

MISSING OUNCES - PIERSON

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## M E M O R A N D U M

**TO:** Rosebud JV Management Committee  
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S. Santti/Carlin  
T. Tempel/Twin Creeks  
File 75504-5.2.1

**FROM:** Rosebud Mine-Mill-Metal Reconciliation Task Force  
C. H. Bucknam/Inverness  
G. Pierson/Hecla  
D. Seymour/Carlin

**DATE:** October 13, 1998

**COPY:** K. Allen/Rosebud  
R. Clayton/Rosebud  
D. Dean/Twin Creeks  
J. Dunstan/Twin Creeks  
F. Hanagarne/Carlin  
R. Lisle/Winnemucca  
G. McMillen/Twin Creeks  
S. Myrhow/Twin Creeks  
J. Sigurdson/Twin Creeks  
D. E. Spiller/Inverness  
P. Walker/Twin Creeks

**SUBJECT: Rosebud Mine-Mill-Metal Reconciliation Monthly Review for September, 1998**

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A review meeting was held at the Piñon Mill Conference Room on October 7, 1998, to assess the progress on the ten action items established by the task force. The current status of these items is reported, below:

1. "The mining and processing managers will produce a list of milestones that document potentially significant changes that have taken place in staff and procedures since start-up, during September."

This process took longer than expected and will be completed in October, 1998.



2. "Gene Pierson will document the mine production reporting in flowchart form during September."

Data gathering is completed on this item and documentation will be completed in October, 1998. Gene spent a significant amount of time updating the trend analysis and began trying to correlate the trend changes with the preliminary mine milestone list. The task force recommended that efforts be made to track the samplers identity with the samples, to develop methods to improve sampling procedures at the mine and methods to provide samplers with feed back on accuracy.

3. "Charles Bucknam will solicit ideas for a bulk round reference sampling procedure for the mine in September."

A preliminary scope was issued for this procedure and costs still need to be estimated. Use of the primary crusher at Twin Creeks appears to be a better alternative than using the rock breaker at the mill, which has been broken down for some time.

4. "Charles Bucknam will propose an interlaboratory testing program for ore, waste, mill heads and tailing solids and solutions in September and implement the program in October."

A scope for this program was circulated at an estimated cost not to exceed \$9000, including the participating industry laboratory internal costs. Sample materials have been collected at NMS and sample preparation is being scheduled. Distribution of samples is planned for October and compilation of results in November, 1998.

5. "Jim Sigurdson will document the mill circulating load information collected to date in September and Dave Seymour will propose a study to Assess the mill recirculating loads and hold-up in October."

Jim Sigurdson reported that there is little useful historic information available on this issue and that the work needs to be repeated. Stuart Myrhow and Dave Seymour will develop a scope of work to circulate for comment in October, 1998 and will review the requirements of the joint venture agreement on this subject. The project may include table concentration studies at NMS and screen-fire assay analyses at American Assay. Purchase of the Pitard Software is recommended to support the variability study that is needed to validate the sampling interval being used in the Piñon mill.



6. "Dale Dean and Stuart Myrhow will document the progress on the program to correct the head sampling system design flaws in September."

The report on the head sampler was completed and the task force was quite pleased with the progress on head sampler improvements to date. The recommendation of the task force is to modify the feed chute to the sampler with a square configuration, rather than a round one, for at least five feet prior to the discharge, in order to further reduce splash and further improve the geometry of sampling. Air starvation appears to continue to be a problem with the drive mechanism, so a recommendation was made to experiment with an air receiver or dedicated compressor to further improve the sampler operation. Gene Pierson will investigate the possibility of shipping the Grouse Creek sampler to the site, to be held in reserve.

7. "Dale Dean and Stuart Myrhow will document the progress of the program to correct the tailing sampling system design flaws and estimate the order of magnitude of losses during down time in October."

This item is on track for completion in October, 1998. Significant improvements have already been made on proper routing of tailing streams and it has been verified that the solid component of the slurry down time losses are being properly accounted for in the metallurgical balance at the time of mill shut down.

8. "Dave Seymour will audit mill inventory procedures in October."

This item was completed at the end of September and a report will be issued during October, 1998. The procedures for CIL "looked good" and some improvements are possible for the procedures used to measure and sample the carbon bins. Dave Seymour will continue to monitor these procedures. Charles Bucknam agreed to follow up with Dr. Misra at the University of Nevada, Reno, to see if the selenium removal technology that was pilot tested at the Hollister Project could be used to remove selenium from the strip solution, prior to Merrill Crowe precipitation of the precious metals.

9. "A test lot of refinery slags will be processed at GD Resources in September."

This item was not completed due to shipping restrictions imposed by the Twin Creeks warehouse. Dave Seymour agreed to follow up on this to see when the project could be completed. Charles Bucknam agreed to perform a preliminary scoping study on the use of metal detection equipment on the slag, when a 5 kg sample of the slag can be sent to NMS. The task force recommended that the electrostatic separator equipment be used on the Rosebud slag material in the refinery or the equipment moved to the Piñon Mill for operation, if necessary. Rosebud slag has been accumulated separately at the refinery since September, 1998.



10. "An engineering audit of the refinery dust handling procedures will be performed in October."

Charles Bucknam, Dale Dean, Jim Dunstan and Gene Pierson toured the Getchell Gold refinery to see their Hi Vac system used for precipitate, flux and dust handling, mixing and feeding the melting crucibles. This system allowed for the majority of dust generated in a particular lot to be recovered and melted in the same lot. The capital cost of the system was low, at \$40,000 (including a dedicated bag house), and reduced the dust losses by 50%. The task force recommends that Twin Creeks continue with an engineering study in October, 1998, to determine the justification for the installation of a similar system to be dedicated to Rosebud precipitate and dust handling.