MODELING THE 3D NET INFILTRATION DISTRIBUTION AT THE EQUITY SILVER MINE WASTE DUMP

by

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ABSTRACT

The Equity Silver Mine site has been experiencing problems with ARD at its waste dump facility since 1981. A protective engineered soil cover was constructed over the top of the entire waste dump with the purpose of reducing ARD by impeding water and oxygen infiltration into the waste rock. Currently, there is a discrepancy between the 15% actual the 5% previously predicted infiltration. A new model illustrating the 3D net infiltration distribution over the surface of the Equity Silver Mine waste dump is presented in this thesis.

The 3D infiltration model was developed through the integration of soil-atmosphere moisture flux and slope energy modeling. Verified soil properties from previous Equity Silver Mine waste dump soil cover modeling were used, in combination with updated climate data, to carry out the model development. The 3D models show that the difference in net infiltration at various slopes across the waste dump can vary as much as 15%, with infiltration of up to 30% on the north-facing side. Approximate quantification for the total flow into the waste rock layer showed that for the year of 2004, there can be up to 12% of total annual precipitation. Furthermore, it was also established that 35% of total infiltration into the cover occurs through the horizontal and south-facing dump surfaces, while 65% of the infiltration occurs through the north-facing and other sloped surfaces. Infiltration and flow increased by 42% when sloped Q_{net} values were applied. Areas of high infiltration over the surface of the waste dump were consistent for all net infiltration models developed. With the high infiltrative problem areas identified, Equity Silver site personnel can now use the newly developed 3D net infiltration model to navigate the locations where soil cover improvement would need to be implemented.

TABLE OF CONTENTS

Abstract……..…ii
Table of Contents……..……...iii
Acknowledgements……...…..viii

Chapter 1 INTRODUCTION 1
1.1 General.....1
1.2 Background 2
1.3 Objective and Methodology 3
1.4 Thesis Outline.....5

Chapter 2 RESEARCH BACKGROUND.....7
2.1 General.....8
2.1.1 Infiltration 8
2.1.2 Evaporation.....9
2.1.3 Net Radiation (Q_{net}) 14
2.1.4 Plant Transpiration And Root Water Uptake.....14
2.2 History of Research at Equity Silver.....15
2.2.1 Waste Dump Instrumentation and Characterization.....16
2.2.2 Predictive Modeling.....17
2.2.3 Waste Dump Surface Mesh Development.....17
2.2.4 Slope Energy Model 18

Chapter 3 MODEL VERIFICATION 22
3.1 Previous Modeling 22
3.2 Benchmark Modeling 24
3.3 Vegetation Modeling.....27
3.3.1 Plant Root Uptake.....27
3.3.2 Waste Rock 28
3.3.3 Soil Properties.....28
3.3.4 Boundary And Initial Conditions.....29
3.3.5 Results.....29

Chapter 4 MODEL DEVELOPMENT.....34
4.1 Soil-atmosphere Flux Modeling.....34
4.1.1 Site Background.....35
4.1.1.1 General.....35
4.1.1.2 Model Input Data 38
4.1.1.2.1 Soil Properties.....38
4.1.1.2.2 Weather Data 41
4.1.1.2.2.1 Temperature 44
4.1.1.2.2.2 Humidity 45
4.1.1.2.2.3 Wind Speed.....46
4.1.1.2.2.4 Net Radiation And Precipitation 47
4.1.1.2.3 Topography.....49
4.1.1.2.4 Vegetation.....50
4.1.2 Base Case Modeling 50
4.1.2.1 Model Set Up 50
4.1.2.2 Results.....52
4.1.3 Parametric Analyses 53

4.1.3.1 Net Radiation 54
4.1.3.2 Saturated Hydraulic Conductivity 55
4.1.3.3 Results 56
4.2 Slope Energy Modeling 61
4.3 Model Integration 61
4.3.1 Soil Flux Model 62
4.3.2 Sun Energy Model 63
4.3.3 Net Radiation Correlation 63

Chapter 5 MODEL APPLICATION AND DISCUSSION 65
5.1 High K_{sat} 66
5.2 Low K_{sat} 71
5.3 Discussion of Results 75
5.4 Flow Quantification 77
5.4.1 Nodal Average 77
5.4.2 Area Average 78

Chapter 6 CONCLUSIONS AND RECOMMENDATIONS 80

References 85

Appendix A – 1998 Equity Silver Climate Data 89
Appendix B – 2004 Equity Silver Climate Data 96
Appendix C – Results of Parametric Analyses for Base case, Low and High K_{sat} Cases 103
Appendix D – Model Integration Calculations 113
Appendix E – Manual Flow Quantity Calculations for 2004 171

LIST OF TABLES

TABLE 3.1 - TILL COVER SOIL CHARACTERISTICS USED IN WEEKS' SOILCOVER MODELS 24
TABLE 3.2 - CHARACTERISTICS OF THE THE TILL COVER USED IN THE VEGETATION MODELING 29
TABLE 4.1 - DISTRIBUTION OF WASTE BETWEEN DUMPS (AZIZ, 2010) 37
TABLE 4.2 - SATURATED HYDRAULIC CONDUCTIVITIES FOR PARAMETRIC ANALYSES 55
TABLE 5.1 - PERCENT NET INFILTRATION OF THE 3D MODELS 76
TABLE 5.2 - OVERALL PERCENT INFILTRATION OF 3D MODELS 78
TABLE 5.3 - CALCULATED OVERALL % INFILTRATION FROM TWO DIFFERENT METHODS 79

LIST OF FIGURES

FIGURE 1.1 - FLOW CHART OF 3D NET INFILTRATION DEVELOPMENT AT THE EQUITY SILVER MINE WASTE DUMP 4
FIGURE 2.1 - SCHEMATIC OF WATER CYCLE AND PARAMETERS OF INFILTRATION 9
FIGURE 2.2 - ZONES OF A NATURAL SOIL SYSTEM (SWANSON, 2003) 10
FIGURE 2.3 - CLASSICAL EVAPORATION VERSUS TIME CURVE (HILLEL, 1980) 11
FIGURE 2.4 - HISTORY OF RESEARCH CONDUCTED AT THE EQUITY SILVER MINE WASTE DUMP 16
FIGURE 2.5 - SIMPLIFIED FLOWCHART FOR MODEL OF NET RADIATION ON SLOPED SURFACES, F_C, CLEAR-SKY FUNCTION; F_O, ESTIMATED CLEAR-SKY FUNCTION (WEEKS, 2006) 20
FIGURE 2.6 - VARIATION IN AVERAGE DAILY NET RADIATION ($MJ/M^2/DAY$) OVER THE TOPOGRAPHY OF THE EQUITY SILVER MINE WASTE DUMP, AS BASED ON 1998 CLIMATE DATA FOR HORIZONTAL SURFACE (WEEKS, 2006) 21
FIGURE 2.7 - VARIATION IN AVERAGE PE (MM/DAY) OVER THE TOPOGRAPHY OF THE EQUITY SILVER MINE WASTE DUMP, AS BASED ON 1998 CLIMATE DATA FOR HORIZONTAL SURFACE (WEEKS, 2006) 21
FIGURE 3.1 - EFFECT OF COVER SLOPE AND DIRECTION ON AE AND PE AT EQUITY SILVER MINE WASTE DUMP, AS BASED ON 1998 CLIMATE DATA FOR HORIZONTAL SURFACE (WEEKS, 2006) 23
FIGURE 3.2 - IMPACT OF SLOPE ON ANNUAL COVER FLUX - A COMPARISON BETWEEN ORIGINAL AND REPLICATED MODELS 26
FIGURE 3.3 - ACTUAL EVAPORATION VERSUS POTENTIAL EVAPORATION - A COMPARISON BETWEEN ORIGINAL AND REPLICATED MODELS 26
FIGURE 3.4 - INFILTRATION VERSUS SLOPE FOR NON-VEGETATED AND VEGETATED MODELS BASED ON 1998 WEATHER DATA 30
FIGURE 3.5 - ACTUAL TRANSPIRATION VERSUS SLOPE FOR VEGETATED MODEL 31
FIGURE 3.6 - ACTUAL INFILTRATION VERSUS SLOPE FOR VEGETATED MODELS 32
FIGURE 4.1 - EQUITY SILVER MINE LOCATION MAP (GOLDCORP, 2009) 35
FIGURE 4.2 - EQUITY SILVER MINE SITE PLAN SHOWING LOCATIONS OF MAIN, SOUTH TAILS, AND BESSEMER DUMP (SWANSON, 1995) 36
FIGURE 4.3 - LOCATION OF EQUITY SILVER MAIN, SOUTHERN TAILS, AND BESSEMER WASTE DUMPS (O'KANE, 1995) 37
FIGURE 4.4 - SOIL-WATER CHARACTERISTIC CURVES FOR MATERIALS AT THE EQUITY SILVER MINE WASTE DUMP 40
FIGURE 4.5 - FULLY AUTOMATED WEATHER STATION LOCATED AT THE CREST OF THE MAIN DUMP (WEEKS, 2006). 43
FIGURE 4.6 – CORRECTED DAILY MAXIMUM, MINIMUM, AND AVERAGE TEMPERATURE FOR THE NON-FREEZING 2004 YEAR 45
FIGURE 4.7 – CORRECTED DAILY MAXIMUM, MINIMUM, AND AVERAGE RELATIVE HUMIDITY FOR THE NON-FREEZING YEAR 2004 46
FIGURE 4.8 – CORRECTED DAILY WIND SPEED FOR THE NON-FREEZING 2004 YEAR 46
FIGURE 4.9 – CORRECTED DAILY Q_{NET} AND PRECIPITATION FOR THE 2004 NON-FREEZING YEAR 47
FIGURE 4.10 - THREE DIMENSIONAL FINITE ELEMENT MESH REPRESENTING THE SURFACE OF THE EQUITY SILVER MINE WASTE DUMPS (SARETSKY, 1998, WEEKS, 2006) 49
FIGURE 4.11 - SCHEMATIC BASE CASE MODEL SET-UP 51
FIGURE 4.12 - BASE CASE MODEL RESULTING WATER BALANCE 52
FIGURE 4.13 - Q_{NET} AT 50%, 100% AND 150% OF HORIZONTAL MEASUREMENT 54
FIGURE 4.14 - BASE CASE AE AND PE VERSUS % Q_{NET} 56
FIGURE 4.15 - % INFILTRATION VERSUS % Q_{NET} FOR BASE CASE MODEL 57
FIGURE 4.16 - RESULTS OF PARAMETRIC ANALYSIS WITH LOW K_{SAT} FOR THE UNCOMPACTED TILL 58
FIGURE 4.17 – RESULTS OF PARAMETRIC ANALYSIS WITH HIGH K_{SAT} FOR THE UNCOMPACTED TILL 60
FIGURE 4.18 - FLOWCHART OF MODEL INTEGRATION FOR THE DEVELOPMENT OF 3D NET INFILTRATION MODELS 62
FIGURE 4.19 - NET RADIATION CORRELATION BETWEEN TWO STREAMS OF MODELING 64
FIGURE 5.1 - 2004 ANNUAL AVERAGE % NET INFILTRATION AT EQUITY SILVER MINE WASTE DUMP, K_{SAT} UNCOMPACTED = $6.0X10^{-04}$ CM/S, K_{SAT} COMPACTED = $2.0X10^{-05}$ CM/S 67
FIGURE 5.2 - 2004 ANNUAL AVERAGE % NET INFILTRATION OF THE MOST PERVIOUS CASE 68

FIGURE 5.3 - % 2004 ANNUAL AVERAGE % NET INFILTRATION OF THE MOST PERVIOUS CASE 69
FIGURE 5.4 - 2004 ANNUAL AVERAGE % NET INFILTRATION AT EQUITY SILVER MINE WASTE DUMP, K_{SAT} COMPACTED TILL = $2.0X10^{-04}$ CM/S, K_{SAT} UNCOMPACTED TILL = $6.0X10^{-06}$ CM/S..... 70
FIGURE 5.5 - 2004 ANNUAL AVERAGE % NET INFILTRATION AT EQUITY SILVER MINE WASTE DUMP, KSAT COMPACTED TILL - $2.0X10^{-04}$ CM/S, K_{SAT} UNCOMPACTED TILL = $6.0X10^{-07}$ CM/S..... 70
FIGURE 5.6 - 2004 ANNUAL AVERAGE % NET INFILTRATION AT EQUITY SILVER MINE WASTE DUMP, K_{SAT} COMPACTED TILL = $6.0X10^{-04}$ CM/S, K_{SAT} UNCOMPACTED TILL = $2.0X10^{-08}$ CM/S..... 71
FIGURE 5.7 - 2004 ANNUAL AVERAGE % NET INFILTRATION AT EQUITY SILVER MINE WASTE DUMP, K_{SAT} COMPACTED TILL = $6.0X10^{-05}$ CM/S, K_{SAT} UNCOMPACTED TILL = $2.0X10^{-05}$ CM/S..... 72
FIGURE 5.8 - 2004 ANNUAL AVERAGE % NET INFILTRATION AT EQUITY SILVER MINE WASTE DUMP, K_{SAT} UNCOMPACTED = $6.0X10^{-05}$ CM/S, K_{SAT} COMPACTED = $2.0X10^{-06}$ CM/S 73
FIGURE 5.9 - 2004 ANNUAL AVERAGE % NET INFILTRATION AT EQUITY SILVER MINE WASTE DUMP, K_{SAT} UNCOMPACTED = $6.0X10^{-05}$ CM/S, K_{SAT} COMPACTED = $2.0X10^{-07}$ CM/S 73
FIGURE 5.10 - 2004 ANNUAL AVERAGE % NET INFILTRATION AT EQUITY SILVER MINE WASTE DUMP, K_{SAT} UNCOMPACTED = $6.0X10^{-05}$ CM/S, K_{SAT} COMPACTED = $2.0X10^{-08}$ CM/S 74

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The earth is the Lord's and everything in it, the world, and all who live in it; for He founded it upon the seas and established it upon the waters.

Chapter 1 INTRODUCTION

1.1 General

An important area of study in the field of geotechnical engineering is the behaviour of moisture flux both within the soil medium and across the soil-atmosphere interface. Accurate characterization of the moisture movement process, which is largely based on the evaluation of soil, plant and atmospheric interactions, is a critical part in designing engineered soil covers for waste disposal sites.

An engineered soil cover is often used as a protective layer placed on top of acid generating waste rocks at mining operations. The purpose of the soil cover is to eliminate the exposure of the underlying waste rock to water and oxygen, both agents for advancing acid and metal leaching. The low saturated hydraulic conductivity of the cover material promotes runoff and impedes water infiltration. In addition, the cover can also be used to establish a high degree of saturation, inhibiting oxygen diffusion to the waste rock. To date, extensive research has been done to evaluate the functionality of soil covers. The research has included a combination of field and laboratory work, completed in parallel with the development of computer modeling programs for the prediction of cover performance and the quantification of moisture fluxes.

1.2 Background

The Equity Silver Mine in central British Columbia has been the basis of much of the research done on soil covers, as the mine's waste dump has had a long-term acid rock drainage (ARD) problem. The mine was in operation between the years of 1980 and 1994 and acid rock drainage was found to be leaching from the mined waste rock in late 1981, only one year after mine operation started. Pyrite is the most abundant sulphide in all of the mineralized zones at Equity, averaging between 2 to 5% by volume in the waste rock. Currently, ARD from the mine site is being collected and processed in a lime treatment plant to neutralize acid and remove metals prior to discharging water back into the environment. Since the discovery of ARD, the total environmental expenditures have been in excess of $20 million CAD. Annually, the cost of running the ARD collection and treatment system averages around $1.1 million, of which 70% represents the cost of lime to neutralize the acid (Aziz and Ferguson, n.d.).

A soil cover is currently in place over the entire surface of the Equity Silver Mine waste dump. The rate of evaporation, transpiration and infiltration at the surface of the cover is highly dependent on incoming net solar radiation. Currently at the Equity Silver Mine waste dump, there is a discrepancy between the 5% predicted net infiltration (O'Kane et. al., 1998) and the 15% net infiltration collected in the ARD seepage ditches. It has been speculated that this is due to the fact that the south-facing side of the waste dump remains relatively dry throughout the course of the year, while most of the infiltration is occurring through the north-facing side of the dump where less sunlight is received. An energy

model, SunModel, was developed for the calculation of net radiation received on sloped surfaces (Weeks, 2006). This model was applied to the Equity Silver Mine waste dump and three dimensional (3D) maps showing the annual average net radiation and potential evaporation were created. In order to maintain the model at the simplest possible case and also to illustrate the two extreme cases of moisture-limited and soil-limited evaporation, vegetation effects were not included in the Weeks' modeling. In real cover systems, plant transpiration can be expected to increase the removal of water from the cover profile above what would take place without vegetation (Weeks, 2006).

1.3 Objective and Methodology

As it is important to accurately describe and predict actual conditions for net infiltration, the incorporation of vegetation into the modeling system is essential. The main focus of this thesis will cover modeling of flux behaviour at the Equity Silver Mine waste dump, as an extension of previous research, in which plant transpiration is also simulated in the soil flux models. In this thesis, SunModel is used in combination with the numerical modeling program SoilCover to develop three dimensional net infiltration models for the Equity Silver Mine waste dump.

As mentioned above, the work that has been completed herein draws from and brings together many of the previous research that has been completed, both on soil cover performance and also site-specific work for the Equity Silver Mine waste dump. The

work progress outlining the methodology of the 3D net infiltration model development in this thesis is shown in Figure 1.1.

