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CRIPPLE CREEK & VICTOR

Newmont Mining Corporation
PO Box 191
100 North 3rd St.
Victor, Colorado 80860

TO	:	Lori Douglas, Tige Brown, Katie Blake,
CC	:	Vivek Galla, Gloria Quispe
DATE	:	Saturday August 5, 2023
SUBJECT	:	ECOSA Stability Analysis

The present document summarizes the findings of a stability assessment of ECOSA. A rainfall event occurred at Cripple Creek on 31st July 2023 at an average total of 3inches. Sloughing of material was recorded on ECOSA 10300 lift.

Figure 1 Area of instability

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FIELD SUPPLIED
8/24/23
Gran Marian Boatemaa

Figure 2 Drone flights comparison pre and post instability

Figure 3 Three sections under review at ECOSA

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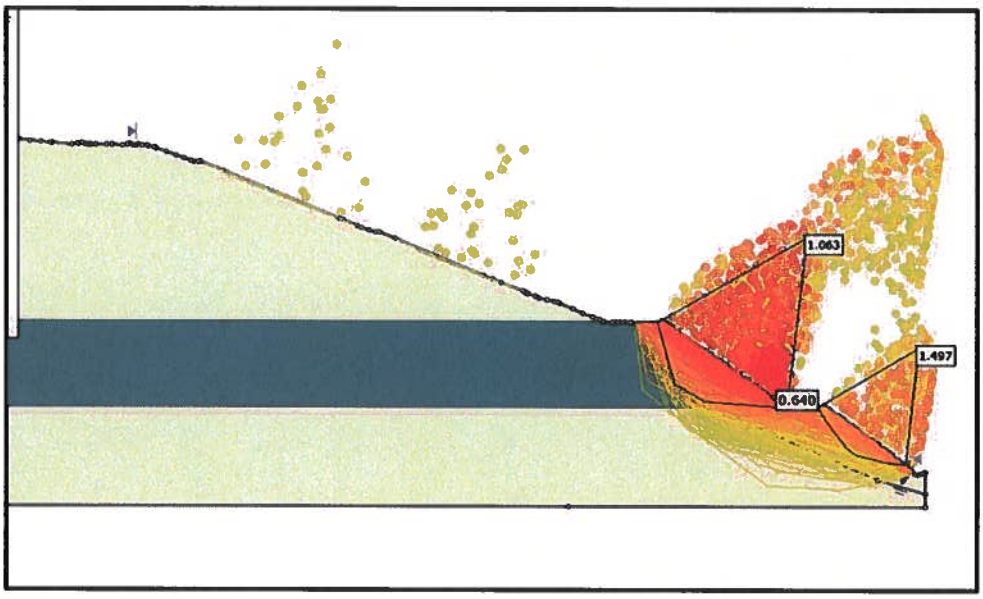

