

TO: Don Cooper

Nov. 15, 1988

CC. CONFIDENTIAL.

From: Bryan Cross

Subject: JOHN BARTRUM'S ATTACK ON YK DIVISION METALLURGISTS.

This man is frightened of explaining both YK Division TRP and ERG at home. His last brief visit led to him generating a lot of time and money expenditures that have not solved the basic problem of this plant not meeting the expectation the Australians bought and paid for. Bartrum's visit laid a great deal of "priority" work that lets face it we were not adequately staffed to address while going through a shaky start up season. Total up the O/T we each have not been congratulated for. The man spent an admitted hour reviewing what took a weekend to prepare then garbaged the information and then vented his spleen on us. He did not even have the decency to address Section 1 of our report which pointed out that he is kidding himself if he believes overall recoveries much more than 30% can be expected at the TRP with our current flowsheet. Kilborn metallurgists brought in helped us get over some operating difficulties but did not contribute a great deal in preparing the documentation necessary to satisfy Mr. Bartrum's list of diagnostic metallurgical testwork.

The lack of proper slurry density control mystified the carbon concentrations and eliminated proper distribution. I adjusted with S. Waller's encouragement the daily Met balance to reflect the total amount of gold in solution in comparison to the reclaim water shot at the mining face. The amount of gold value in the 30% moisture in the interstices of stored solids has never been determined but the calculation method is consistent with those performed on Pilot Plant data. Doing this shifted the thinking at the TRP to optimizing carbon adsorption efficiency. Sufficient cyanide was no problem in the Pilot tests as when tails cyanide concentrations dropped to 0.25 lb/ton, overall leaching and adsorption efficiency did not change. Shifting improvement intentions from the leach to the adsorption efficiency was hampered by low slurry density contributed to by both mining operator boredom and loaded carbon elutriation water going into the Surge Tank. The automatic programmable monitor controls were not available until the end of the operating season and the need for the thickener expenditure was not pressed. I spent some time down at the monitor operating stations while shifting and agree with Sadek that with constant attention the miners can give the desired density control. I have never spent more than 2 out of 12 hours doing this. Constant whip cracking, a competitive bonus system or the memory units performing with 1/2 hour adjustments should do it. A thickener would float off much of our woodchip problems, ensure the desired density for retention time and yield good carbon distribution in the tanks.

Bartrum's constant demand for dissolved oxygen readings amaze and flabbergast me. Why insist on more readings when every reading seems greater than the maximum saturation concentration at all temperatures. Cold water only can hold about 10 ppm of dissolved oxygen, perhaps it is residual flotation frother in the slurry holding bubbles together that leads to our consistently greater than saturation dissolved oxygen readings.

We now know that we have settling occurring in the CIL. So why did we not scrap the seven 100 Hp agitators and put new ones in? As Bartrum suggests we had 81 days to do so thereby his hindsight tells us we lost \$9 million. First one should say that the CIL froze up exactly two months after his August 22nd Action Plan memo and we operated for a month under winter conditions prior to that. Does Bartrum not know we have been struggling to retrieve our froze in carbon and save the plant from winters full fury since October 22nd? Even with Bartrum's automatic expenditure approval for new agitators nothing could have been done about delivery times nor would we have been willing to shutdown an agitator to replace it under freezing conditions.

Doug Bartlett's introduction to our report seems to have made Mr. Bartrum particularly antagonistic. Doug has only been with us a month or so and has barely gotten over picking our brains in his orientation. Doug's evaluation of expected mining grades, recoveries and the expectations due to the Pilot Report are valid to me. Mr. Bartrum failed to even comment on this part of our report. John Bartrum is very angry with us and I suppose I at him as the man states he spent one hour perusing the report put together over four days (2 on our own time). Then he says he did not even retain it but garbaged it!!!

Well I've had a chance to expend some of my anger by writting this and will get back to the job of trying to improve our metallurgical performance.

One last comment is regarding cyanide. We do not have a statistically sound base to say that increased cyanide dosage will not give us higher recoveries from any particular area undergoing reclamation. Operations to date including Pilot work indicates to me the solids do not respond to higher dosage. The last analysis had the N.W. Pond sitting with 40 ppm total cyanide in solution. The increased effluent treatment costs some of which we have put off a year will be calculated as this cost is another that has to be included when we talk about increased TRP cyanide useage.