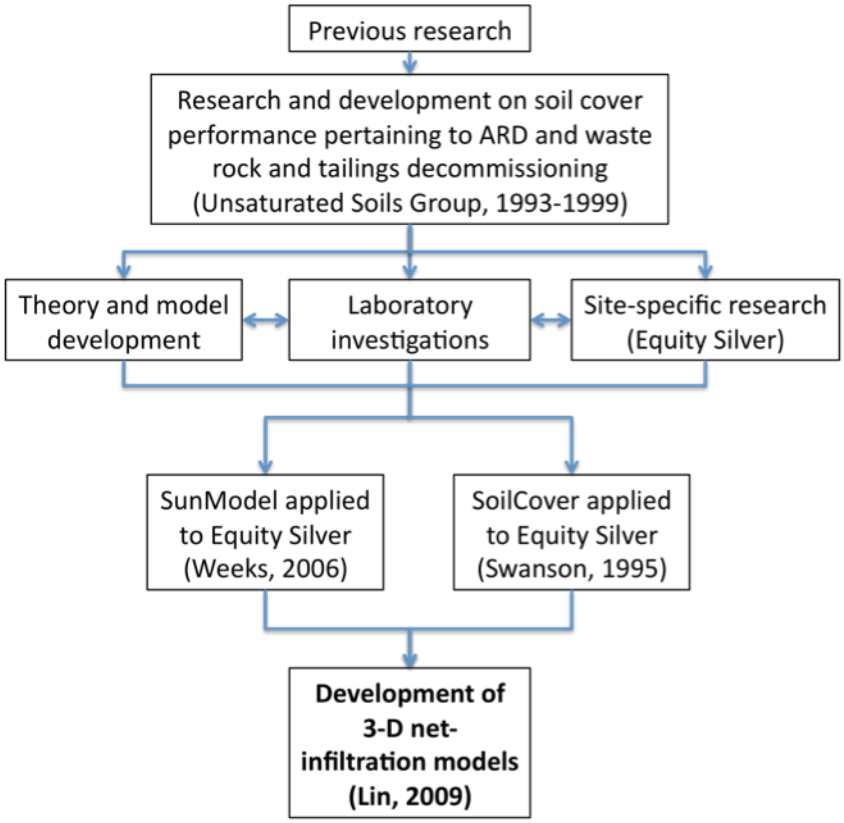

Figure 1.1 - Flow chart of 3D net infiltration development at the Equity Silver Mine waste dump

The specific objectives of this thesis are fourfold, and are outlined as follows:

i. To summarize the previous work that has been completed on cover performance for the Equity Silver waste dumps in a concise and chronological manner, showing how continuous studies have lead to the current research.

ii. To incorporate the effects of vegetation as an extension of the soil-atmosphere moisture flux models completed by Weeks in 2006.

iii. To develop 3D net infiltration models using SunModel and SoilCover. The resulting models will:

- provide a visualized summary of infiltration conditions over the entire surface of the Equity Silver Mine waste dump,
- illustrate the net infiltration variances at different areas of the dump,
- serve as a tool for identifying areas of the waste dump with higher infiltration, making known specific locations of the waste dump where improvement of cover performance is needed, and
- be used to quantify net infiltration at the Equity Silver mine waste dump.

1.4 Thesis Outline

This thesis includes six chapters. In Chapter one, an introduction to the research completed for this project is summarized. The methodology of how the work is to be completed, and objectives to the purpose of the work are illustrated and outlined. In Chapter two, an overview of the history of research completed at the Equity Silver Mine waste dump will be reported. Particularly, a description of how previous work completed over a period of 15 or more years has lead to the current research will be shown. Chapter three will cover the work done to verify previous models, as well as the incorporation of vegetation into the models to analyze the effects of plant root uptake. Chapter four will be focused on the process of development for the updated model. A detailed site description, including up-to-date data used in the analyses, is also included in Chapter four. Chapter five will cover results and discussions of the research analyses. In addition

to the models developed specifically for Equity Silver, a generalized format that can be applied to any cover system for the visualization of 3D net infiltration models will be presented. In the final chapter, conclusions will be made and recommendations for future work will be presented.

Chapter 2 RESEARCH BACKGROUND

Fully coupled heat and water transport between the soil and the atmosphere has been the subject of research for many decades. This area of research has been more prevalent within the field of agricultural science. Although engineers have only recently noted the significance in this field of study, soil scientists have been wrestling with the topic for much longer.

Swanson et. al (2003) provided a literature review that summarized the early work done on soil-atmosphere modeling, as well as modeling the performance of soil covers. The Unsaturated Soils Group (USG) at the University of Saskatchewan carried out a series of research projects relating to acid rock drainage, waste rock and tailings decommissioning between the years of 1993 and 1999. The focus of the USG research centered on defining the physical processes of water infiltrating into, exfiltrating from, and moving within the soil, as well as the moisture exchange processes between the soil and the atmosphere. These research projects can be categorized into three main sections, namely theory and model development, laboratory investigations, and site-specific research. Several research programs completed within the USG have been for and/or at the Equity Silver Mine waste dump. A complete summary of the work done by the USG has been documented (USG, 1997).

An overview of the main areas of research background upon which the completion of this thesis has been based on will be discussed below, followed by a more specific discussion

summarizing the research completed specifically for or in relation to the Equity Silver Mine.

2.1 General

In the areas of geotechnical and geo-environmental engineering, there are many instances where the estimation of water fluxes through the ground surface is required. The factors that control fluxes include evaporation, transpiration, precipitation, infiltration, and runoff (Swanson, 2003).

2.1.1 Infiltration

The diagram in Figure 2.1 shows the basic scheme of the water cycle and the various components leading to infiltration that occurs through a soil medium. The cycle is driven by energy received from the sun, or solar radiation. Atmospheric moisture is received at the surface of the soil through precipitation in the form of rain and/or snow. Immediately, runoff occurs at the surface of the soil medium. Also at the soil surface, water is released back into the atmosphere through direct evaporation. Moisture that seeps into the soil medium can be taken up by root uptake and released back into the air through transpiration. Further on, as water percolates through the soil, moisture is trapped within the pores of the soil skeleton and there is a change in the soil medium water storage. Therefore, infiltration through the soil medium is essentially precipitation minus runoff, evaporation, transpiration (root uptake), and the change in water storage

content of the soil. This is shown in the equation displayed in the diagram. Ideally, an engineered soil cover would reduce net infiltration, I, into the waste rock layer down to zero, thus eliminating the possibility of ARD.

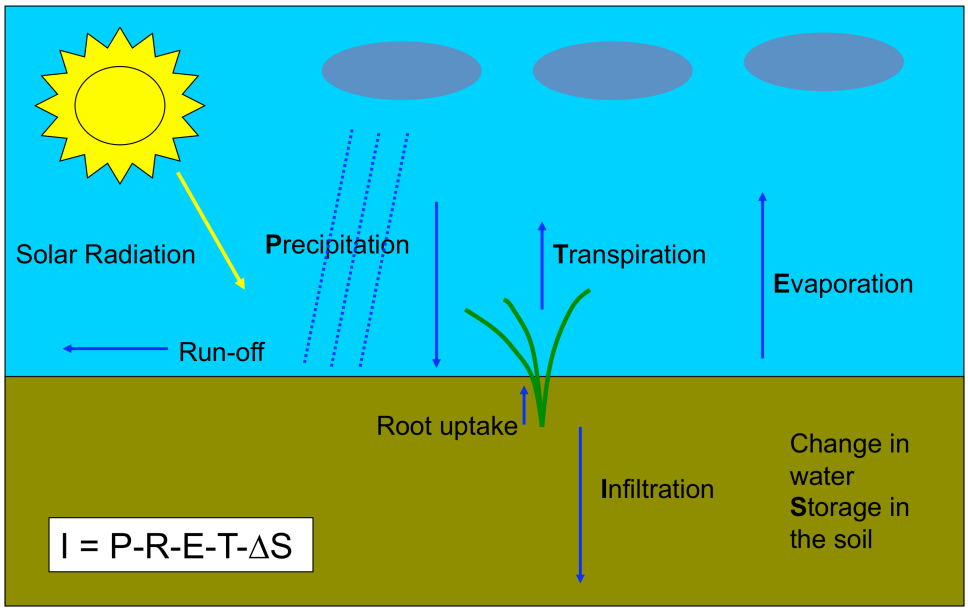

Figure 2.1 - Schematic of water cycle and parameters of infiltration

2.1.2 Evaporation

Traditionally, the Penman Method (Penman, 1948) has been used for flux estimation to calculate the evaporation that occurs from a soil surface. However, the Penman Equation does not take into account of the reduction in evaporation rate as the soil begins to dry out. Researchers have studied the implication of this phenomenon (Machibroda 1994, Morton 1985, Wilson 1990).

In Figure 2.2, Swanson (2003) has shown the three main zones that define a natural soil system: the saturated zone, the unsaturated zone, and the soil-atmosphere interface. In

the saturated zone, pores in the soil medium are completely filled with water and saturated hydraulic conductivity is relatively constant. In the unsaturated zone, pores are only partially filled with water and saturated hydraulic conductivity is dependent on the soil matric suction (i.e. the suction that exists within the empty spaces of the pores that are not filled with water). The part of the unsaturated zone that is exposed to the atmosphere is called the soil-atmosphere interface and is where soil moisture moves in both the liquid and vapour phases in response to precipitation and evapotranspiration.

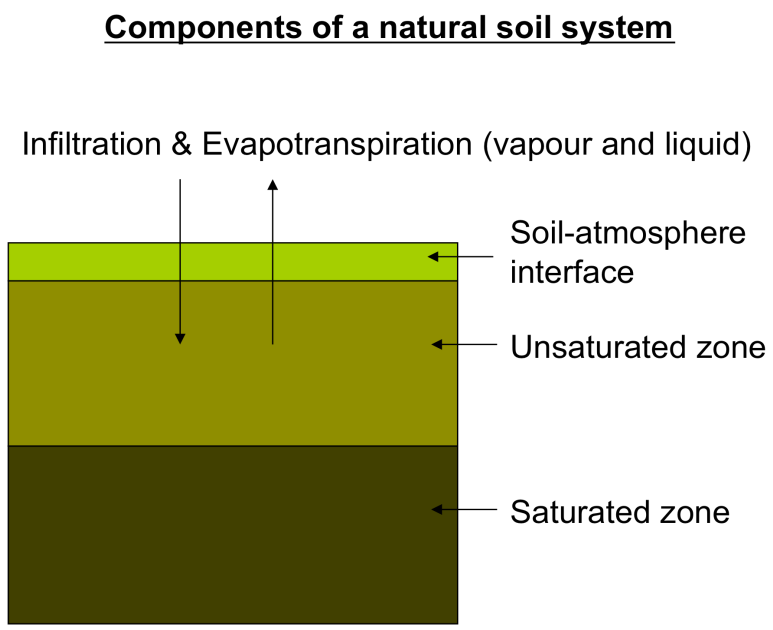

Figure 2.2 - Zones of a natural soil system (Swanson, 2003)

Evapotranspiration is comprised of two components, namely evaporation (potential and/or actual) and transpiration. Evaporation that occurs at the surface of a soil medium is based on atmospheric demand. A curve showing evaporation versus time is shown in Figure 2.3. In the beginning, actual evaporation (AE) is equal to potential evaporation

(PE) as there is enough moisture in the soil that is available to be evaporated. For PE, which is the maximum rate at which evaporation occurs from the soil surface, the amount of evaporation would be roughly equal to the amount that would occur from a free-standing water surface. When the soil begins to dry out, evaporation rates begin to decrease to equal actual evaporation rates.

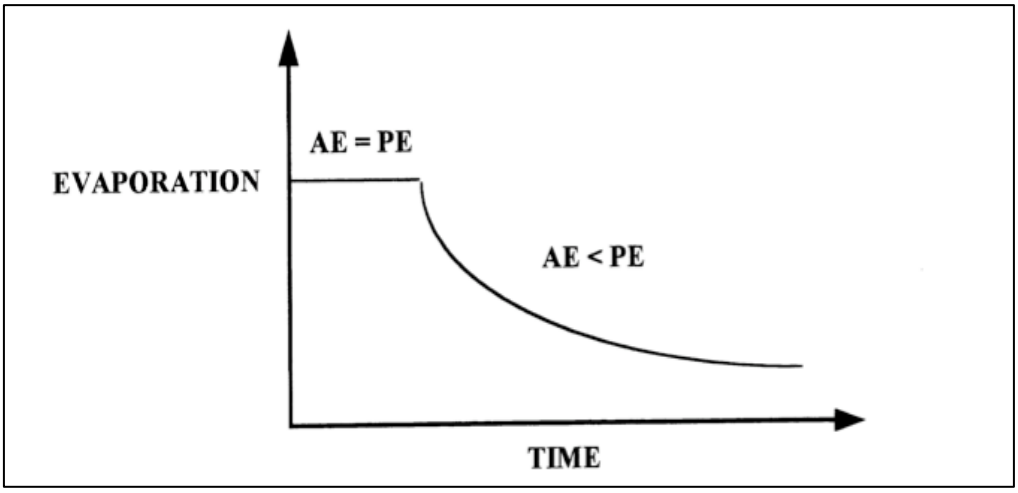

Figure 2.3 - Classical evaporation versus time curve (Hillel, 1980)

Machibrdoa (1994) found that using the original Penman equation, which neither takes into account the change in evaporation rates and saturated hydraulic conductivity with a change in soil saturation, infiltration rates were underestimated. The modified Penman Equation method proposed by Wilson (1990) allowed the calculation of actual evaporation from saturated and unsaturated surfaces. Using the modified Penman method, Machibroda et al. (1993) investigated infiltration through exposed mine tailings. Machibroda (1994) incoporated the modified Penman method into a fully coupled heat and water (liquid and vapour) transport finite element model formulated by Joshi et al. (1993). The first version of the SoilCover model (USG, 1997) was based upon this

formulation and was used to simulate a full water balance of a tailings site. Results from the model confirm that using the original Penman method to calculate leads to an overestimation of evaporation and thus underestimation infiltration.

An overview of the fully coupled solution of the heat and mass transfer equations provided by Wilson (1990) for the prediction of actual evaporation from soil surfaces is presented below. This equation has been widely used in the design of soil covers for mine waste sites. This coupled solution allowed the prediction of vapour pressure at the soil surface, so that the actual evaporation is predicated with the modified Penman equation, as shown (Wilson, 1990):

$$AE = \frac{\Gamma Q_{net} + \nu E_a}{\Gamma + A\nu} \qquad [2.1]$$

where:

$\Gamma =$ *slope of saturation curve versus vapor pressure curve at mean air temperature*
$\nu =$ *psychometric constant*
$E_a = f(u) e_a (B_h - A)$
$f(u) =$ *wind mixing function*
$e_a =$ *vapour pressure of air above evaporating surface*
$Bh =$ *inverse of air relative humidity*
$A =$ *inverse of relative humidity at soil surface*

In the equation, the parameter A becomes one in the case of saturated vapour pressure in the soil surface, and the equation simplifies to the original Penman equation. To solve for the actual evaporation, the vapour pressure at the soil surface needs to be calculated.

This is accomplished through simultaneously solving equations for moisture (liquid and vapour) and heat transport.

The following equation was presented by Wilson (1990) for the one-dimensional flow of liquid water and water vapour:

$$\frac{\partial h}{\partial t} = C^1{}_w \frac{\partial}{\partial z}\left(k_w \frac{\partial h}{\partial z}\right) + C^2{}_w \frac{\delta}{\delta z}\left(D_v \frac{\delta P_v}{\delta z}\right) \qquad [2.2]$$

where:

$h =$ *water pressure head*
$t =$ *time*
$z =$ *vertical position (elevation)*
$k_w =$ *hydraulic conductivity*
$D_v =$ *Diffusion coefficient for water vapour through soil*
$P_v =$ *Partial pressure due to water vapour*
$C^1{}_w =$ *Coefficient of consolidation with respect to the liquid water phase*
$C^2{}_w =$ *Coefficient of consolidation with respect to the water vapour phase*

The calculation of vapour pressure in the soil requires knowing the temperature of the soil, which must be calculated at the same time as the liquid and vapour flow. The following equation was proposed by Wilson (1990) for heat flow:

$$C_h \frac{\delta t_e}{\delta t} = \frac{\delta}{\delta z}\left(\lambda \frac{\delta t_e}{\delta z}\right) - L_v\left(\frac{P_t - P_v}{P_t}\right)\frac{\delta}{\delta z}\left(D_v \frac{\delta P_v}{\delta z}\right) \qquad [2.3]$$

where:

$C_h =$ *Volumetric specific heat of soil as a function of water content* $= C_v \rho_s$
$C_v =$ *specific heat of the soil*
$\rho_s =$ *mass density of the soil*
$\lambda =$ *Thermal conductivity of soil*
$L_e =$ *Latent heat of vapourization of water*

Solving the modified Penman equation [2.1] simultaneously with equation [2.2] and [2.3] through finite element methods is the basis for the flux boundary modeling program SoilCover (USG, 1997). More detailed formulations of these equations, including the calculations of the parameters in equations [2.2] and [2.3], are provide by Wilson (1990).

2.1.3 Net Radiation (Q_{net})

As seen in the modified Penman equation, net radiation is an important determinant of actual evaporation. Weeks has examined the variation in solar radiation with respect to evaporation from slope surfaces, and developed a method to predict the solar radiation on soil slopes (Weeks, 2006). More details of Weeks' work will be discussed in Section 2.2.4.

