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CONSULTING

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Our Reference: VA101-1/10-A.01
Continuity Nbr.: V5-1042

October 13, 2005

Mr. Ron Martel
Mount Polley Mining Corp.
P.O. Box 12
Likely, B.C. V0L 1N0

Dear Ron,

**Re: Slope Stability Analysis**

A stability analysis was completed on the Main and Perimeter Embankments for the Mount Polley Tailings Storage Facility. MPMC feels they cannot economically place enough Zone C to the ultimate toe up to 948m elevation by summer 2006. The solution to this problem is to place as much Zone C as possible on the Perimeter Embankment, and continue placing till using Zone U as a running surface on the Main Embankment.

This slope stability analysis was completed in order to determine whether a modified centerline construction of 2:1 for Stage 5 would be stable both seismically and statically in the short term and the long term. In the current design the core slopes upstream at 0.5:1 rather than at the 2:1 as analyzed in this stability assessment.

The analysis indicated:

-The proposed design change will be safe statically for Stage 5 and in the long term.

-The proposed design change will able to withstand a 1 in 475 year seismic event assuming that the liquefaction does not occur in the tailings.

-Due to the nature of the tailings it is expected that liquefaction will occur during a seismic event. The assumed design Tau/Sigma ratio of the tailings when liquefaction occurs is 0.05. This analysis indicates a factor of safety less than 1. This means **the dam will fail during a seismic event if liquefaction occurs while the freeboard is high** (if you deviate from the design by building a modified centerline core construction of 2:1 rather than 0.5:1). However, as the tailings rise, this risk is significantly reduced. In other words, as soon as Zone U construction is completed there is a high risk of failure. As the tailings rise up to the design freeboard level there is a low risk of failure due to a seismic event.

-If Zone U is used as a running surface the all the way to the 965m elevation the Tailings Storage Facility will be much more stable.

During the Stage 4 construction program I noted an area on the Perimeter Embankment between 43+00 and 44+00 that experienced a noticeable deflection while standing 20 meters away from a D7 cat. The Perimeter Embankment should be a priority for Zone C placement in order to increase the stability of the Embankment. It is uncertain as to the cause of the “bouncy corner”, it may be a result of the use of cyclone sands as a substitute for Zone C downstream of the core in this area.

In conclusion, one option is to place as much Zone C as possible on the Perimeter Embankment, then move on to the Main Embankment. If MPMC does not have enough resources to complete the Main Embankment, then place the Stage 5 till using Zone U as a running surface. During Stage 4 construction the downstream Zone S was overbuilt. As a result additional lifts can be placed on top with minimal changes to the overall design plan. Keep in mind if liquefaction occurs in the tailings during a seismic event while the freeboard is high, there is a high risk of failure.

While we are on the topic of liquefaction, remember that static liquefaction can occur as well. Metastability is the ability of a non-equilibrium state to persist for a long period of time. Gold tailings can exist in a metastable state that makes it prone to sudden and catastrophic static liquefaction. Relating this to the design change requested, building stage 5 core at 2:1 will shift the centroid of the core upstream by 4 meters all the way to the ultimate crest. This shift would mean the centroid is no longer directly above the till, it be above the tailings. Due to the nature and properties of gold tailings they should not be used as a foundation material because the consequences of liquefaction are too great.

There is a potential for static liquefaction to occur at the corner of the Main and South Embankments.

Please do not hesitate to contact us if you require additional information regarding the stability of the TSF.

