

Contents

Contents.....	vi
Chapter 1 Introduction.....	1
1.1 General Introduction.....	1
1.2 Objectives of the Thesis.....	2
1.2.1 General Objective.....	2
1.2.2 Specific objectives.....	2
1.3 Scope of the research.....	2
1.4 Thesis contents.....	3
1.5 General Background.....	4
1.5.1 Sublevel Stoping (SLS).....	4
1.5.2 Mathews' stability graph method.....	4
1.5.3 Graphical method over the years.....	9
1.5.4 Key Structural Features.....	10
1.5.5 MineRoc.....	11
1.5.6 Numerical Modelling.....	14
Chapter 2 Methodology.....	17
2.1 Adapting the B factor to account for major faults.....	17
2.2 Obtaining an F factor.....	18
2.2.1 F factor calculation.....	18
2.2.2 Numerical modelling.....	20
Chapter 3 Results.....	26
3.1 Use of b factor from major geological faults' orientation on Mathews' stability graph method. A case study.....	26
3.1.1 Original Mathews' method.....	26
3.1.2 Stability graph using B factor from faults.....	27
3.1.3 Results comparison.....	28
3.2 F factor: Quantifying the impact of faults on open stope's back stability.....	28
3.2.1 F factor charts.....	29
3.2.2 Effect of fault's distance to the back.....	30
3.2.3 Effect of fault's place of intersection.....	30
3.2.4 Results interpretation.....	31
Chapter 4 Conclusions and future works.....	33
4.1 Limitations of F factor.....	33

4.2 Conclusions.....	33
4.2.1 Conclusions of calculating B factor from faults' orientation.....	33
4.2.2 Conclusions of F factor	34
4.2.3 Possible improvements and future works for the F factor	35
Chapter 5 Bibliography	36
Annexed.....	39