2.1.4 Plant Transpiration And Root Water Uptake

Tratch (1994) has completed the theoretical development of modeling the effects of vegetation within a soil medium on soil-atmosphere moisture exchange. Vegetation characteristics are described by the Leaf Area Indices (LAI), which is defined by the ratio of the green leaf surface area to the ground surface area below, and is a function of plant

species, vegetation density, and growth stage. Potential transpiration (PT) is calculated as a function of the PE and LAI. Consequently, potential transpiration is partitioned into a potential root uptake profile. The root flux is distributed linearly between the top and bottom nodes of the root system. Actual root uptake for each node in the root system is a function of the moisture availability and is calculated based on a defined plant limiting factor. Net radiation is modified on the basis of the LAI as vegetation effectively intercepts incoming radiation, which will reduce actual evaporation rates. Details of the theoretical development have been presented by Tratch (1994).

2.2 History of Research at Equity Silver

Research at the Equity Silver Mine on the performance of its waste dump cover was first initiated in 1992 (Swanson et. al, 2003). A large part of the work at Equity Silver has been completed within the USG. The timeline in Figure 2.4 outlines the research work completed for the engineered soil cover at the Equity Silver Mine waste dump since 1992.

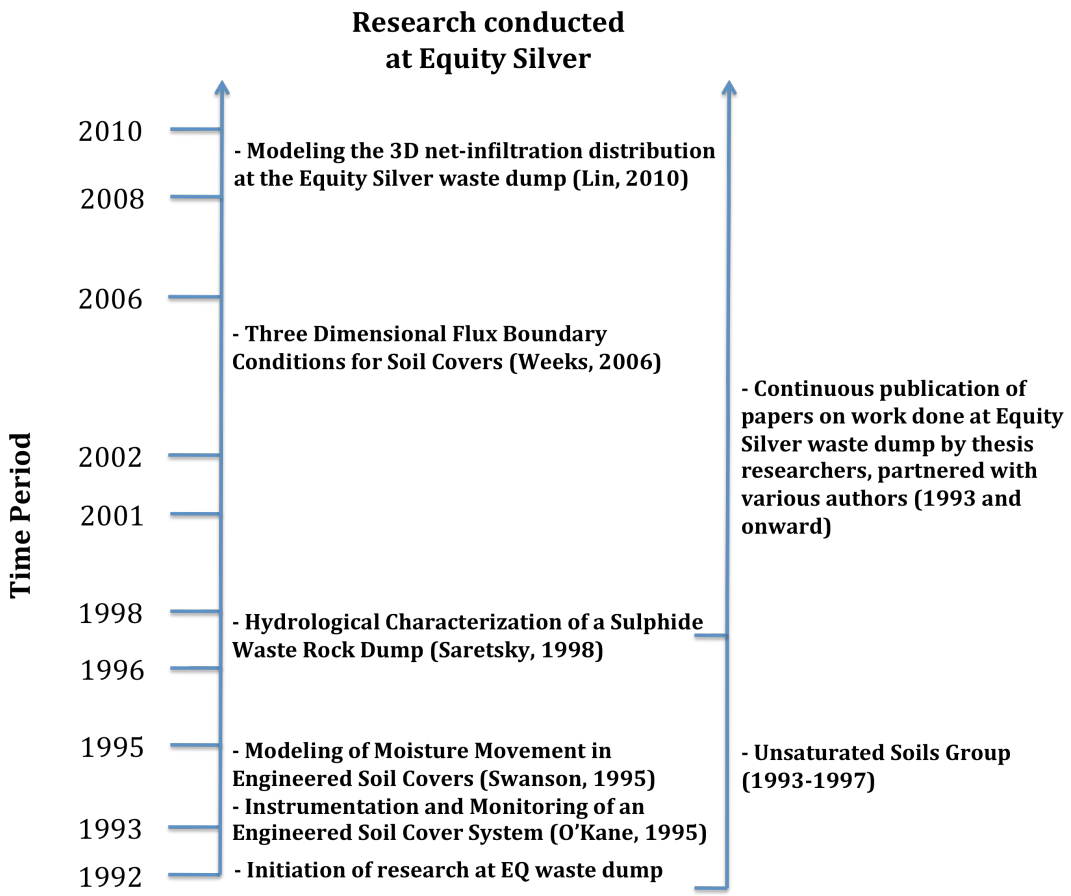

Figure 2.4 - History of research conducted at the Equity Silver Mine waste dump

2.2.1 Waste Dump Instrumentation and Characterization

Between the period of 1992 and 1995 O'Kane (1995) carried out a detailed instrumentation program to evaluate the performance of the engineered soil cover system at Equity Silver Mine as a water and oxygen barrier. Field instrumentation was installed to monitor temperature, gaseous oxygen, and gaseous carbon dioxide in the waste rock material. Soil temperature, soil suction, and water content were monitored in the till cover. Additionally, a fully automated weather station was installed at the top of the waste dump. Part of O'Kane's research included a laboratory program that carried out

the full characterization of the waste cover materials. The average measured infiltration from lysimeters placed at the base of the soil cover system was approximately 5% of precipitation. Results of O'Kane's work has also been published in cooperation with Wilson and Barbour (O'Kane et. al, 1998).

2.2.2 Predictive Modeling

Swanson carried out the second phase of the instrumentation and modeling program initiated by O'Kane in 1992 (Swanson, 1995). Swanson's research involved using the SoilCover program to evaluate the model's ability to predict in-situ conditions. The Equity Silver Mine was chosen as the 'wet' site for model evaluation for a range of climatic conditions. Computed and measured field responses for the wet site showed that for a five month period between June to November of 1993, there was good agreement. The soil hydraulic properties determined by O'Kane were calibrated to match field conditions. Swanson's predictive modeling revealed that the cover system performed well under extreme climate conditions. The results of Swanson's work has, similarly with O'Kane's work, been published in cooperation with O'Kane, Wilson, and Barbour (Swanson et. al, 2003).

2.2.3 Waste Dump Surface Mesh Development

Saretsky carried out a complete hydrologic characterization of the Equity Silver Mine waste dump, which entailed the investigation the system's geologic structure, topography, surface hydrology, groundwater, and water chemistry (Saretzky, 1998). Part

of Saretsky's work included the development of a three dimensional mesh that defines the entire surface of the waste dump. More details of the 3D mesh is described in Section 4.1.1.2.3 and the full development process of the mesh is outlined in Saretzky's thesis (Saretzky, 1998).

2.2.4 Slope Energy Model

A model was developed by Weeks (2006) that can predict net radiation, or Q_{net}, on sloped surfaces. Prior to Weeks' research, there had been several well-established approaches available for predicting evaporation from a horizontal surface. However, issues that affect evaporation from soil slopes had not been fully investigated. A comprehensive overview of the effects of slope on Q_{net} documented in literature is summarized by Weeks (2006).

To develop the net radiation prediction model, it was important to consider how Q_{net} is related to potential and actual evaporation and to examine the components of solar radiation that make up Q_{net}. The components of net radiation are as follows:

$$Q_{net} = L_{\downarrow} - L_{\uparrow} + S_{\downarrow} - S_{\uparrow}$$

Where:

$L_{\downarrow}$ = *Longwave radiation incident on the surface*
$L_{\uparrow}$ = *Longwave radiation emitted and reflected by the surface*
$S_{\downarrow}$ = *Shortwave radiation incident on the surface*
$S_{\uparrow}$ = *Shortwave radiation emitted and reflected by the surface*

For the model presented by Weeks, Q_{net} for the slope is estimated based on the measured Q_{net} received by a horizontal surface at the same general location. To perform the transformation, the Q_{net} measured on a horizontal surface is broken down to individual constituents of longwave radiations and short wave radiations. Each wave component is then modified by the appropriate relationships into what is anticipated on the slope. Once they have been transformed, the constituent components are summed to obtain the Q_{net} that would be received on the slope. For practical application, this developed technique was coded as a program called SunModel, using the MATLAB language. The preliminary version of this model was presented by Weeks and Wilson (2003) and the final version of the model by Weeks (2006). The flowchart from Weeks (2006) in Figure 2.5 shows a simplified block diagram with the different steps used by the model.

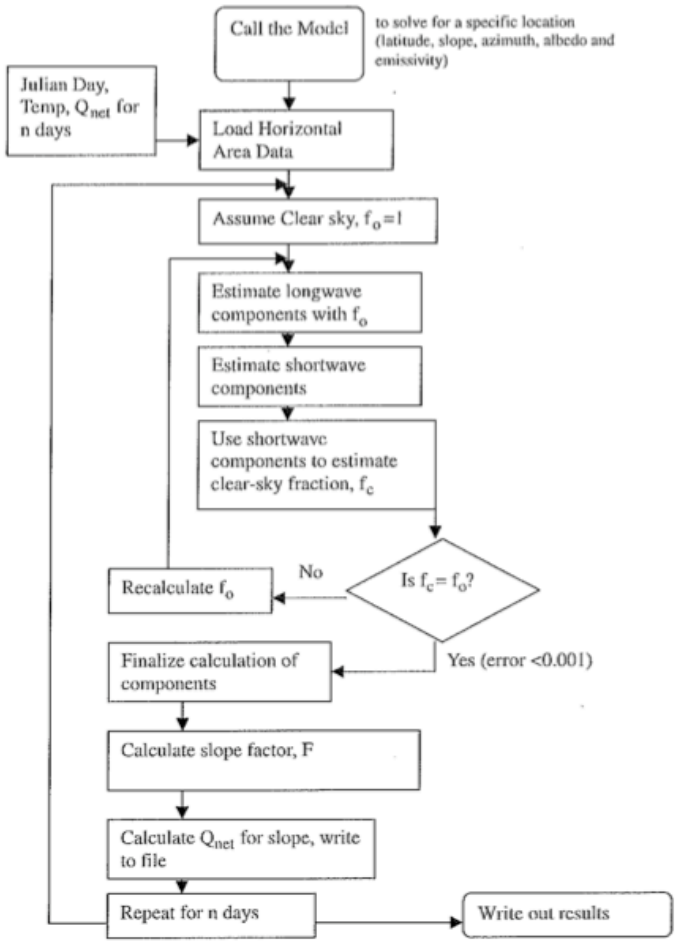

Figure 2.5 - Simplified flowchart for model of net radiation on sloped surfaces, f_c, clear-sky function; f_o, estimated clear-sky function (Weeks, 2006)

SunModel was subjected to verification by its application to compute net radiation over different areas of the Equity Silver Mine waste dump. Measurements of the horizontal Q_{net} on the sloped surfaces of the dump were taken using a portable net-radiometer and compared to values for the same locations estimated by SunModel and showed very good correlation (Weeks, 2006).

As part of Weeks' research, 3D models of the Equity Silver Mine waste dump were generated to illustrate the variances in a few parameters of interest. Figure 2.6 and Figure

2.7 show the variations in daily average Q_{net} and PE, respectively, over the surface of the dump for the year of 1998. It can be clearly seen that the north-facing slopes (in the northern hemisphere) receive less sunlight and thus experience less evaporation. Contrarily, the south-facing slopes receive more sunlight and experience a higher degree of evaporation. Weeks concluded that this could be significant when carrying out engineered soil cover design (Weeks, 2006).

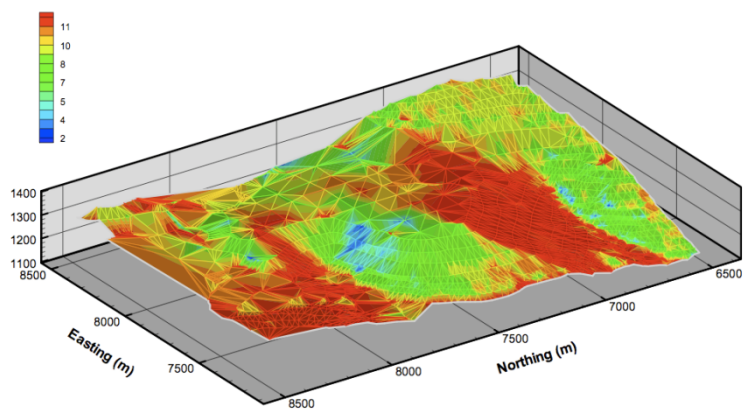

Figure 2.6 - Variation in average daily net radiation (MJ/m^2/day) over the topography of the Equity Silver Mine waste dump, as based on 1998 climate data for horizontal surface (Weeks, 2006)

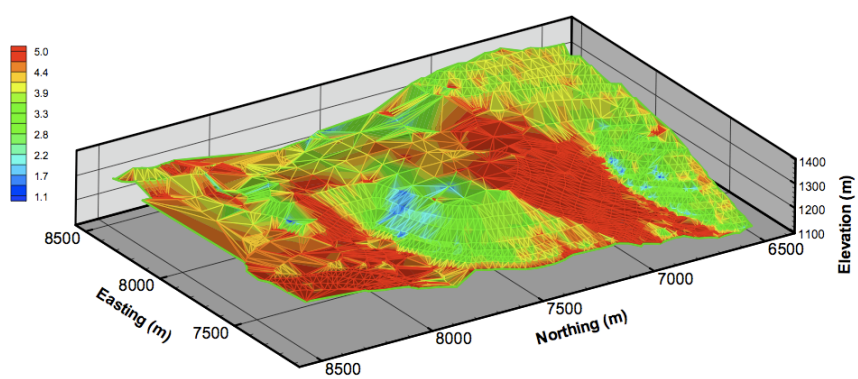

Figure 2.7 - Variation in average PE (mm/day) over the topography of the Equity Silver Mine waste dump, as based on 1998 climate data for horizontal surface (Weeks, 2006)

Chapter 3 MODEL VERIFICATION

In combining the results of previous research to create a new model, previous models were used to be built upon. It was essential for the author to verify the modeling that had been carried out, so that further modeling could be continued based on a confirmed reference point. As well, the effects of vegetation on the water balance of the SoilCover simulations had to be analyzed and validated.

3.1 Previous Modeling

A critical part of the modeling completed by Weeks (2006) included a series of data generated by SoilCover runs using different Q_{net} inputs corresponding to different slope orientations on-site. Q_{net}'s on the slopes were computed by SunModel and the results are shown in Figure 3.1. The effects of cover slope and direction on PE and AE at the Equity Silver Mine waste dump are illustrated by this series of model runs. From this graph, it can be seen that within the same site there can exist two microclimates. At 45° north, annual precipitation is higher than annual PE, representing a humid climate. However, at 45° south, annual precipitation is much lower than annual PE, representing a semi-arid climate. Hence, from this graph it can be seen that slope direction and orientation can have an effect on creating differing climatic environments, due to the different amounts of energy received.

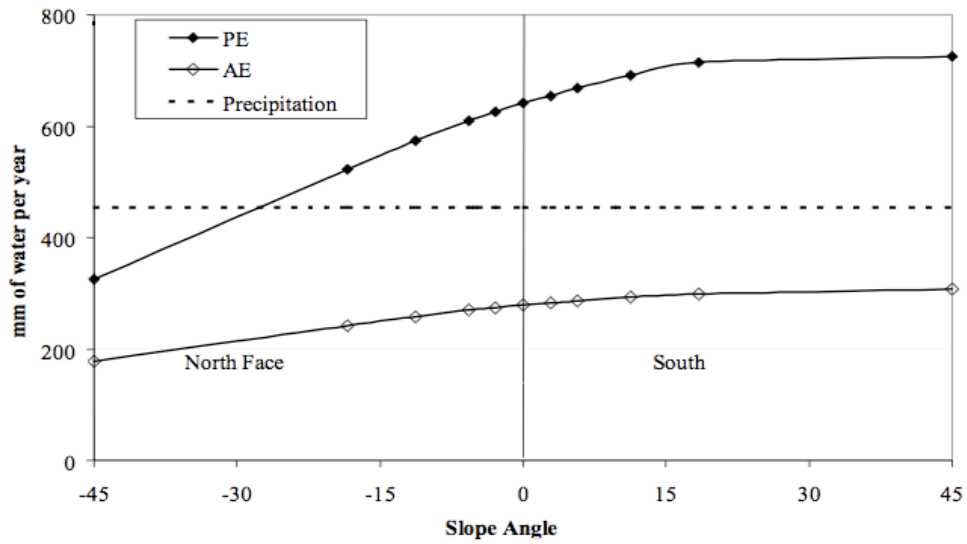

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Figure 3.1 - Effect of cover slope and direction on AE and PE at Equity Silver Mine waste dump, as based on 1998 climate data for horizontal surface (Weeks, 2006)

The climate data for 1998, reported as a typical year by Weeks, was used in these simulations. A complete set of the 1998 climate data used in the modeling is found in Appendix A. The models were run for a full year's growing season, meaning the period of time for which there was no snow on the ground (non-freezing period). For the year 1998, this was approximately between April 18th to November 2nd (Julian day 108 to 306). Each data point was based on the averaged daily results obtained from running the Q_{net} model over a full year's growing season for the given combination of slope and aspect (Weeks, 2006). The eleven data points representing various slopes were taken along a north-south axis to illustrate the most extreme effects of change in a slope.

