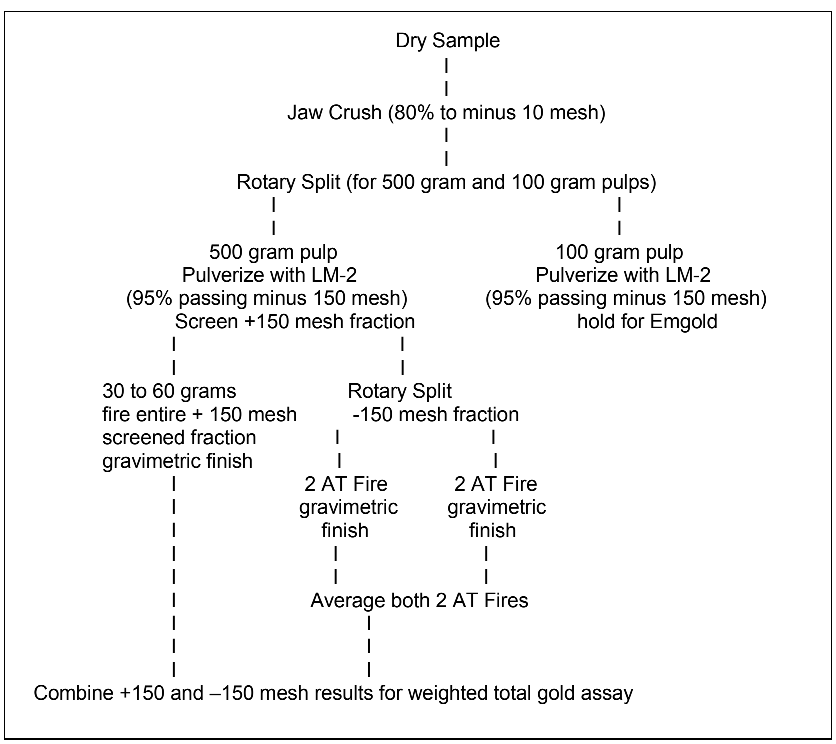
13.0 SAMPLE PREPARATION, ANALYSES & SECURITY

13.1 2003 – 2004 Gold Exploration Samples

In the 2003-2004 surface drilling programs, procedures were established to minimize assay inconsistencies caused by the presence of coarse gold. Historic records for the Idaho-Maryland mine noted coarse gold in all ore types, thus Idaho-Maryland chose to be conservative and have all samples analyzed using screened metallics fire assay methods. The flowchart of the preparation and analysis process is shown in Figure 13-1. The laboratory prepared two pulps from each sample. One 500 g sample was for fire assay analysis and a 100 g pulp was prepared and returned to Idaho-Maryland for gold panning. Panning of the 100 g pulp by Idaho-Maryland staff provided (1) a cursory check on the lab, (2) allowed collection of gold particle size, shape, and population information, and (3) helped direct the ongoing core drilling program when lab analysis turn-around time was slow. The 500 g pulp was analyzed for gold only, utilizing screened metallics fire assay methods. All pulps and coarse rejects were saved by the lab and delivered back to the Idaho-Maryland core facility.

Figure 13-1: Sample Preparation and Assay Procedure Flowchart, Primary Laboratory



A rigorous QA/QC program was developed and utilized at the Idaho-Maryland Project. Extra precautions were taken by Idaho-Maryland staff to mitigate the potential for assay variability due to the frequent coarse gold occurrence in the mineralization. The program used Standard Reference Materials (SRMs), blank samples (made from barren massive antigorite serpentinite), coarse reject and pulp duplicate samples and third party laboratory check assays. Insertion rate of SRMs and duplicates was about 1 in 20 samples. Blanks were only inserted immediately following mineralized intervals.

The SRMs were prepared from gold mineralized material of varying grades, collected from a nearby gold mine to formulate bulk homogenous material. Two groups of material were collected: one with a mean certified value of 0.21 oz/ton Au and the other with a mean certified value of 0.17 oz/ton Au. These materials were used to successfully control the assay quality process.

Juras (2004) stated that blank sample results showed no evidence of gold contamination during sample preparation. Duplicate performance was good to fair, reflecting the coarse particulate nature of the gold mineralization. Performance was worse closest to the detection limit. Patterns on control charts were symmetric about zero, suggesting no bias in the assay process.

Four criteria were used in selection of samples for third party laboratory check assays. These were (i) all assays equal to or greater than 0.01 oz/ton Au, (ii) all samples with free gold panned from 100 g pulp sample regardless of assay value, (iii) all samples with visual similarity to ore types regardless of assay value, and (iv) 5% of the remaining sample population selected randomly. Results mirrored the primary laboratory duplicate analyses.

Juras reviewed Idaho-Maryland's QA/QC procedures on site and found them to have been strictly followed. The gold assay process for the 2003 and 2004 drill campaigns were shown to be in control. The rigorous assaying methodology employed during the these phases of drilling identified mineralization types which will require screened metallics fire assaying in future work. These ore types include samples containing (i) over ten percent vein quartz, (ii) green chloritized diabase with porphyroblastic pyrite overgrowths, (iii) phyllonites with porphyroblastic pyrite overgrowths, and (iv) about 3 feet of wall rock immediately preceding and after any of the first three types.

The methods established during the surface drilling programs formed a foundation for accurate sampling of mineralized rocks. Similar assaying procedures would be utilized during future surface or underground sampling at Idaho-Maryland.

13.2 Historic Gold Samples

This project contains an historic database with over 36,000 assays. The assays, which are almost exclusively for gold, were done on samples taken from underground workings (walls and backs from drifts and crosscuts, walls from raises). Many are channels samples; fewer are muck car samples and grab samples. Those from diamond drill holes comprise only a minor portion of the assay database.

The assay data reside as handwritten entries on scale assay plans (1" to 50 ft) for all mine levels. Drillhole assay data accompany the intercepts on these plan maps, and copies of assay certificates are present for the final 10 years of production.

The samples were fire-assayed at former mine site laboratories. No records exist of any QA/QC program. Sample quality can still be inferred, however, by the reconciliation of historic production records to underground sample data. These studies, as well as a recent investigation on mill-to-resource prediction (see Section 17), showed that the resource or reserve estimates consistently underestimated the amount of gold produced by milling, a discrepancy most likely reflective of sample size influence rather than laboratory technique. Gold deposits with coarse gold areas are best sampled with large sizes, which was not common practice at the time the Idaho-Maryland Mine was in operation. Therefore, any estimates made using this historic data should include comparisons with values unadjusted and adjusted for the regular underreporting of grade (i.e., call factor).

AMEC stated that the comprehensive set of assay plans, supported by records of muck car stope samples and mapped geology data, as well as the detailed historical production records, all supported the integrity of the assay data for the Idaho-Maryland Mine, and they concluded that the data were suitable for use in mineral resource estimation.