Yours truly,

**KNIGHT PIESOLD LTD.**

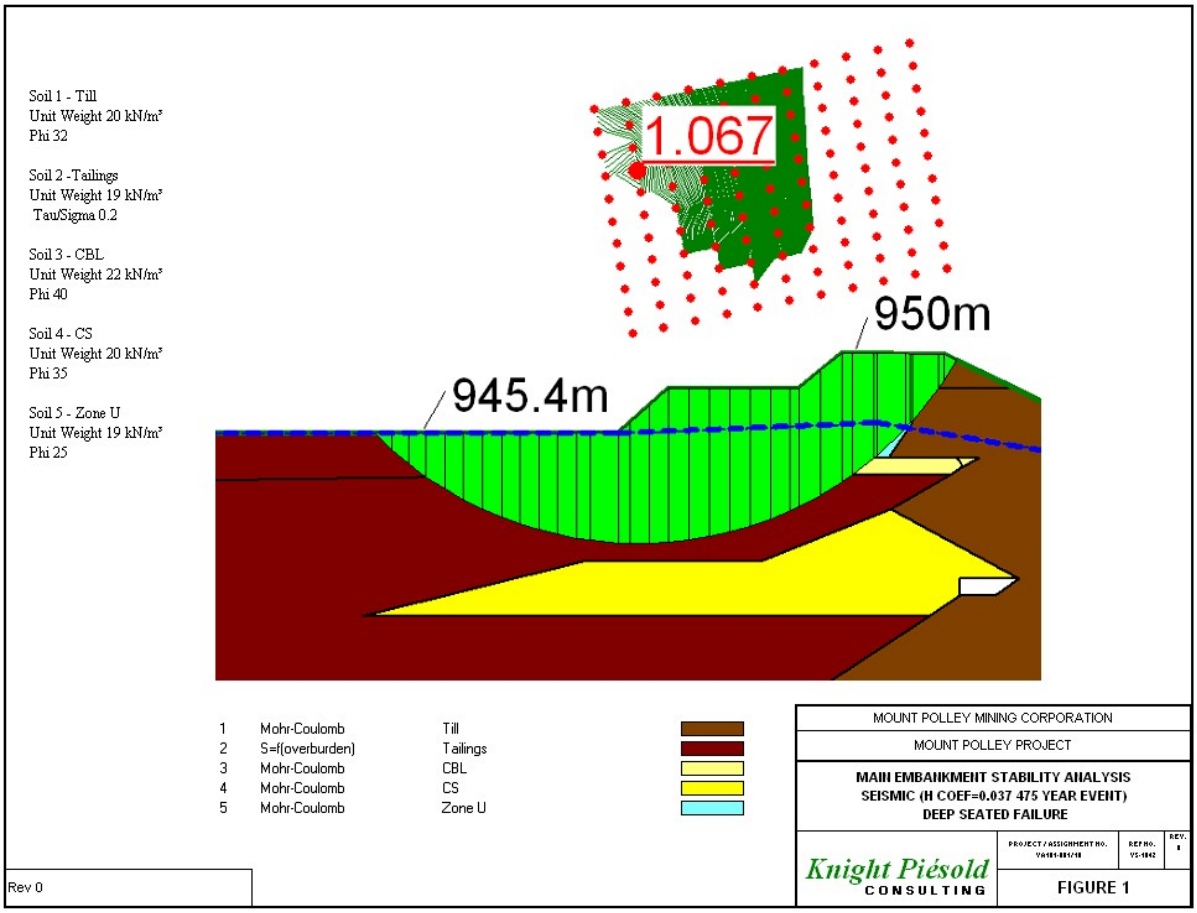
Approved by:

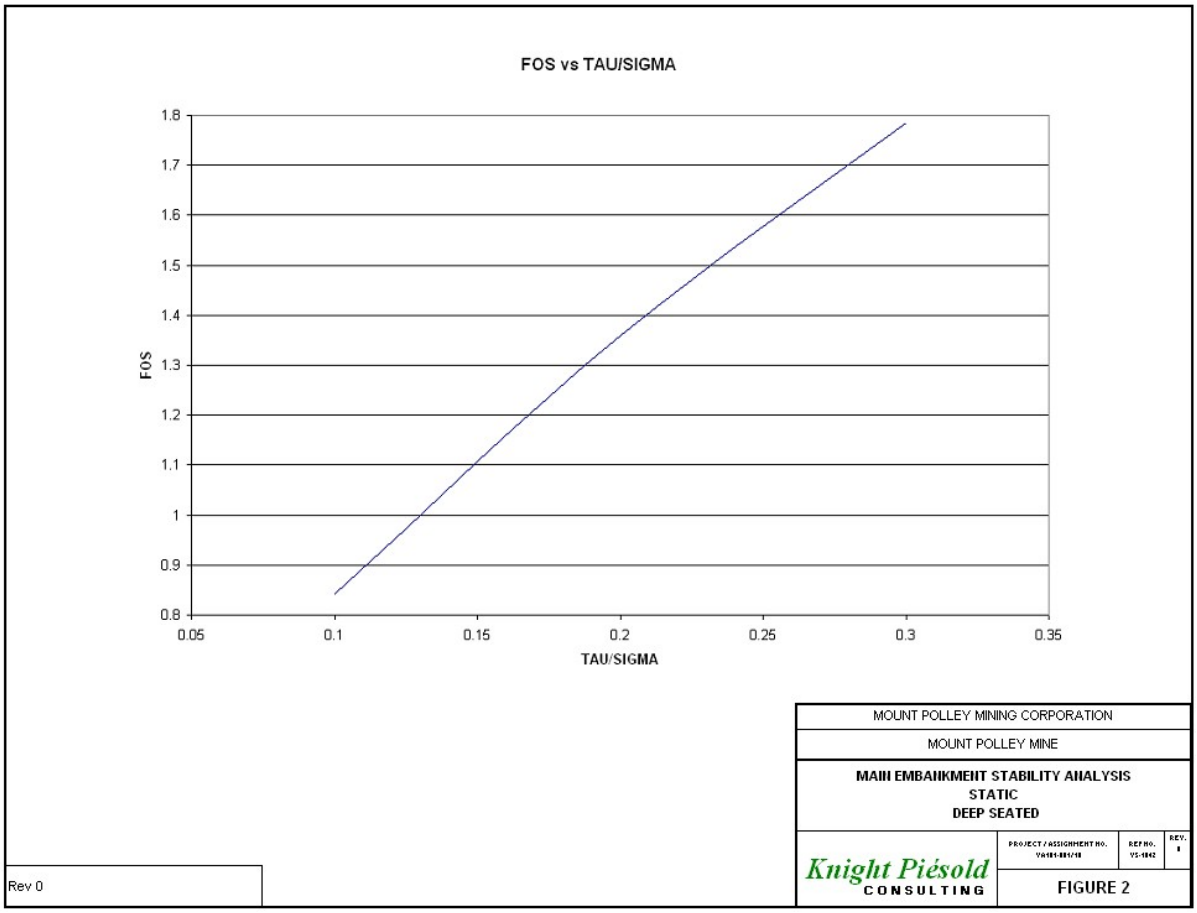
Mark Burke
Staff Engineer

Ken Brouwer, P.Eng.
Managing Director

Encl: Figure 1 – Rev 0 – Seismic Deep Seated Failure
Figure 2 – Rev 0 – FOS vs Tau/Sigma (Static)
Figure 3 – Rev 0 – FOS vs Tau/Sigma (Seismic)

/MMB


Soil 1 - Till
Unit Weight 20 kN/m³
Phi 32
Soil 2 -Tailings
Unit Weight 19 kN/m³
Tau/Sigma 0.2
Soil 3 - CBL
Unit Weight 22 kN/m³
Phi 40
Soil 4 - CS
Unit Weight 20 kN/m³
Phi 35
Soil 5 - Zone U
Unit Weight 19 kN/m³
Phi 25
1.067
950m
945.4m
1 Mohr-Coulomb Till
2 S=f(overburden) Tailings
3 Mohr-Coulomb CBL
4 Mohr-Coulomb CS
5 Mohr-Coulomb Zone U
Rev 0
MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY PROJECT
MAIN EMBANKMENT STABILITY ANALYSIS
SEISMIC (H COEF=0.037 475 YEAR EVENT)
DEEP SEATED FAILURE
Knight Piésold CONSULTING
FIGURE 1


FOS vs TAU/SIGMA
FOS
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.05
0.1
0.15
0.2
0.25
0.3
0.35
TAU/SIGMA
MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE
MAIN EMBANKMENT STABILITY ANALYSIS
STATIC
DEEP SEATED
Knight Piésold
CONSULTING
FIGURE 2
Rev 0