Weeks' setup of the Equity Silver Mine waste dump cover profile contained a 0.3 m layer of uncompacted till underlain by a 0.5 m layer of compacted till. Material properties used in the simulations are summarized in Table 3.1. The K_{sat} value of the compacted till used in Weeks' soil flux modeling is relatively low at $5X10_{-08}$ cm/s. This value was

taken from laboratory experiments conducted by SENES (1991) and was confirmed by O'Kane (1995). The current in-situ K_{sat}'s of both the compacted and uncompacted tills could possibly be higher. Yet for the scope of this research previously determined values are used. The K_{sat} values of the tills are varied later in the latter part of the thesis, and will be discussed in Section 4.1.3.2. Detailed soil properties used in the Weeks' previous models can be found in Weeks' research thesis (Weeks, 2006). A pressure of 0 kPa was set as the boundary condition at the lower limit of the cover profile, to simulate the saturated conditions that were typically observed at the base of the cover profile in the field (Weeks, 2006). The modeling carried out by Weeks did not incorporate vegetation, in order to maintain the model at the simplest possible case, and to also show results of the two most extreme moisture-limited and soil-limited evaporation cases.

Table 3.1 - Till cover soil characteristics used in Weeks' SoilCover models (Weeks, 2006)

Properties	**Uncompacted**	**Compacted**
K_{sat} (cm/sec)	$3X10^{-06}$	$5X10^{-08}$
Porosity	0.33	0.31
Sg	2.77	2.77
Air Entry Value (kPa)	100	1000
Classification	SC-CL	SC-CL

3.2 Benchmark Modeling

Benchmark models were created by replicating Weeks' models presented in the above section. Eleven SoilCover simulations with the exact model inputs and mesh setup were

carried out. The purpose of replicating Weeks' models and comparing the replicated results with the original results was to:

i. Help the author become familiarized with the SoilCover modeling program,
ii. ensure the proper functionality of the SoilCover program, and
iii. create benchmark models upon which base case analyses incorporating vegetation can be built upon.

A comparison of the original and the replicated benchmark model results is shown in Figure 3.2 and Figure 3.3. Potential evaporation, actual evaporation, cumulative infiltration and cumulative runoff for the original and replicated eleven data points were plotted on the same graph. It can be seen that there is good agreement between the original and replicated data.

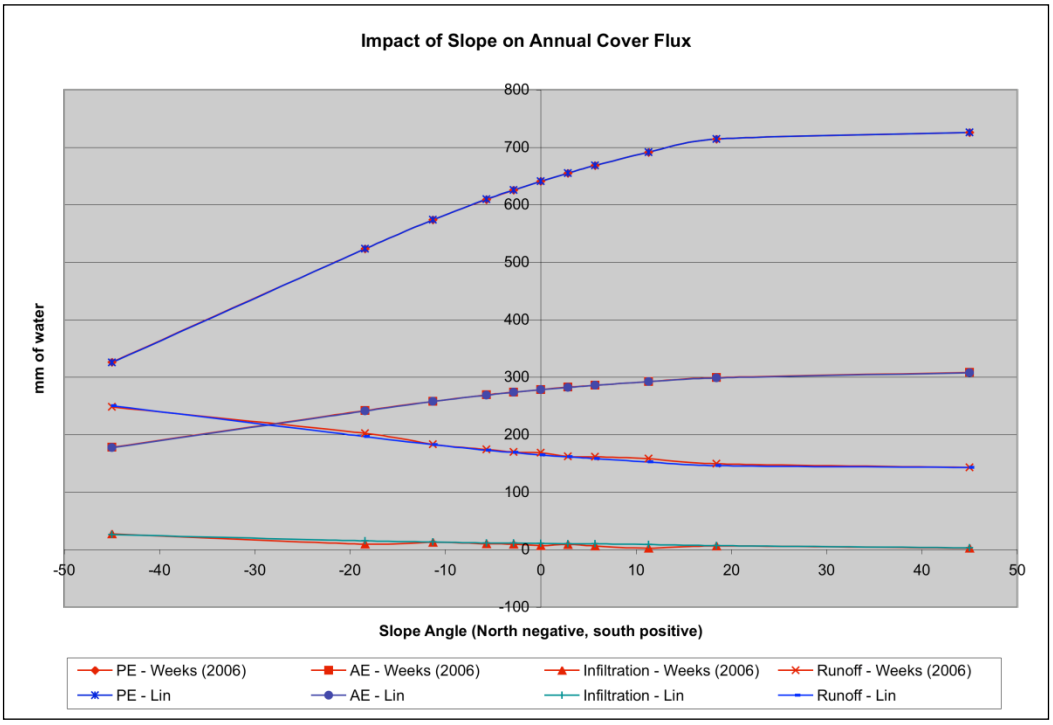

Figure 3.2 - Impact of slope on annual cover flux - a comparison between original and replicated models

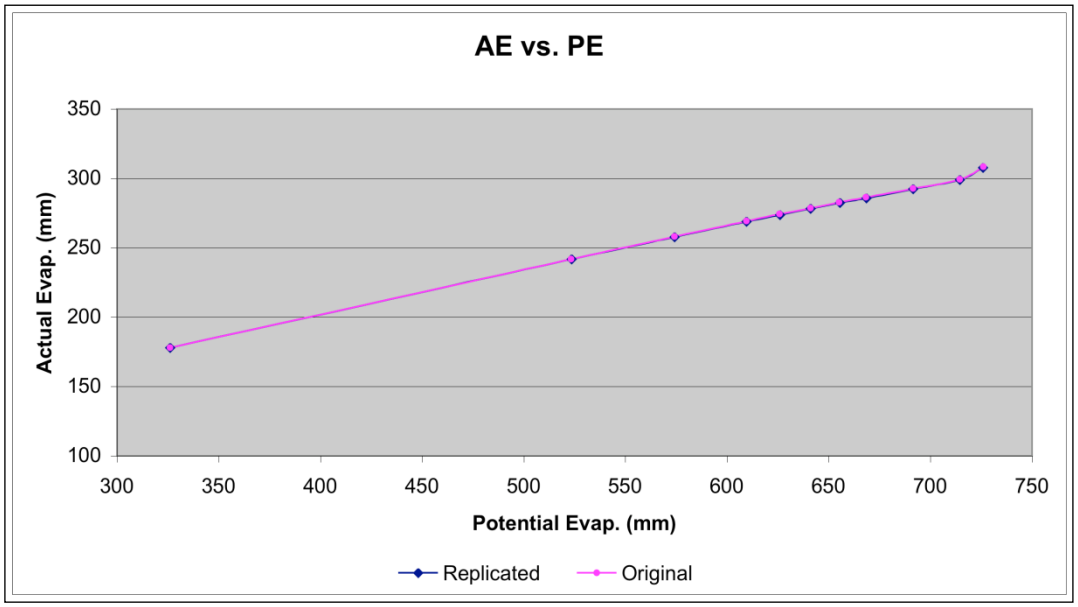

Figure 3.3 - Actual evaporation versus potential evaporation - a comparison between original and replicated models

A comparison of the results from the Weeks' simulations and the replicated benchmark simulations confirmed the validity of the benchmark models to be used for further modeling.

3.3 Vegetation Modeling

Vegetation models were set up by simulating the effects of root uptake for the verified benchmark models. For the purpose of basing the vegetation models to represent real-life conditions, soil properties used for the vegetation models were replaced by those based on the predictive models completed by Swanson. These properties will be further discussed in Section 3.3.3 below.

3.3.1 Plant Root Uptake

In the case of the water balance for a vegetated system, plant transpiration can greatly increase the total evaporation from the cover above what would take place without vegetation. To investigate the effects of vegetation on the resulting water balance for the benchmark models, they were re-run incorporating vegetation into the simulations (i.e. simulate root uptake). 'Good vegetation' was selected in SoilCover as the vegetation type in place, with a moisture wilting point of 1500 kPa and a moisture limiting point of 100 kPa. The Leaf Area Index (LAI) peaks in the middle of the growing season up to approximately 2. The root depth of the vegetation was modeled to be 30 cm deep, extending to the bottom of the upper uncompacted till layer.

3.3.2 Waste Rock

Swanson carried out the evaluation and application of SoilCover in modeling moisture movement within engineered soil covers (Swanson, 1995). Conclusions from his work stated that the application of soil-atmosphere modeling is a useful tool for analysis, design, and evaluation of engineered soil covers for acid generating mine wastes. Swanson had incorporated within his model for the Equity Silver Mine waste dump the waste rock layer that underlies the cover soil. Weeks' SoilCover simulations were primarily focused on the effects of Q_{net} on PE and AE and were therefore only included the uncompacted and compacted till layers of the cover. Since the aim of this phase of the research was to model the complete soil cover system over the waste dump, a 1.2 m layer of waste rock underneath the soil cover was added to the vegetation model setup. Properties of the waste rock were that of the Beaver Creek sand (Wilson, 1990, Swanson, 1991) and are described in Section 4.1.1.2.1.

3.3.3 Soil Properties

Soil properties of the compacted and uncompacted layers used for the vegetation models are shown in Table 3.2. The saturated hydraulic conductivity used for the vegetation modeling were based on Swanson's predictive model soil properties (Swanson, 1995).

Table 3.2 - Characteristics of the the till cover used in the vegetation modeling

Properties	Uncompacted	Compacted	Waste rock
K_{sat} (cm/sec)	$6X10^{-06}$	$2X10^{-7}$	$3X10^{-03}$
Porosity	0.37	0.33	0.4
Sg	2.77	2.77	2.77
Air Entry Value (kPa)	10	100	6
Classification	SC-CL	SC-CL	-

3.3.4 Boundary And Initial Conditions

The boundary conditions for the benchmark models with vegetation include fully saturated conditions with suctions of 0 kPa in both till layers, and a constant lower suction boundary condition of 12 kPa in the entire waste rock layer (waste rock at residual suction). Initial temperature conditions included a graded temperature profile from $0^{o}C$ at the top to $14^{o}C$ at the bottom of the cover.

3.3.5 Results

Results of the vegetated models are discussed in this section. Since vegetation is simulated, transpiration is now taking place. Much of the moisture that would otherwise infiltrate into the waste rock layer is now being taken up by the plant roots and released back into the atmosphere through their stoma. Figure 3.4 shows the resulting infiltration for the benchmark models (no vegetation) and vegetated models. It can be seen that there is a notably less amount of infiltration occurring in the vegetated cases. A negative infiltration value indicates that water is leaving the system at the surface of the mesh. Furthermore, it is shown that as the slope of the surface becomes more south-facing, the difference between non-vegetated infiltration and vegetated infiltration becomes greater.

As the energy received on the surface of the mesh becomes greater, the effects of transpiration is also magnified. The rate of root uptake, partially driven by Q_{net}, reaches a point where it becomes strong enough that more water is being pulled out of the system than infiltrating into the till layers.

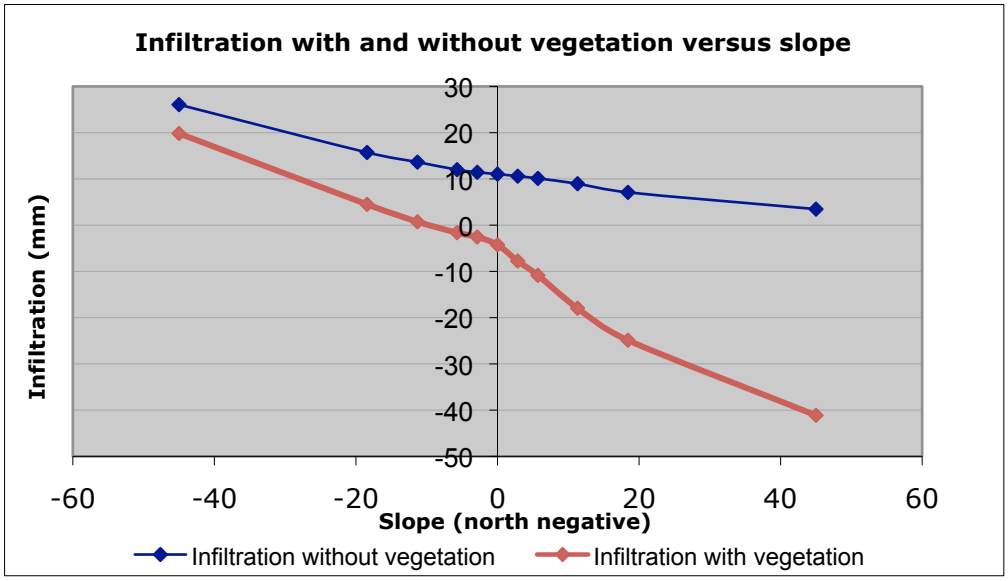

Figure 3.4 - Infiltration versus slope for non-vegetated and vegetated models based on 1998 weather data

Figure 3.5 shows the computed actual transpirtation from the engineered soil cover system with a change in slope from north to south. It can be seen that there is an increase in transpiration as the slope becomes more south-facing.

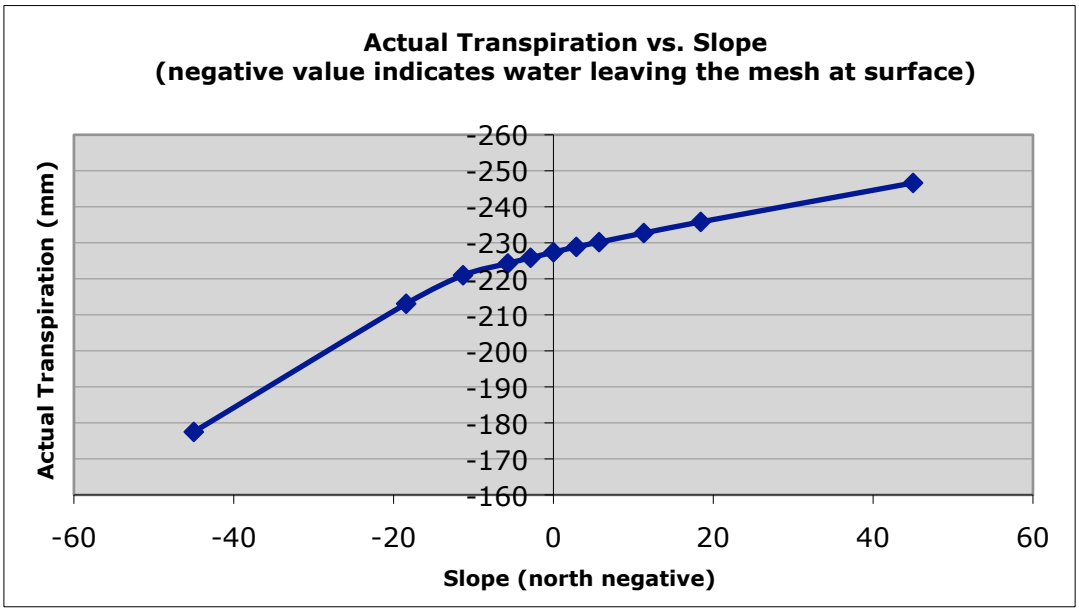

Figure 3.5 - Actual transpiration versus slope for vegetated model

Figure 3.6 shows the change in actual infiltration (net infiltration) as the slope becomes more south-facing. In SoilCover, the net cumulative infiltration does not include transpiration. Therefore, net infiltration into the system is obtained by adding the negative value of transpiration (a negative at the surface indicates water leaving the mesh) to the value of net cumulative infiltration. It can be seen that there is a decrease in net infiltration as the slope becomes more south-facing. This is expected, due to an increase in transpiration. Model results also show that values for net infiltration become negative starting at a slope of north 10H:1V. According to the model and as mentioned earlier, this means water is physically being exfiltrated out of the system at the surface.

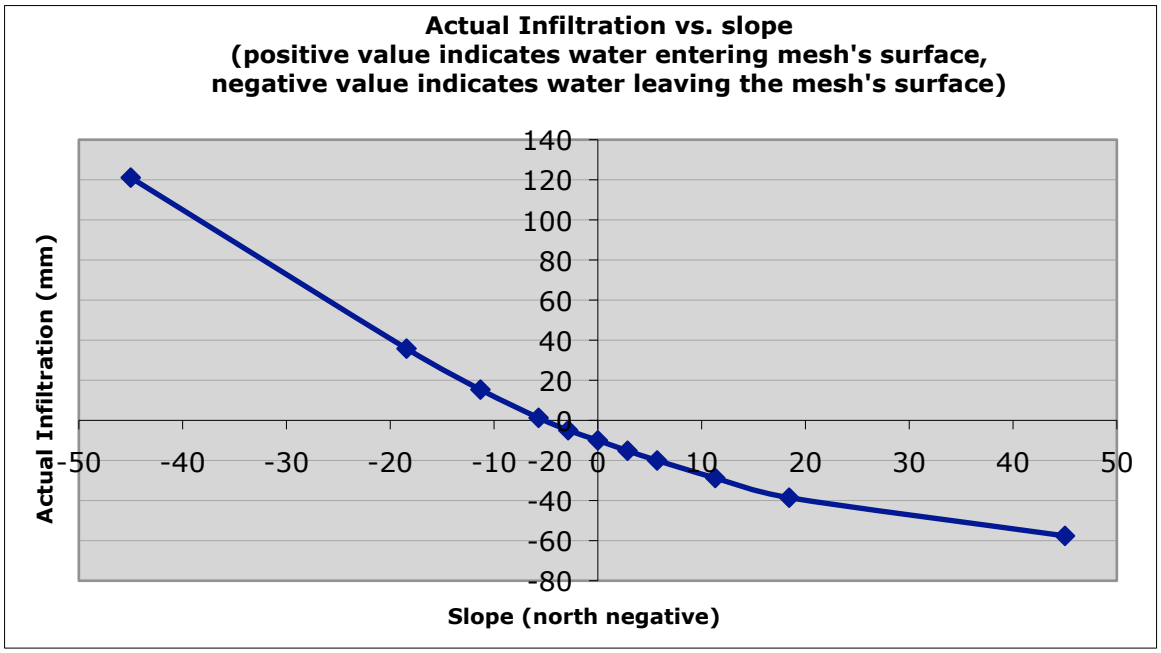

Figure 3.6 - Actual infiltration versus slope for vegetated models

Upon further investigation, it was found that the potential evaporation yielded from the 1998 weather data is high compared to other previous models. Prior modeling of a 153 day period from June 4 to November 4, 1993, yielded a PE of 430 mm for a flat surface (Swanson, 1995). Comparing to the model of a 199 day period from April 18 to November 1, 1998, which yielded a PE of 640 mm for a flat surface, the latter resulted in a PE approximately 4 mm/day higher than the former. Furthermore, the net radiation data for 1998 contained a number of values over 20 MJ/m^2/day, which are also higher compared to the site-measured values for a typical year by Weeks (2006), of which none were higher than 18 MJ/m^2/day.

