then half of flux. Do not stir.

Lab #23, runs samples in triplicate.

Lab #25, crucibles are glazed with borax prior to assaying.

#### 11.0 GENERAL CALCULATIONS

In the fire assay process calculations are based upon the assay ton sample weight. This weight of 29.17 grams is arrived at by a rather interesting route. The gold recovered from the samples is weighed in milligrams which are directly converted to Troy ounces per Avdp. ton of ore. I have asked several fire assayers exactly what this number means with very few answers. For general information, I have included how this number was derived.

Definitions: 1 Avdp. ton (short ton)=2,000 Avdp. pounds  
1 Avdp. pound=16 Avdp. ounces  
1 Avdp. ounce=28.34952 grams  
1 gram=1,000 milligrams  
1 Troy pound=12 Troy ounces  
1 Troy ounce=31.10348 grams

Since gold values are given in Troy ounces per ton, the Troy ounces in one ton of activated carbon must be determined.

$$(2000 \text{ lbs/ton}) \times (16.0 \text{ oz/lb}) \times (28.34952 \text{ g/oz}) = 907184.64 \text{ g/ton}$$
$$2,000 \times 453.59237 = 907184.70 \text{ grams in 1 ton}$$
$$(907184.64 \text{ g/ton}) / (31,10348 \text{ g/T oz}) = 29166.66 \text{ T oz/ton}$$

Divide 29,166.667 by 1,000 and you get 29.166667. This is the same ratio as grams to milligrams, so there are 29,166.667 milligrams in 29.166667 grams of sample, which is the same ratio as 1 Troy ounce to one ton of ore. Thus milligrams of gold to assay ton of sample is the same as Troy ounces per ton of ore. Which makes life a little easier for all of us.

If you need to know gold values in grams per ton, multiply Troy ounces per ton by 31.103486 to convert to grams per Avdp. ton.

Example: .155 oz/t x 31.103486 = 4.821 gram/t

#### 12.0 PRECISION AND BIAS (not applicable)

#### 13.0 WASTE DISPOSAL

All Federal, State, and Local Regulations and Standards apply. See Appendix A (Page 45) for more information.

#### 14.0 CONTRIBUTING ORGANIZATION

Lab #

- 1: Amax Gold Inc., Sleeper Mine, P.O. Box 1820, Winnemucca, NV 89445
- 2: Asamera Minerals Inc., P.O. Box 398, Wenatchee, WA 98801
- 3: Asarco Incorporated, P.O. Box 1230, East Helena, MT 59635
- 4: Barrick Mercur Gold Mines, Inc., P.O. Box 838, Tooele, UT 84074
- 5: Battle Mountain Gold Company, P.O. Box 1627, Battle Mountain, NV 89820-1627
- 6: Boise Assayers and Metallurgy Inc., 650 East Amity, Boise, ID 83705
- 7: Cone Geochemical Inc., 810 Quail Street, Suite I, Lakewood, CO 80215
- 8: Cortez Gold Mines, Cortez, NV 89821
- 9: Dee Gold Mining Co., P.O. Box 1193, Elko, NV 89801
- 10: Doe Run Co., P.O. Box 500, Viburnum, MO 65566
- 11: FirstMiss Gold., P.O. 220, Golconda, NV 89414
- 12: Freeport-McMoRan Gold Co., Big Springs Gold Proj., Mt. City Star Rt., Elko, NV 89801