Figure 4 Stability Analysis of cross section 1

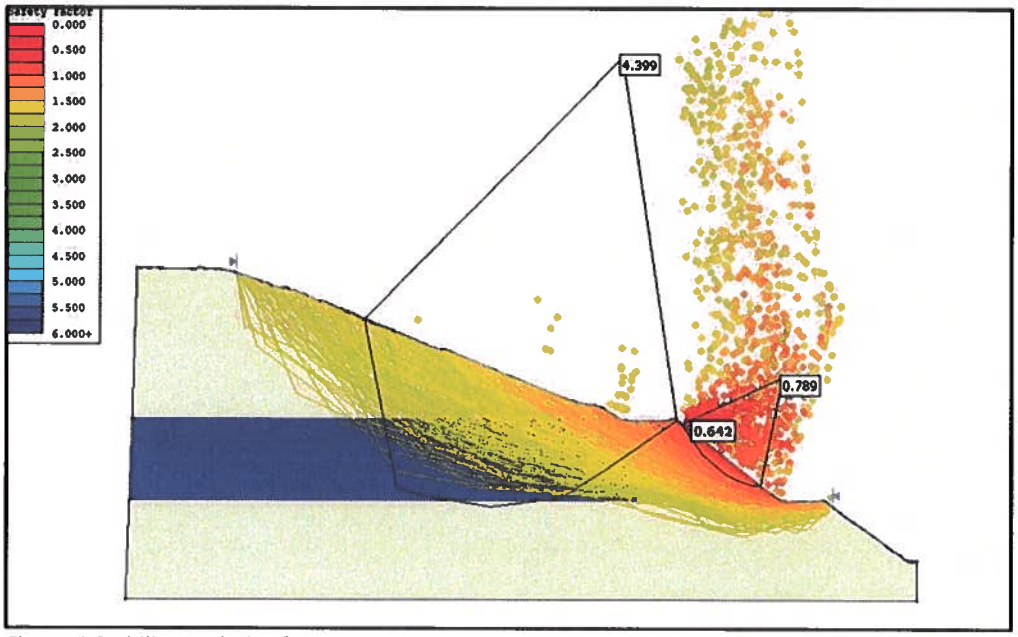

Figure 5 Stability Analysis of cross section 2

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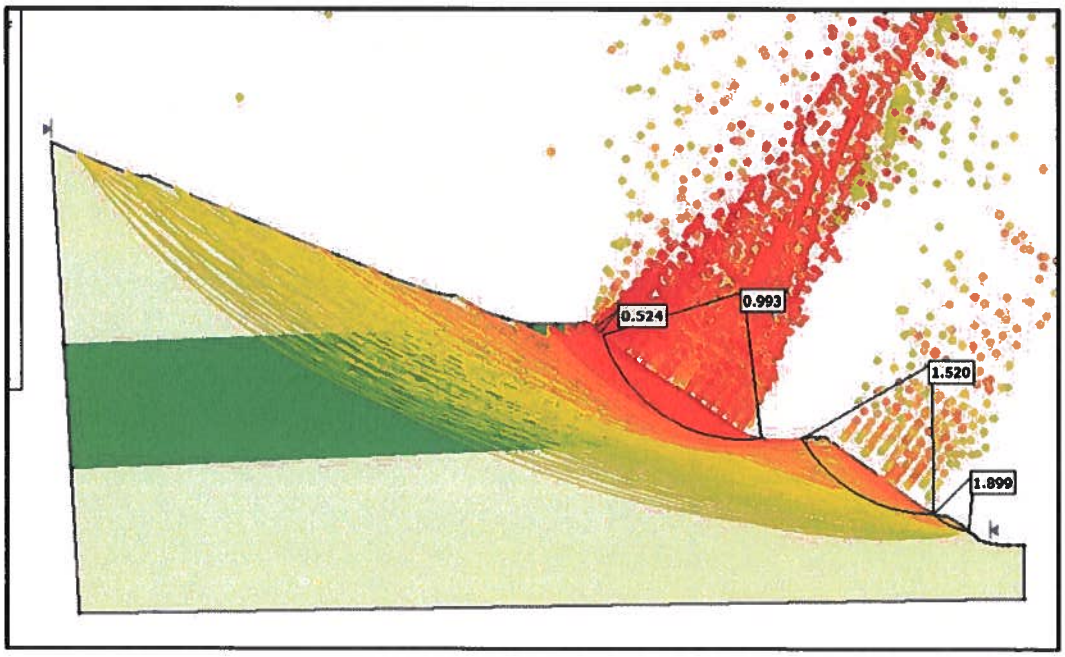

Figure 6 Stability Analysis of cross section 3

Analysis Results Summary

The geometry of the material boundaries, each cross section was informed by field conditions and historic material testing in the area. The material properties were determined from historic materials testing, the reports for which are listed in the reference portion of this memorandum. A summary of the Factors of Safety (FoS) can be found in Table 1.

Cross Section #	FoS, 10300 lift
Section 1	1.03
Section 2	0.789
Section 3	0.993

Table 1. Summary of analysis results

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The analysis showed that the sections /benches that are susceptible to bench instability are the sections with high percentage of fine material. The section of the observed washout had a low Factor of safety, and which also get affected by inadequate water diversion. Due to the grade on the catch benches, water ponds on the benches causing instability on colluvium material.

For the three Cross Sections the average FoS ranges between 0.7 and 1.03 which is the lower than the minimum allowable FoS of 1.2. The sections under review 3 show low Factors of Safety because of the weaker material properties assigned to the 10100 lift which also reflects a bench-scale failure type that does not affect the overall slope. This failure type is consistent with current field conditions and is being managed and monitored by the CC&V Geotechnical group.

Figure 7 Risk map for ECOSA section under review

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References

Call & Nicholas, Inc., 2011. Cripple Creek and Victor Mine Wild Horse Extension Pit Design Slope Recommendations, dated April 2011.

Adrian Brown, 2003. Wild Horse Extension Slope Design, dated September, 2003.

"LAB TESTING MASTER – Cripple Creek". Excel spreadsheet summarizing historic laboratory testing results from geotechnical drilling of the various rock types. Prepared for Cripple Creek and Victor Gold Mining Company, dated August 2013.