It can be concluded that the vegetation model is functioning. Yet, the results are not yet representative of actual conditions due to outdated and suspected incongruous weather data. The vegetation models were generated for the purpose of investigating the effects

of vegetation, namely transpiration and net infiltration, for a typical Equity Silver waste cover model set up. While the model is fully functioning, further refinement of model inputs is needed for the cover modeling that will be used in the development of the 3D net infiltration models. This includes a constant and verified set of soil properties and an updated and verified weather data set.

Chapter 4 MODEL DEVELOPMENT

The development of the 3D net infiltration models at the Equity Silver Mine waste dump requires the combination of two modeling processes. Moisture flux prediction through SoilCover modeling functions as the main modeling program used to compute net infiltration into the waste rock layer. For this thesis, SoilCover Version 4.01 is used for the modeling. Equivalent net radiation values adjusted for slope and direction across the surface of the waste dump are derived from SunModel, Version 2006.

4.1 Soil-atmosphere Flux Modeling

It has been estimated by Equity Silver site personnel that the waste dump is currently experiencing approximately 15% overall net infiltration into the waste rock layer, with up to 30% on the northern, shadier, side. The infiltration on the horizontal slope is estimated to be approximately 5%. The development of the net infiltration model will help determine areas of higher and lower infiltration, dependent on the amount of energy received at various parts of the waste dump. With Weeks' previous models verified and the SoilCover vegetation component applied and confirmed, the base case model of which the net infiltration model will be built upon can now be generated.

A comprehensive understanding of site conditions and soil properties is achieved through both reviewing the previous literature and work that have been completed for and at Equity Silver, and by reviewing the updated weather data received from site.

4.1.1 Site Background

4.1.1.1 General

The Equity Silver Mine is located in the central interior of British Columbia, approximately 575 kilometers northwest of Vancouver and 35 kilometers southeast of Houston, at an elevation of 1300 meters above sea level and latitude of approximately 54° North. The Mine is located in the humid alpine environment of central British Columbia. The average annual precipitation is 710 mm per year, which historically has been made up 40% rain and 60% snow. The average annual precipitation exceeds the annual potential evaporation of 500 mm (Swanson et. al, 2003). Average monthly temperatures are typically below zero degrees Celsius between the months of November and April. The location map of the mine, currently owned by Goldcorp Inc., is shown in Figure 4.1.

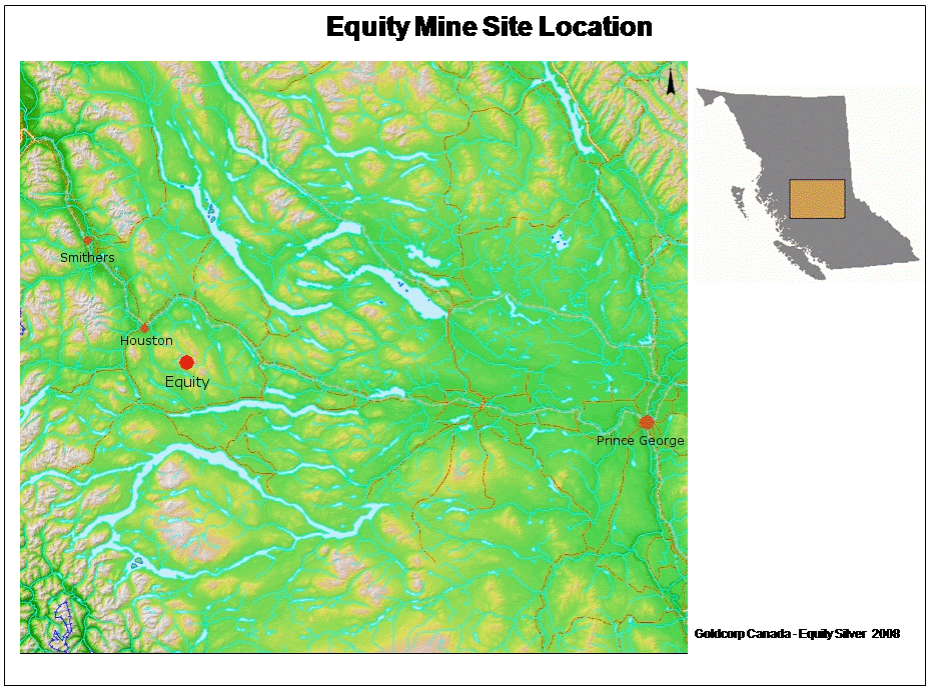

Figure 4.1 - Equity Silver Mine Location Map (Goldcorp, 2009)

Mining operations consisted of open pits, underground workings, and a 9000 tonne per day milling complex. Silver ore was extracted from three open pit zones; the Main Zone, the South Tails Zone, and the Waterline Zone, as shown in Figure 4.2. During the lifetime of the mine, approximately 80 million tonnes of waste rock was produced and placed in three adjacent waste dumps; the Main Dump, the Southern Tails Dump, and the Bessemer Dump, as shown in Figure 4.3.

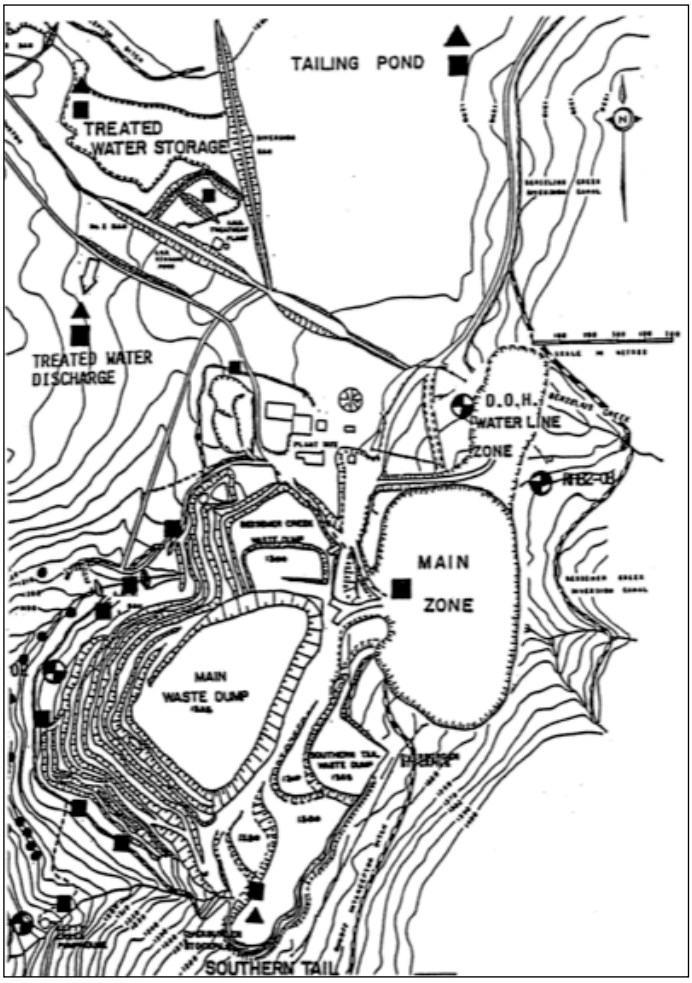

Figure 4.2 - Equity Silver Mine site plan showing locations of Main, South Tails, and Bessemer Dump (Swanson, 1995)

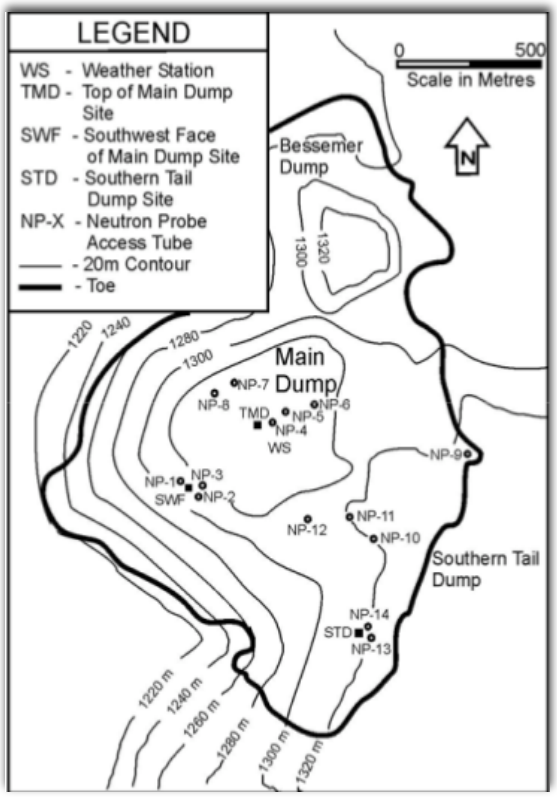

Figure 4.3 - Location of Equity Silver Main, Southern Tails, and Bessemer Waste Dumps (O'Kane, 1995)

The construction of a soil cover over the three adjacent waste dumps on site began in 1991, covering an area of approximately 118 hectares. The progressive placement of the cover was completed in 1994. The total size of the waste dumps is shown in Table 4.1. Additionally, there is also 6,000,000 tonnes of low-grade ore in the northern section of the Main dump between the Main and Bessemer dump.

Table 4.1 - Distribution of waste between dumps (Aziz, 2010)

Dump Name	Volume of Waste Rock (Mt)	Area (ha)
Bessemer	16	41
Main	43.1	48
Southern Tails	17.5	29

The cover design consisted of a 0.5 m layer of compacted till, underlain by a 0.3 m layer of uncompacted till. The till was placed with the lower layer compacted to 95% of standard proctor maximum dry density. The design was aimed at maintaining saturation in the lower till layer to limit oxygen diffusion into the waste rock, and maximizing evaporation in the upper till layer to minimize moisture flux through the cover. Till material used to construct the covers were locally available and could be utilized at the waste dumps at a reasonable cost (Weeks, 2006). A description of the soil properties is presented in the following section.

4.1.1.2 Model Input Data

4.1.1.2.1 Soil Properties

Soil properties for the Equity Silver waste dump used for the net infiltration model development were from properties used by Swanson in the predictive modeling section of his research (Swanson, 1995, Swanson et. al, 2003). Swanson's properties were based on a complete soil testing and classification process of the till and waste rock material completed and reported by O'Kane (1995) and O'Kane et. al (1998). The till was gravel and cobble rich, with a clayey silt matrix. The soil is classified as SC-CL, indicating that there is an equal amount of both fine and coarse-rained material within the till. The make-up of the till consisted of approximately 23% gravel, 28% sand, 40% silt, and 9% clay sized particles. The specific gravity of the till was found to be 2.77. The plastic limit and liquid limit of the till cover material were 39.6% and 17.4%, respectively.

The maximum dry density of the till material was 1.90Mg/m^3, and the optimum molding moisture content was approximately 14.5%, based on standard Proctor compaction tests. In-situ tests carried out by using a nuclear densometer showed that the compacted till layer had a void ratio of 0.5 (porosity of 33%) and the uncompacted till layer a void ratio of 0.59 (porosity of 37%). The in-situ Proctor density of the uncompacted layer varied from approximately 66% of optimum at the surface to 93% of optimum at the base.

Swanson et. al (2003) reported soil water characteristic curves, as shown in Figure 4.4. Laboratory soil water characteristic curves were determined by O'Kane (1995) for the lower compacted till cover, compacted both 2% wet and 2% dry of optimum. For modeling purposes, Swanson (1995) further developed soil water characteristic curves for both the compacted and uncompacted till layers. A field soil water characteristic curve was determined for the uncompacted till layer based on O'Kane's moisture content and matric suction measurements (O'Kane, 1995). The soil water characteristic curve for the compacted till layer was generated based on O'Kane's soil water characteristic curve for the dry of optimum till sample. Furthermore, field measurement made by Swanson showed moisture contents of the till layers to be 2 and 4% higher than those measured in the laboratory soil water characteristic curve tests. Hence the laboratory soil water characteristic curves were calibrated to better fit the field data by normalizing the laboratory data to the field data. A detailed description of the soil water character curves development process was discussed by Swanson (1995) and also Swanson et. al (2003).

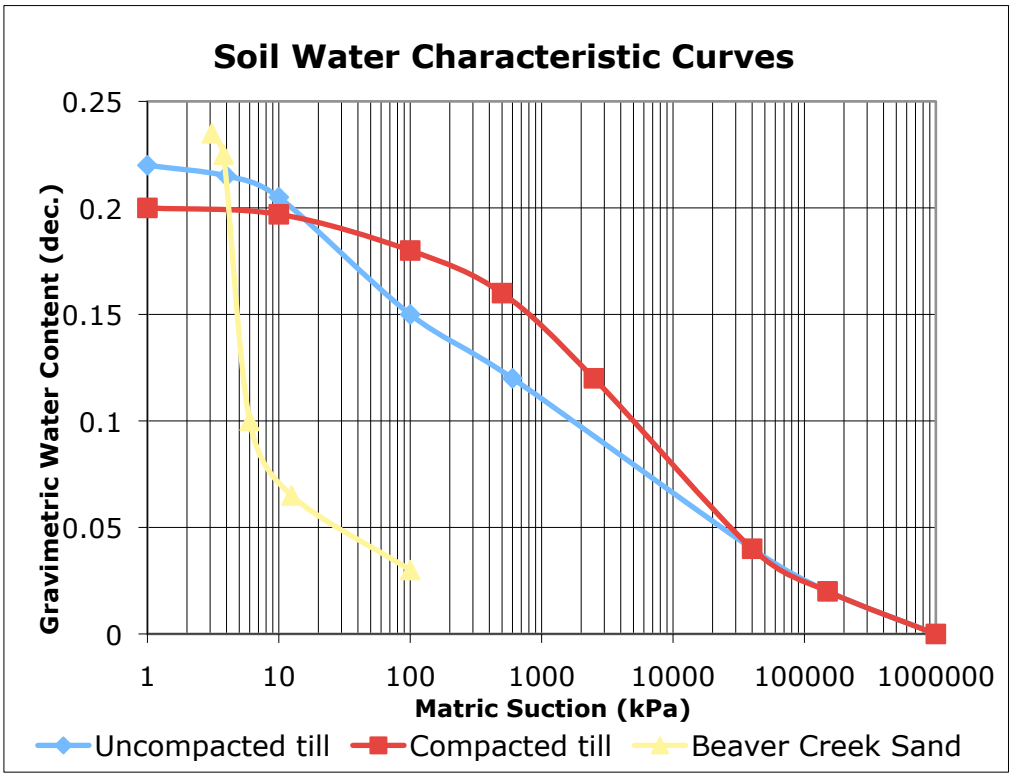

Figure 4.4 - Soil-water characteristic curves for materials at the Equity Silver Mine waste dump

The saturated hydraulic conductivity, or K_{sat}, of the uncompated and compacted till layers were first measured by SENES (1991). Falling head laboratory permeater tests resulted in a K_{sat} value of $5X10^{-07}$cm/s for the uncompcated till and $2.0X10^{-08}$cm/s for the compacted till. O'Kane (1995) performed laboratory tests and obtained K_{sat} values for the uncompacted layer between the range of $5.7X10^{-07}$cm/s to $6X10^{-06}$cm/s.

The soil water characteristic curve for the waste rock is based on the Beaver Creek Sand (Wilson, 1990, Swanson, 1991). The K_{sat} value of $1.3X10^{-03}$ cm/s for the waste rock is based on the value reported by Wilson (1990). For the 3D net infiltration base case

modeling, the soil properties used are those used in the benchmark vegetated models, as summarized in Table 3.2.

For Swanson's predictive models, thermal properties, namely thermal conductivity versus gravimetric moisture content and specific heat versus gravimetric moisture content functions for the cover system were estimated using the program "TheHydroproS" (Tarnawski and Wagner, 1991). Values for percent gravel, sand, silt, and clay size particles along with an average porosity of the cover system were used as input into the program. The thermal properties for the waste rock are based on values by Wilson (1990), for a typical sandy material.

For the modeling completed in this thesis, the thermal conductivity function and volumetric specific heat function are automatically generated by SoilCover using the Johansen Method (1975) and the de Vries Method (1958), given a quartz percentage of 0.7 and a solids specific heat value of 800 $J/Kg^3\ ^oC$ for the soil, respectively.

4.1.1.2.2 Weather Data

All weather data used in the modeling was received directly from the Equity Silver Mine site. The weather data measured on-site include hourly temperature, humidity, net radiation (horizontal), wind speed and direction, and precipitation. These particular parameters were monitored due to their potential impact on the water balance of the soil cover (Weeks, 2005). A full weather data set, with record of the above listed parameters from the year of 1995 to 2008, was received from site. There are some gaps in the data

due to malfunctioning of the data logging equipment. In these cases the weather data was either not available (not recorded) or the values reported were far outside of the normal range(s) and deemed defective.

