ADDITIONAL INFORMATION FOR DORIS PROJECT

----- Original Message -----
From: Connell, Larry
To: dts@nunavutwaterboard.org
Sent: Wednesday, May 16, 2007 12:59 PM
Subject: FW: Doris North, Waste rock mgmt plan - Availability of Space for Backfill

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From: Connell, Larry
Sent: Wednesday, May 16, 2007 11:35 AM
To: 'John Brodie'
Cc: Maloof, Terri; 'David Abernethy'; 'Philippe di Pizzo (exec@nunavutwaterboard.org)'
Subject: Doris North, Waste rock mgmt plan - Availability of Space for Backfill

John:

Sorry for the confusion. I went back to George Friesen in Yellowknife who is doing the detail underground mine planning for the Doris North mine to check our numbers. He is currently updating the mine plan as part of the current Doris North Feasibility Study Update being done at SNC Lavalin.

Basically the Doris North Project will see the extraction of:

1) 458,177 tonnes of ore (458,177/2.8 => 163,635 cubic metres) and
2) 206,089 tonnes of waste rock (206,089/2.7 => 76,329 cubic metres) from the underground mine.

Consequently the total void space that will be available underground for placement of all backfill is in the order of 239,964 cubic metres (163,635 + 76,329).

The total estimated amount of flotation concentrate to go underground as backfill is 25,520 cubic metres (45,451 tonnes)
If all of the UG waste rock is to go underground as backfill it will require void space of 76,329 cubic metres (206,089 tonnes)

Consequently the combined void space required for both waste rock and concentrate is 101,849 cubic metres (76,329+25,520) which means we have a theoretical void space surplus of 138,115 cubic metres (239,964-101,849).

It is our intent to segregate waste rock that we believe is non-acid generating, especially early in the mine life, on the surface temporary stockpile pad. We will characterize this waste rock and based on the test results ask for authorization to use the rock on surface. Once such authorization is received we would move this rock for use in construction or as cover material at the quarry 2 landfill.

Attached is the email response I received from George Friesen in response to your query:

“Larry,

Using our numbers from the feasibility study we have

Ore tonnes 458,177
Waste tonnes 206,089 (A little different from the spreadsheet I sent you, the 194,689 must be an earlier number. Sorry, I should have corrected that before)
Total void space = 458,177/2.8+206,089/2.7=239,964 m3

All the waste generated from development (206,089 tonnes) will be required to fill the cut and fill stopes as well as some portions of the open stopes.

I took the liberty of updating the fill and waste stockpile schedule to reflect our current plan (Doris North 2007 feasibility update). See attached spreadsheet. Essentially, we just treated the external dilution a little differently, added a few pillars in the open stopes, and increased the amount of material to be cut and filled. Just like in the earlier plan, we will need all the development waste as fill.

Please call if you have any further questions. (867) 766-5301
George

Regards

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From: John Brodie [mailto:mjohnbrodie@shaw.ca]
Sent: Sunday, May 13, 2007 6:27 PM
To: Connell, Larry
Subject: Doris North, Waste rock mgmt plan

Larry,
I’m a little confused about a detail in the plan in SD10. Page 4 states that there is void space for 198,812 tonnes of rock (110,451 m3). Should this not be 194,689 tonnes (the total tonnes of waste) rather than what appears to be the same number as the total tonnage from open stopes? I appreciate that this a small difference, however the buffer on U/G containment of this rock is small. For example, slightly better than assumed grade control would result in less void space and slightly more development (say additional ramps into the C&F stopes) could use up the volume differential. Relying upon the development void space will be difficult (61,000 tonnes at 2.7 → 22,500 m3, but these are drift and ramps which can probably not be filled effectively to more than 50 – 60% of excavated volume.

As I understand it, the backfill requirements are 172,910 and 21,779 tonnes = 194,689 tonnes, which equals the quantity of waste. (now I get it, the table is correct, just the text has the wrong number).

One final question, is there any intent to segregate any clearly PAG development rock on the stockpile so that you are certain to put the worst stuff back underground?

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