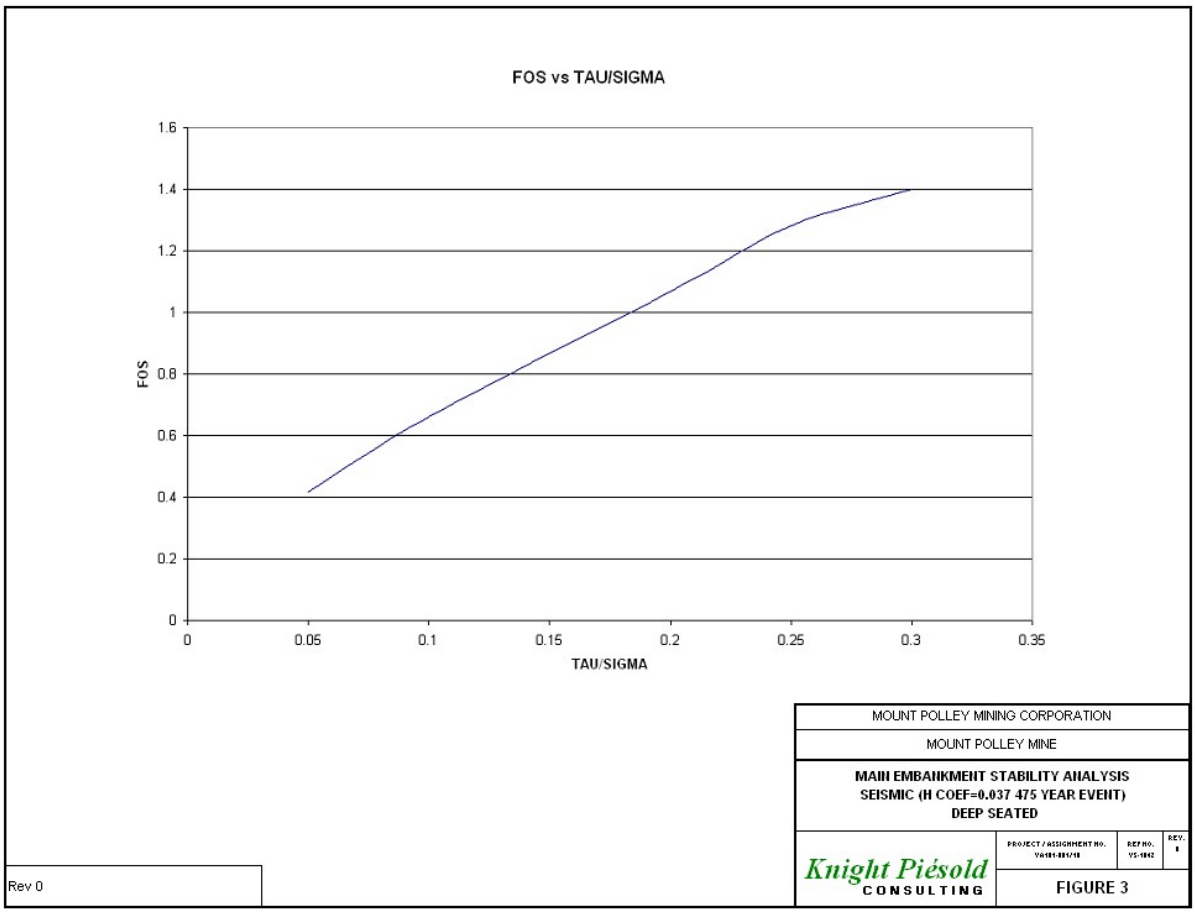

FOS vs TAU/SIGMA
FOS
TAU/SIGMA
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE
MAIN EMBANKMENT STABILITY ANALYSIS
SEISMIC (H COEF=0.037 475 YEAR EVENT)
DEEP SEATED
Knight Piésold
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FIGURE 3
Rev 0