The weather data received from site were obtained from two locations:

i. ***Fully automated weather station*** installed at the crest of the main waste dump, measuring net radiation, temperature, humidity, wind speed and rainfall data. The station was installed in April 1993 by O'Kane (1995) and is currently being maintained by mine site staff. A photo of the station is shown in Figure 4.5.

ii. ***Manual weather monitoring station*** located at Equity Mine located above Main Zone Pit 4B-14. Data from this station is also available in the National Climate Data and Information Archive, maintained by Environment Canada. At the manual monitoring station, maximum and minimum temperatures are measured daily at 8:00 am and 4:00 pm, along with accumulated precipitation. Snow surveys are carried out three times a year at the end of February, end of March, and end of April. Snow depth is measured in centimeters and assumed to have a density of 10 cm snow = 1 mm of rainwater equivalent. Rain and snow accumulation are added together to create the annual precipitation record.

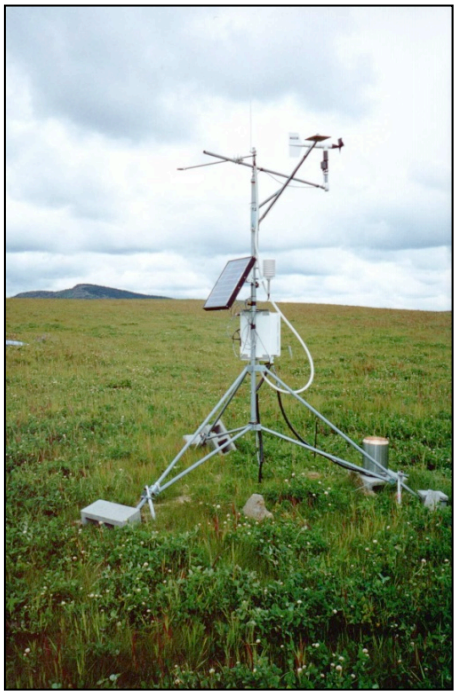

Figure 4.5 - Fully automated weather station located at the crest of the main dump (Weeks, 2006).

To maintain consistency, the main data used for the modeling process were taken from the fully automated weather station. Weather data from the manual monitoring station were used as a double check for the accuracy of the main dataset and also as supplementary data when needed. Snowmelt data is not recorded at the fully automated weather station and therefore was taken from the manual monitoring station.

Weather data was chosen from the year 2004 for net infiltration modeling. This was the year with the most complete weather data, and also with typical values for average precipitation and other weather parameters. As aforementioned, temperatures typically fall below zero between the months of November and April. Between these months conditions within the till cover are frozen, and there is minimal moisture exchange between the soil and the atmosphere. Notable infiltration of surface precipitation into the

waste rock layer can only occur from spring to fall. Hence, a full year in SoilCover flux modeling is usually considered to be from early May to mid-November. For the year 2004, the SoilCover model was set up for 199 days, from May 1st to November 15th (Julian day 122 to 320). The complete set of weather data used for the model is found in Appendix B. Weather data correction due to instrumentation malfunction was only applied to the non-freezing year. A description of the various weather parameters used for the model input for the above time period are discussed below.

4.1.1.2.2.1 Temperature

Daily maximum, minimum and average temperatures for the year 2004 are shown in Figure 4.6. Temperatures start to increase starting in mid-to-late June and drop off again in October. Temperature measurements from the fully automated weather station are used. They were compared with the daily maximum and minimum temperatures taken from the manual weather station, and the two datasets showed a relatively good match. Data from the manual weather station was used for maximum and minimum temperatures for the dates that there appeared to be a malfunction in temperature logger at the automated weather station.

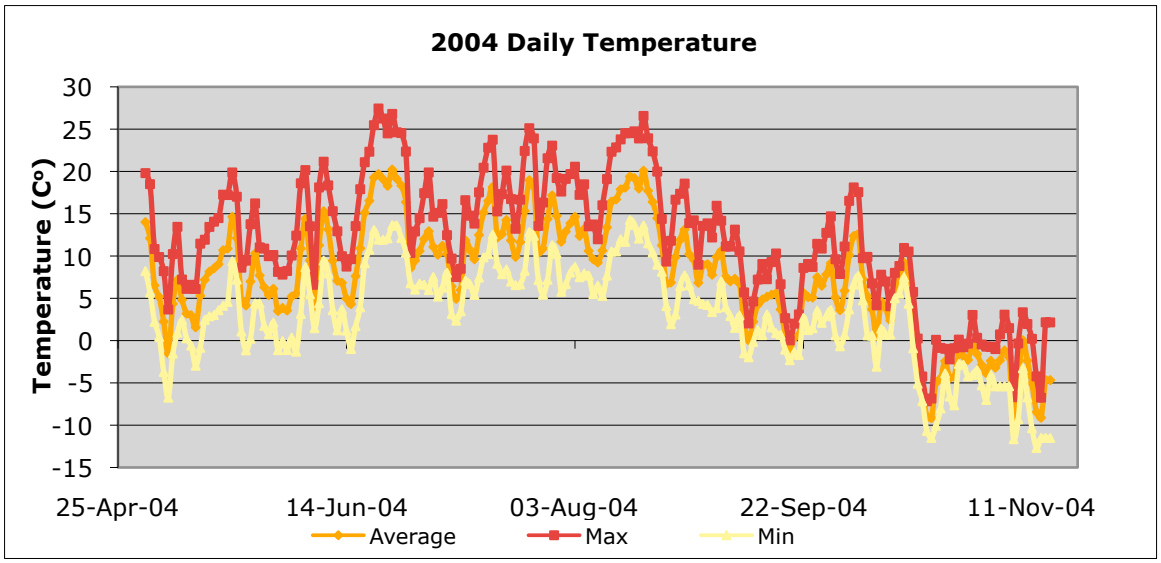

Figure 4.6 – Corrected daily maximum, minimum, and average temperature for the non-freezing 2004 year

4.1.1.2.2.2 Humidity

Daily maximum, minimum, and average relative humidities for the year 2004 are shown in Figure 4.7. Humidity values measured at the site during 2004 varied from close to 100% to below 1%. The average relative humidity was 50%. Approximately 30 days' relative humidity data collected at the automated weather station were corrected due to faulty data. Negative relative humidity data likely indicated a logger malfunction and were removed and replaced by data from the previous (or closest to previous) date.

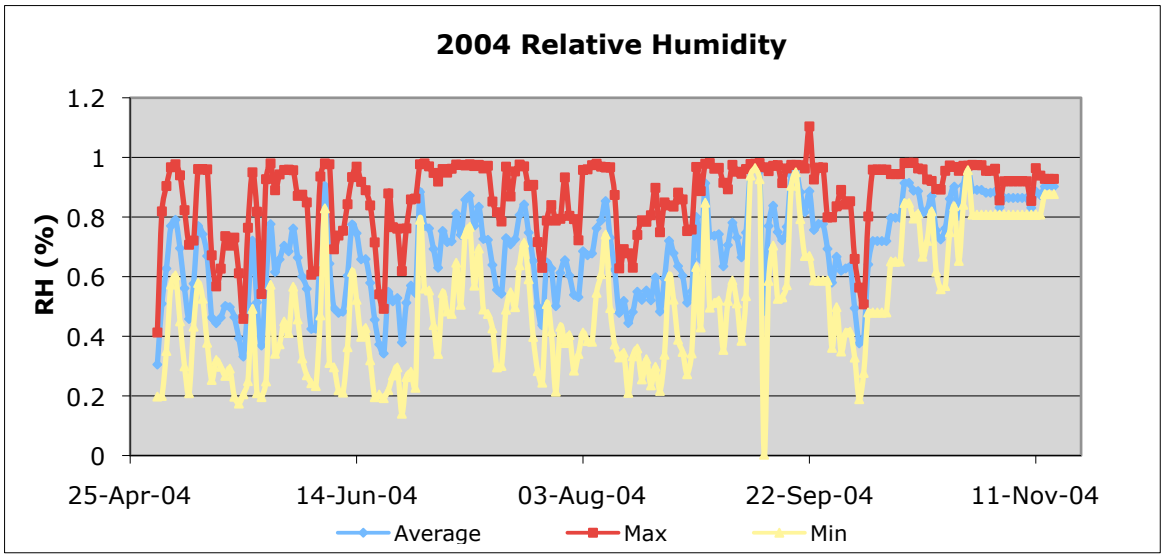

Figure 4.7 – Corrected daily maximum, minimum, and average relative humidity for the non-freezing year 2004

4.1.1.2.2.3 Wind Speed

The average daily wind speed data for year 2004 is shown in Figure 4.8. The average measured wind speed is 14 km/hour.

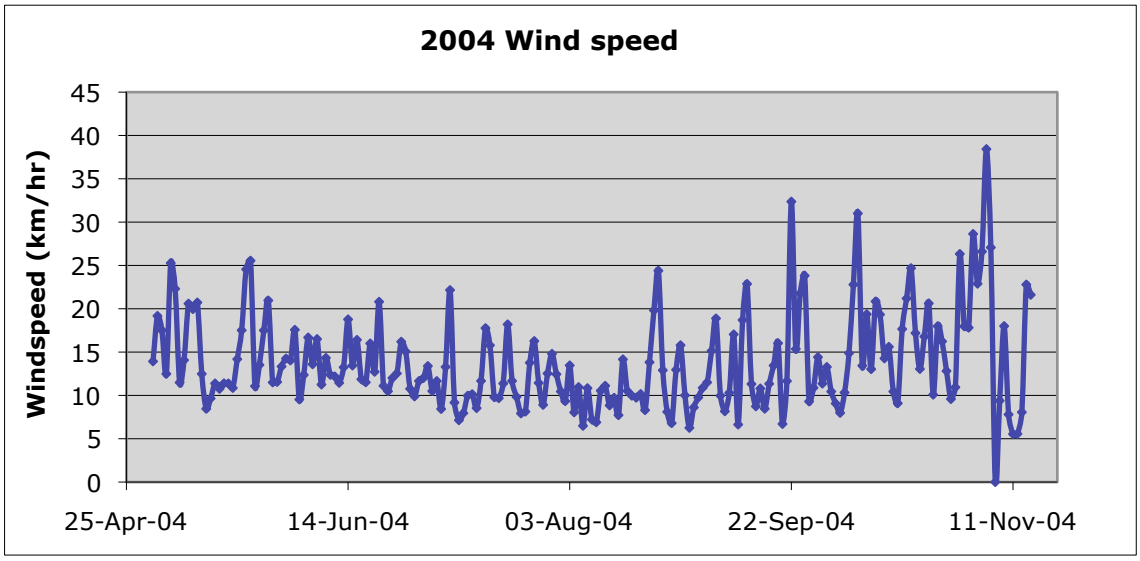

Figure 4.8 – Corrected daily wind speed for the non-freezing 2004 year

4.1.1.2.2.4 Net Radiation And Precipitation

Daily net radiation and precipitation data for the non-freezing 2004 year is shown in Figure 4.9. Net radiation values were measured in W/m^2/hour and integrated over both 13 (From 7am to 7pm) and 24 hours, to investigate the difference in the resulting average net radiation values in MJ/m^2/day between the entire day and daylight hours only. It was found that integrating the net radiation measurements over the whole 24 hours gave slightly lower net radiation values. To be conservative, the lower net radiation values were chosen as modeling inputs. Maximum net radiation occurred in late June at approximately 14 MJ/m^2/day and the average net radiation over the course of the non-freezing year is approximately 5 MJ/m^2/day. As expected, net radiation received in the spring and summer is higher, with the measurement values dropping starting around the beginning of fall in September.

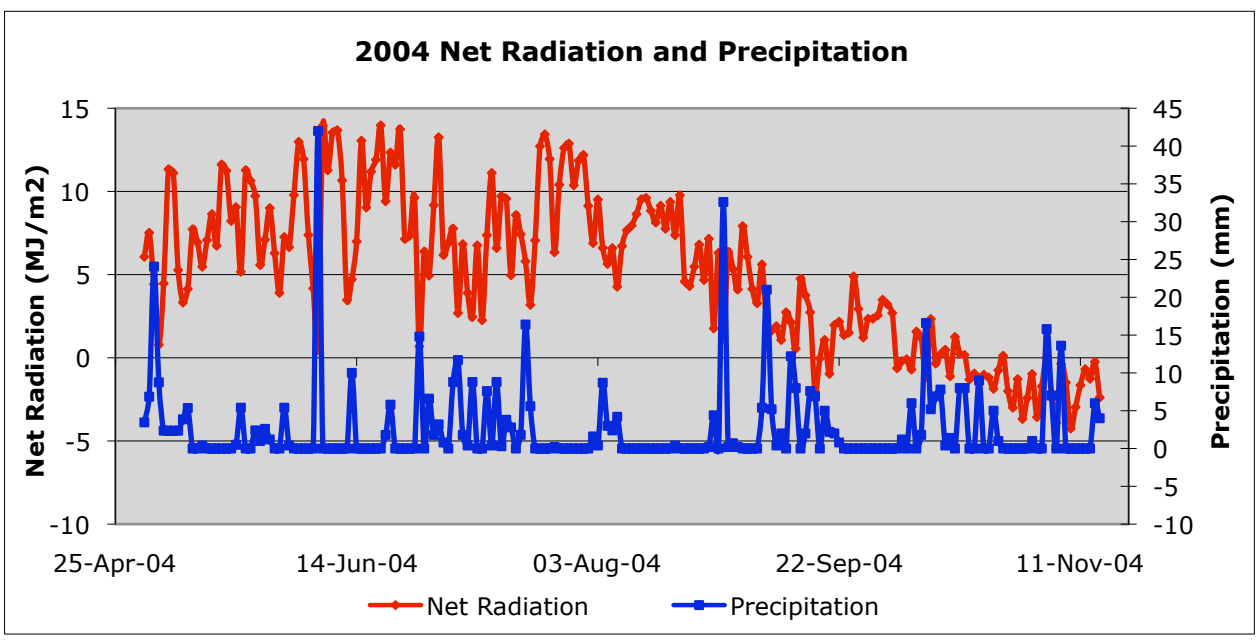

Figure 4.9 – Corrected daily Q_{net} and precipitation for the 2004 non-freezing year

Precipitation data measurements taken at the fully automated weather station showed a lower amount of precipitation recorded (360 mm for the non-freezing year) than the average. In contrast, the precipitation data from the manual weather station recorded a total precipitation of 489 mm, 100 mm more precipitation than that recorded at the automated station. The water equivalent to snowmelt at the end of April in 2004 was 23.6 mm. In the predictive modeling carried out by Swanson (1995), total precipitation for the mean year scenario was 547 mm. Using Swanson's work as a basis, precipitation data from the manual weather station was used, with the total precipitation for the non-freezing year of 2004 yielding to 513 mm (including snowmelt, distributed within the first ten days of the year).

Net radiation and precipitation have been plotted on the same graph to confirm the validity of both sets of data, particularly due to the fact that these parameters were measured at different locations. The data sets show good agreement, as on the days when there was precipitation, a noticeably lower amount of net radiation was received (due to cloud cover). On June 4, 42 mm of precipitation and 0.72 MJ/m^2 of net radiation was received (high precipitation and low net radiation). On August 29, 32.6 mm of precipitation and 1.16 MJ/m^2 of net-radiation was received. The presence of cloud cover did not always indicate precipitation. However, both of the above dates fell within the summer time when there would generally be more sunlight, indicating that the cloud cover that caused the precipitation also prevented sun radiation from reaching the dump surface.

4.1.1.2.3 Topography

Topographic data for the Equity site was collected prior to the initiation of this project, as discussed in Chapter 2, as part of Saretzsky's research (Saretzky, 1998). A total of 2,196 survey points were taken (x, y, z co-ordinates) and used to generate the digital elevation model (DEM) of the site. The surface of the waste dump is defined by a triangular irregular network (TIN). Tecplot, a commercial plotting software, was used by Weeks (2006) to generate a 3D mesh defining the surface of the site, as shown in Figure 4.10. Details on the development process of the DEM is discussed by Weeks (2006). The same DEM as used by Weeks in the energy modeling is used to generate the 3D net infiltration models. Version 9.2 of Tecplot was used for this work.

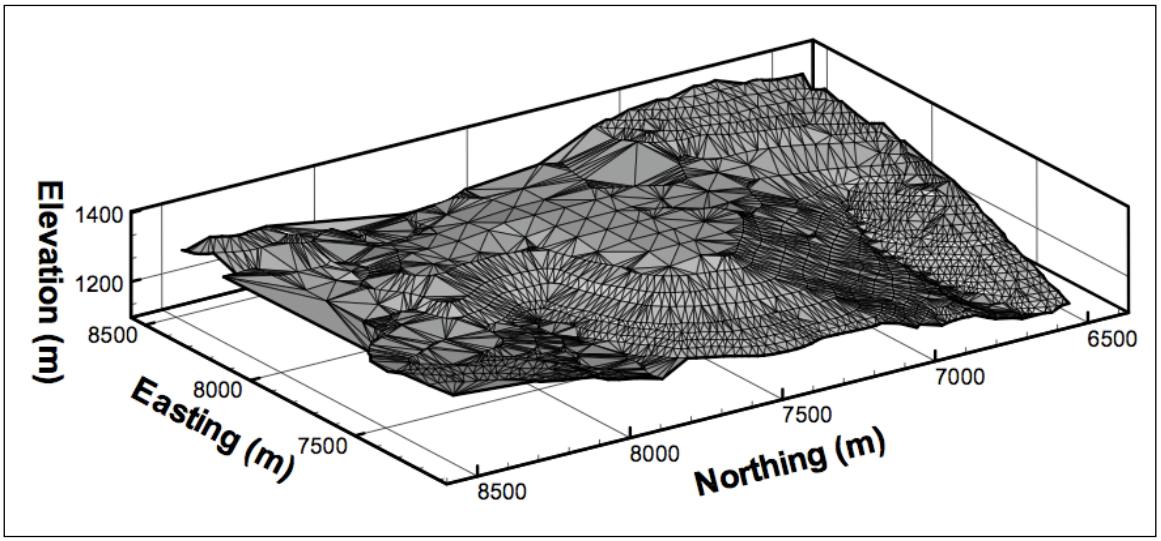

Figure 4.10 - Three dimensional finite element mesh representing the surface of the Equity Silver Mine waste dumps (Saretsky, 1998, Weeks, 2006)

4.1.1.2.4 Vegetation

The vegetation cover at the Equity Silver waste dumps was characterized by Swanson (Swanson, 1995). The uncompacted till is the soil medium in which the vegetation is rooted within. In the SoilCover model, it was assumed that the root depth of the vegetation is 30 cm, down to the bottom of the uncompacted layer. The vegetation grade chosen for the net infiltration model was 'Good vegetation', having a moisture wilting point of 1500 kPa and a moisture limiting point of 100 kPa, with the LAI reaching a maximum of 2 during the peak of the growing season.

4.1.2 Base Case Modeling

4.1.2.1 Model Set Up

Figure 4.11 shows the schematic diagram of the base case model set up. The model profile is 180 cm in total thickness and is comprised of 100 cm of waste rock overlain by 50 cm of compacted till and 30 cm of uncompacted till. The 180 cm profile was discretized into 78, two-noded elements. A 2-mm node spacing was used in the top element and was expanded by a factor of 1.5 to a 1-mm spacing at a depth of 1 cm. From 1 cm deep the node spacing was expanded by a factor of 1.5 to a 2-mm spacing at a depth of 32.5 cm. From this depth the node spacing was again expanded by a factor of 1.5 to the bottom of the mesh, with a maximum spacing of 3 cm reached at a depth of 175 cm. Initial conditions were the same as those used in Swanson's predictive models (Swanson, 1995). Suctions within the till cover were set to be 0 kPa, or at full saturation. Assuming that the waste rock is fully drained, the suction within the waste rock is set to be 12 kPa, which is the suction of the material at residual water content. The temperature at the top

and bottom of the profile is set at 0°C and 14°C at the start of the simulation, respectively. The base case model was run for the period of May 1st to November 15th for the year of 2004. The net radiation data used for the simulation were measured on the horizontal surface at the fully automated weather station.

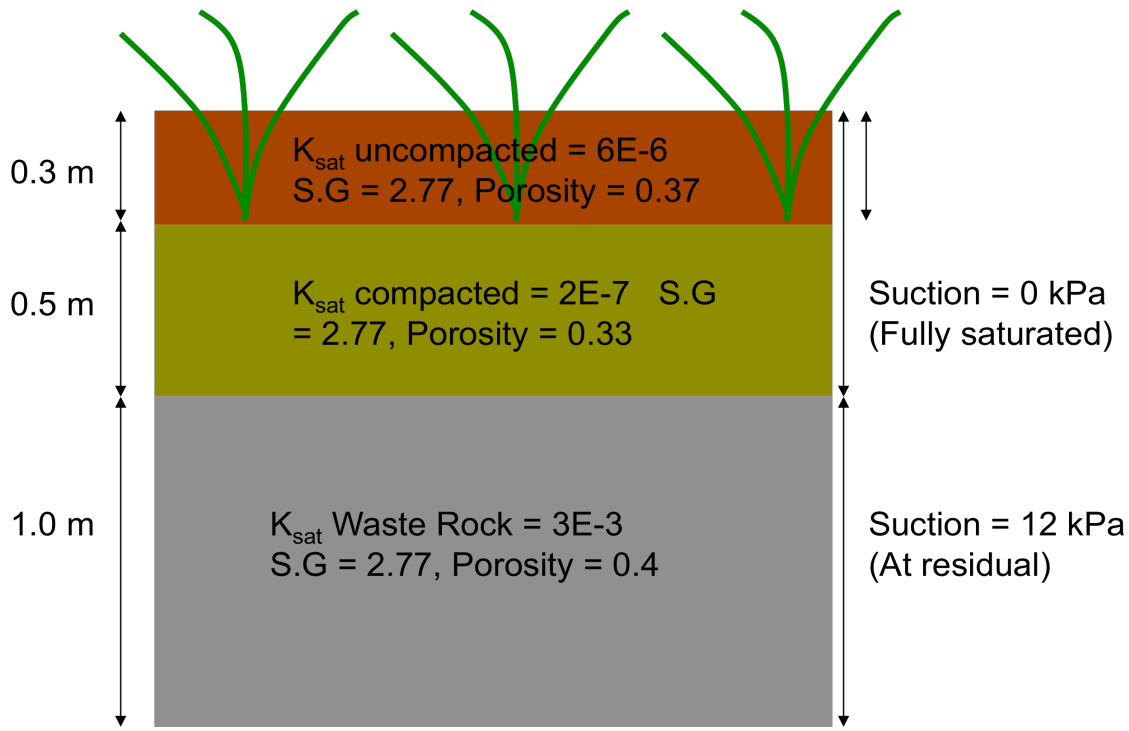

Figure 4.11 - Schematic base case model set-up

For the base case (starting reference) modeling work completed, K_{sat} values used were taken from Swanson's predictive modeling high K_{sat} scenario for Equity Silver (Swanson, 1995). Swanson's high K_{sat} scenario uses a value of $2X10^{-07}$cm/s for the compacted till (i.e., 10 times higher than the value reported by SENES (1991)), and a K_{sat} value of $6X10^{-06}$cm/s for the uncompacted till layer (i.e., 10 times higher than the value reported by SENES (1991)).

4.1.2.2 Results

The results of the base case model simulation are shown in the water balance in Figure 4.12. Cumulative fluxes are charted against the days of the run. Negative fluxes at the surface represent water leaving the system. Total precipitation for the base case run is 512.5 mm. The total PE is 463 mm and the total AE is 157 mm. Actual transpiration (AT) is 210.4 mm. Evapotranspiration (ET) is the actual amount of total vapour that is released back into the atmosphere, including both evaporation from the ground surface and transpiration from vegetation. ET for the base case is 367.4 mm, which equals to total of AE and AT.

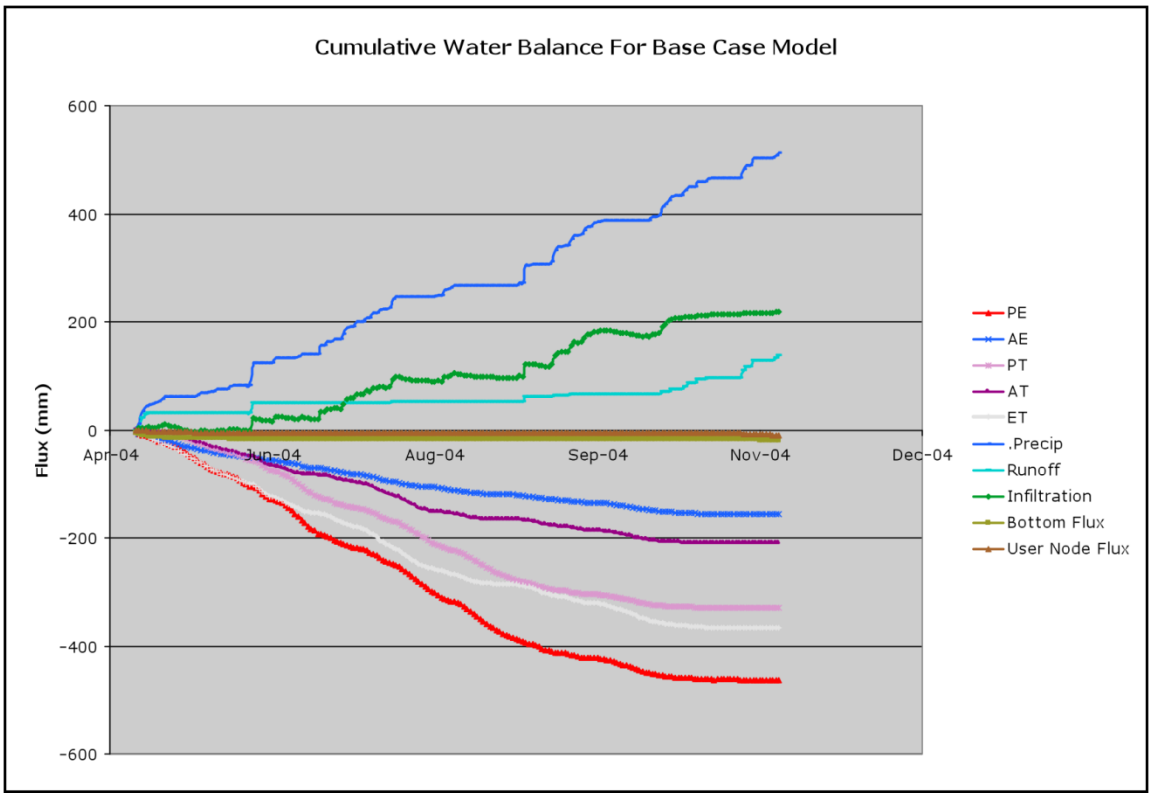

Figure 4.12 - Base case model resulting water balance

The user node flux is the flux that occurs across an internal node as defined by the user depending on the point of interest. In the case of net infiltration modeling at the Equity Silver Mine waste dump, the user node flux is set to be at the bottom of the lower till layer, as the flux through this node will reach the waste rock layer. The user node flux for the base case at the compacted till and waste rock interface is approximately 10 mm, which is approximately 2% of total the total precipitation. This figure is lower than the estimated 5% infiltration on a horizontal surface by O'Kane (1995), and falls within the 0.9% to- 2.7% infiltration determined by Swanson (10 day and 30 day snowmelt for the high K_{sat} predictive scenarios) (Swanson, 1995). In any case, the on-site estimation of a 15% over infiltration suggests that the updated model would need to reflect infiltration much closer to this estimated number. Since O'Kane (1995) determined soil properties at Equity Silver through laboratory experiments, it has been speculated that the saturated hydraulic conductivity of the till cover could be at least two magnitudes higher than what was originally projected. This discrepancy could account for the lower than anticipated infiltration, as the in-situ tills could be more permeable than as defined in the base case model.

4.1.3 Parametric Analyses

Parametric analyses were run for the base case model set-up, with the net radiation input in the model varied. Two additional sets of parametric analyses were run with both the net radiation and the hydraulic conductivity as the varied parameters. Results of all the parametric analyses are found in Appendix C.

4.1.3.1 Net Radiation

Weeks investigated the effects of slope on the resultant net radiation received. Part of the parametric study conducted for this research was also to quantify the effects of decreased and increased net radiation on resulting net infiltration. The daily net radiation measured on the horizontal surface for the year of 2004, for each node of the DEM, were varied by multiplying the horizontal values with factors from 50% of the horizontal measured value to 150% of the horizontal measured value. Therefore, the Q_{net} for each day of the year 2004 would be lessened or increased by the same ratio. Figure 4.13 shows the Q_{net} values for 2004 at horizontal (100%), 50% of horizontal, and 150% of horizontal. For the parametric analysis, Q_{net} values were adjusted from 50% to 150% in 10% increments.

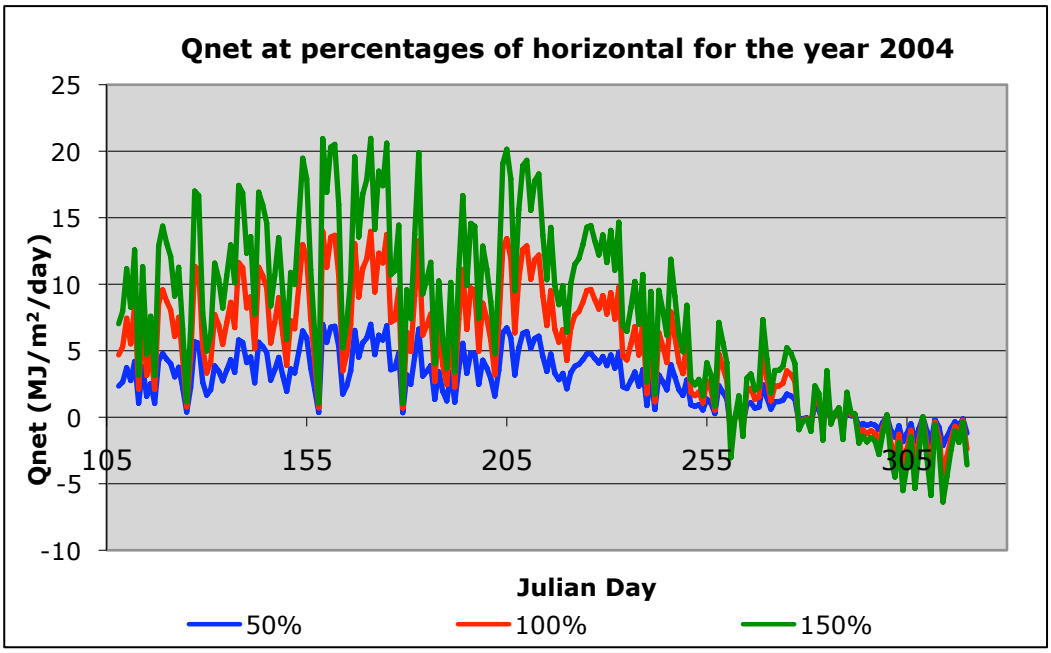

Figure 4.13 - Q_{net} at 50%, 100% and 150% of horizontal measurement

4.1.3.2 Saturated Hydraulic Conductivity

The saturated hydraulic conductivity is one of the major influencing factors on net infiltration (Swanson, 1995). To quantify the effects of K_{sat}, eight modeling cases were run, each with varying K_{sat} values for the uncompacted and compacted till layers. For the most pervious case, that is the case where the till cover has the highest permeability, K_{sat} values were derived from the base case model by increasing base model K_{sat} values by two orders of magnitude. K_{sat} for the uncompacted layer was increased from $6.00X10^{-06}$ cm/s to $6.00X10^{-04}$ cm/s and from $2X10^{-7}$ cm/s to $2.00X10^{-05}$ cm/s for the compacted till layer.

Table 4.2 summarizes the K_{sat} values used in the eight different cases. For the first set of modeling (High K_{sat}), K_{sat} for the uncompacted layer was kept constant at $6.00X10^{-04}$ cm/s while K_{sat} of the compacted layer varied from $2.00X10^{-05}$ cm/s to $2.00X10^{-08}$ cm/s, decreasing by an order of magnitude in each case. K_{sat} for the second set of modeling (Low K_{sat}) was decreased to $5X10^{-05}$ cm/s, and the same values of K_{sat} as those used for the first case of modeling are used.

Table 4.2 - Saturated Hydraulic Conductivities for parametric analyses

	Soil	**Unompacted Till**	**Compacted Till**	**Waste Rock**
High	K_{sat} (cm/s)	$6.00X10^{-04}$	$2.00X10^{-05}$	$3.00X10^{-03}$
			$2.00X10^{-06}$	
			$2.00X10^{-07}$	
			$2.00X10^{-08}$	
Low		$6.00X10^{-05}$	$2.00X10^{-05}$	
			$2.00X10^{-06}$	
			$2.00X10^{-07}$	
			$2.00X10^{-08}$	

4.1.3.3 Results

Results for the base case Q_{net} parametric study are shown in Figure 4.14. The total PE and AE are plotted against percentage Q_{net} to the horizontal. As expected, with an increase in Q_{net} there is an increase in evaporation. The PE increased from 336 mm to 590 mm from 50% of horizontal Q_{net} to 150% of horizontal Q_{net}. AE increased from 139 mm to 172 mm from 50% of horizontal Q_{net} to 150% of horizontal Q_{net}. The variance in AE at different Q_{net} levels is much lower than the variance in PE. This is due to the fact that in SoilCover, AE only accounts for the moisture evaporated from the surface of the soil, but does not include transpiration. Actual transpiration, which is water released into the atmosphere through the vegetative medium, is calculated as a separate parameter from AE. Total evaporation of moisture is AT plus AE, or evapotranspiration (ET), which would be close to PE under non moisture-limiting conditions.

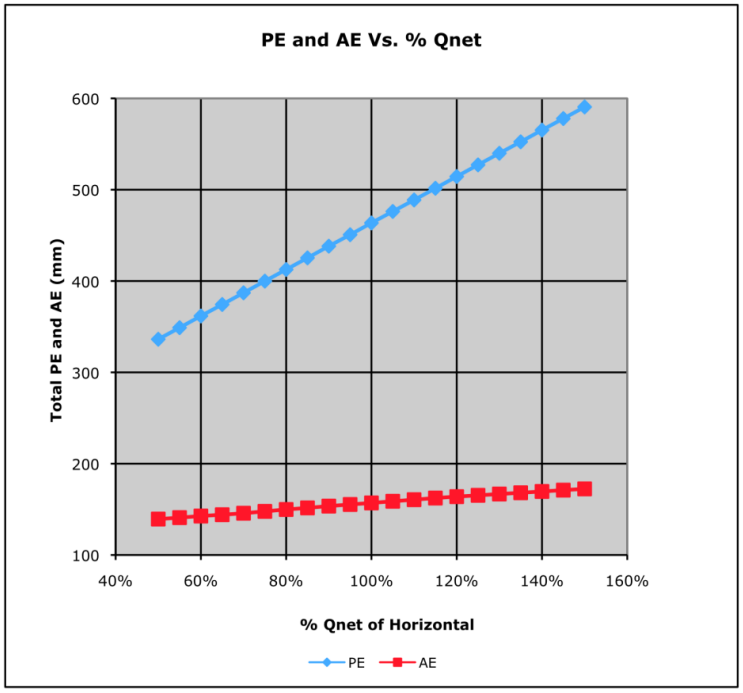

Figure 4.14 - Base case AE and PE versus % Q_{net}

The percent infiltration into the waste rock for the base case is shown in Figure 4.15. At 50% Q_{net}, net infiltration into the waste rock layer is approximately 2.4% of total precipitation. At 100% Q_{net}, net infiltration is approximately 1.95%. At 150% Q_{net} to horizontal, net infiltration is approximately 1.6%. The infiltration into the waste rock layer is taken at the user-defined node between the compacted till and waste rock interface. As expected, net infiltration decreases with an increase in Q_{net}, as more energy is being received at the soil surface.

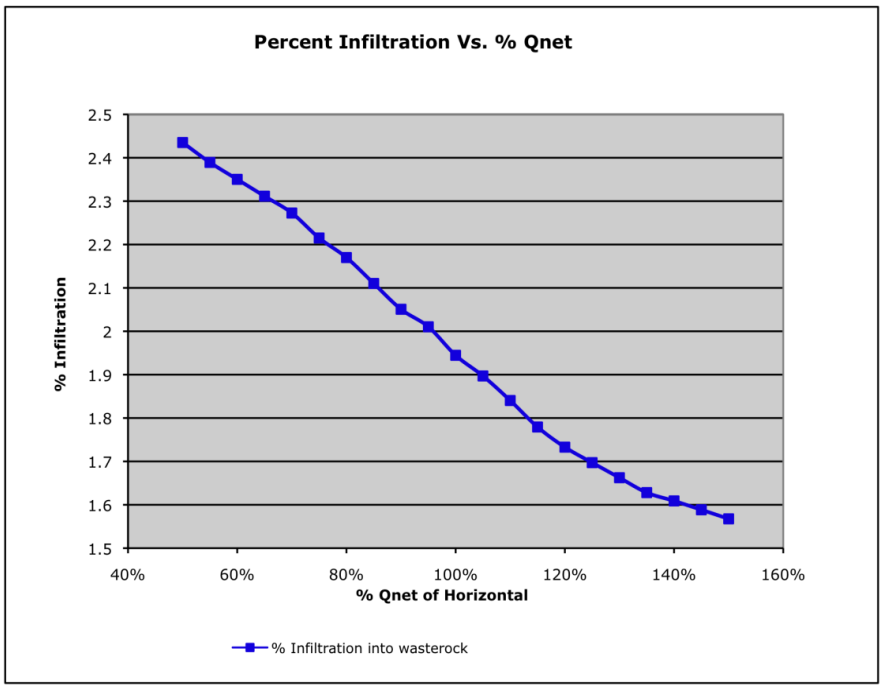

Figure 4.15 - % infiltration versus % Q_{net} for base case model

Results of the first set of K_{sat} parametric analysis are shown in Figure 4.16. Each data point on the graph is the resulting net infiltration value into the waste rock layer for a full year's run. For each variance of K_{sat} values for the till cover soils (each single case), the

Q_{net} is varied from 50% of the horizontal measurement to 150% of the horizontal measurement, in 10% increments. The resulting graphs show both the influence of K_{sat} of the compacted till layer, and also the percent Q_{net}.

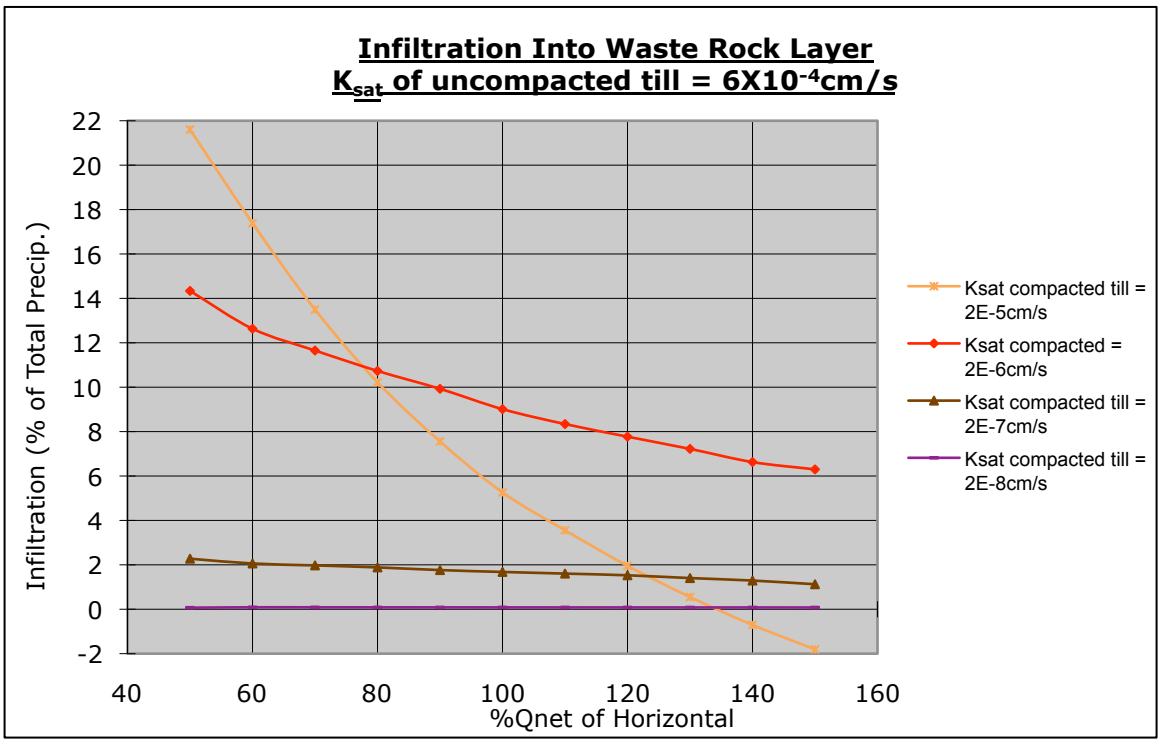

Figure 4.16 - Results of parametric analysis with low K_{sat} for the uncompacted till

In the first set of modeling, K_{sat} of the uncompacted till was $6X10^{-04}$ cm/s. For each of the sub-set case with a different compacted K_{sat}, results showed that net infiltration into the waste rock layer decreased with an increase in Q_{net}. Between cases where compacted K_{sat} values of $2X10^{-06}$ cm/s, $2X10^{-07}$ cm/s, and $2X10^{-08}$ cm/s, overall net infiltration decreased with a decrease in permeability of the compacted till.

For the most pervious case (K_{sat} compacted = $2X10^{-05}$ cm/s), net infiltration reaches close to 22% of total precipitation at a Q_{net} of 50% to horizontal. At 100% Q_{net} to horizontal, net infiltration is approximately 5%. At 150% Q_{net} to horizontal, net infiltration is close to -2%. A negative net infiltration signifies that water is being exfiltrated out of the system at the surface of the cover. Resulting net infiltration values for models of the most pervious case indicate that the saturated hydraulic conductivity of the till cover has reached a point of high enough permeability that the cover begins to perform as a store-and-release system as opposed to a barrier system. In other words, permeability of both the uncompacted and compacted tills are high enough that moisture flux is not limited to only traveling downwards, but is being pulled up due to the now more influential effects of root uptake and increased energy received at the soil surface.

Evidence of the most pervious model cover performing as a store-and-release system is seen also in the steep decrease in net infiltration with the increase in percent Q_{net}. At approximately 78% Q_{net} to horizontal, the net infiltration dips below the net infiltration of next most pervious case (K_{sat} compacted = $2.0X10^{-06}$ cm/s). At approximately 123% Q_{net}, net infiltration of most pervious case dips below net infiltration of the third-most pervious case (K_{sat} compacted = $2.0X10^{-07}$ cm/s), and at approximately 135% Q_{net} to horizontal the net infiltration of the most pervious case dips below net infiltration of the least pervious case (K_{sat} compacted = $2.0X10^{-08}$ cm/s). At a higher Q_{net} in the most pervious case, moisture stored within the till cover layers starts being pulled upwards out of the system. As a result, net infiltration into the waste rock is decreased at high energy. For a barrier

cover, the moisture within the till covers would remain within the pores of the soil medium as the soil medium is not permeable enough for upward moisture flux.

Results of the second set of Ksat parametric analysis are shown in Figure 4.17. In the second set of modeling, the Ksat of the uncompacted till was adjusted to $6X10^{-05}$ cm/s. For each of the four cases with varying Ksat values for the compacted till, net infiltration into the waste rock layer decreased with an increase in Q_{net}. Results for all cases of the second set of modeling show the cover systems performing as barrier covers. In each case, the net infiltration decreased with an increase in percent Q_{net}. Furthermore, net infiltration at respective percent Q_{net} values also decreased with a decrease in permeability of the compacted till.

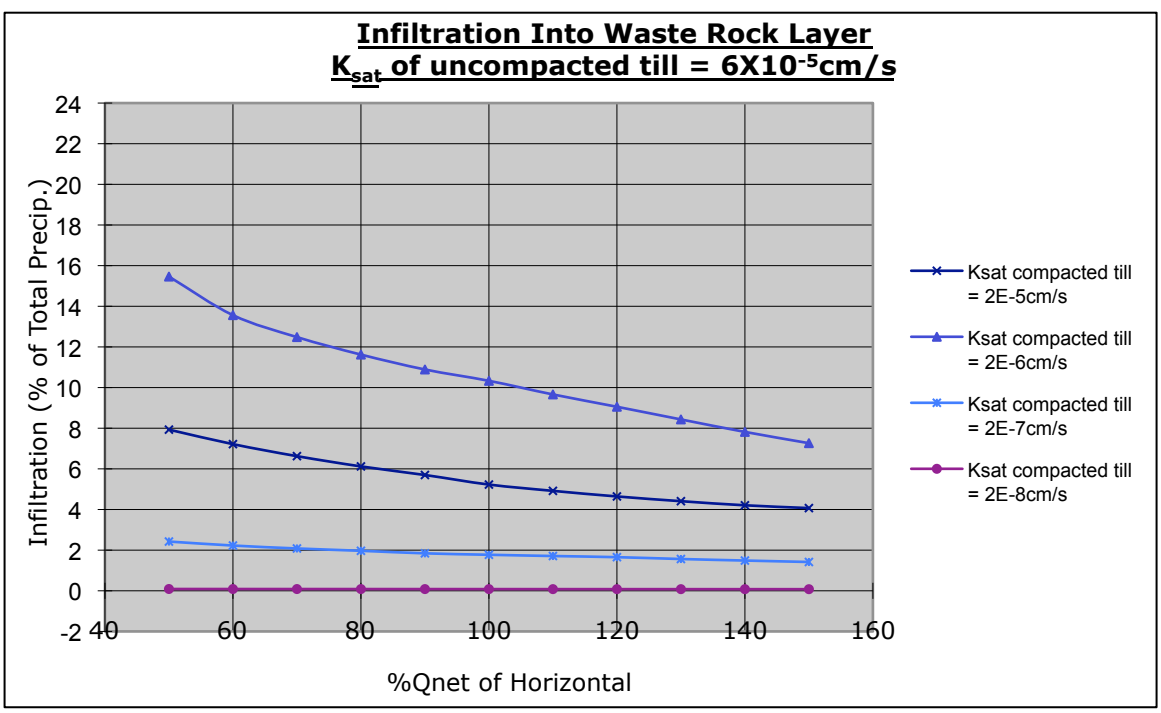

Figure 4.17 – Results of parametric analysis with high K_{sat} for the uncompacted till

4.2 Slope Energy Modeling

SunModel was used to compute the equivalent Q_{net} received on the various surfaces of the Equity Silver Mine waste dump. An algorithm was written specifically for the Equity Silver DEM, so that with inputs of horizontal Q_{net} and weather data, the Q_{net} at each node of the TIN network would be calculated (Weeks, 2006). As presented in Section 2.2.4 the flowchart in Figure 2.6 shows the main logistics of how SunModel works to compute Q_{net} over the surface of the waste dump at Equity Silver. A complete copy of the SunModel code including all subroutines to the calculation of Q_{net} at Equity Silver can be found in Weeks' thesis (Weeks, 2006).

4.3 Model Integration

The development of the 3D net infiltration models involves the integration of two streams of modeling, namely energy modeling for slopes with SunModel, and moisture flux modeling with SoilCover. Originally, it was envisioned that the 3D net infiltration models would be built from the results of approximately 10 soil flux model runs, each with Q_{net} inputs representing selected locations of the waste dump (with various slopes and orientations). The net infiltration distribution model would be generated from contouring infiltration values from these specific points over the surface on the waste dump. However, as modeling progressed, another model generation method allowing much higher accuracy of net infiltration distribution was developed. The flowchart shown in Figure 4.18 outlines the steps in which the integration of both modeling

processes was achieved. For this research, the year 2004 was chosen for the model development

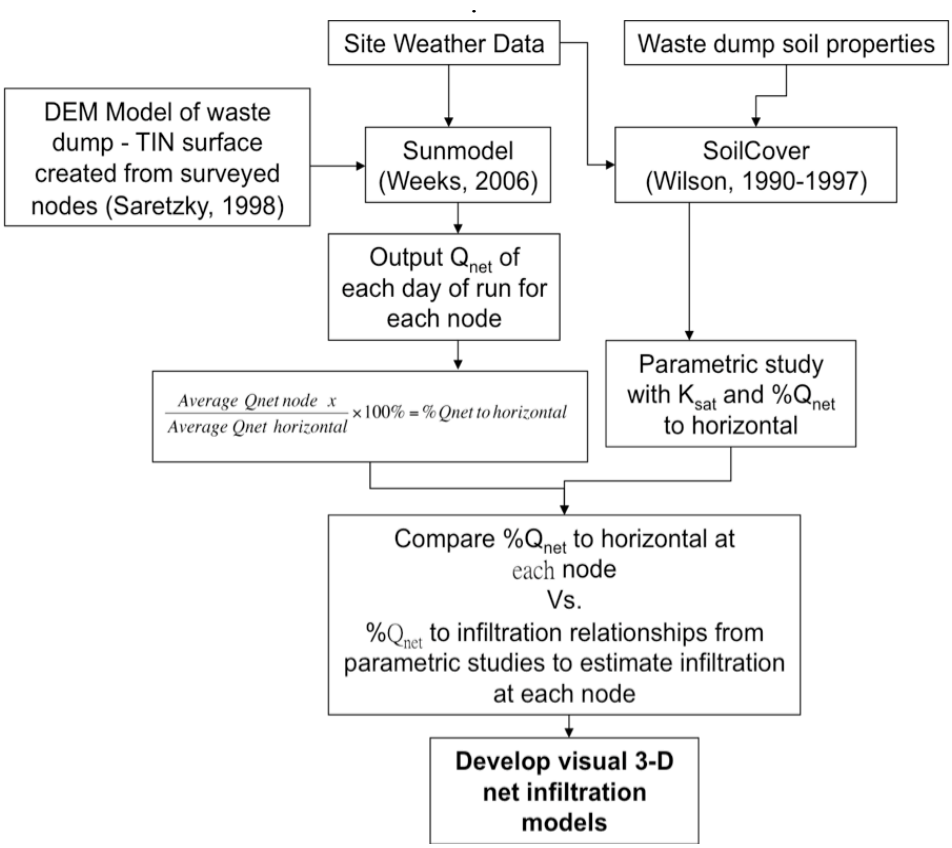

Figure 4.18 - Flowchart of model integration for the development of 3D net infiltration models

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4.3.1 Soil Flux Model

Moisture flux modeling is carried out using SoilCover, in which the components of the water balance are calculated, including the moisture flux into the waste rock layer (net infiltration into the waste rock layer). SoilCover requires inputs of detailed weather data from site and soil properties of the model profile components in order to run the simulation. The parametric analysis carried out with SoilCover involved the varying the

K_{sat} of both the uncompcated and compacted till layer, as well as the amount of Q_{net} received through the year. The percent net infiltration into the waste rock layer for different amounts of net radiation received (factor of the horizontal) could be estimated from the % net infiltration versus % Q_{net} to horizontal graphs, for both sets of models with varying K_{sat} values for the uncompacted and compacted till layers.

4.3.2 Sun Energy Model

A DEM has been developed for Equity Silver waste dumps, as discussed in Section 2.2.3 and 4.1.1.2.3. Given inputs of slope and azimuth for each surveyed node of the 3D model and site weather data, SunModel calculated the equivalent Q_{net} received at each node for each day of the 199 day run. Hence, for the year 2004 a total of 199 Q_{net} values were calculated for each of the 2,196 nodes. Subsequently, the average Q_{net} of the 199 days was calculated for each node. The average Q_{net} at each node was then compared to the average Q_{net} of the 199 days for the horizontal surface, to obtain a % Q_{net} received at each node compared to horizontal.

4.3.3 Net Radiation Correlation

Figure 4.19 below illustrates the net radiation correlation between the two streams of modeling that lead to the generation of the 3D net infiltration models.

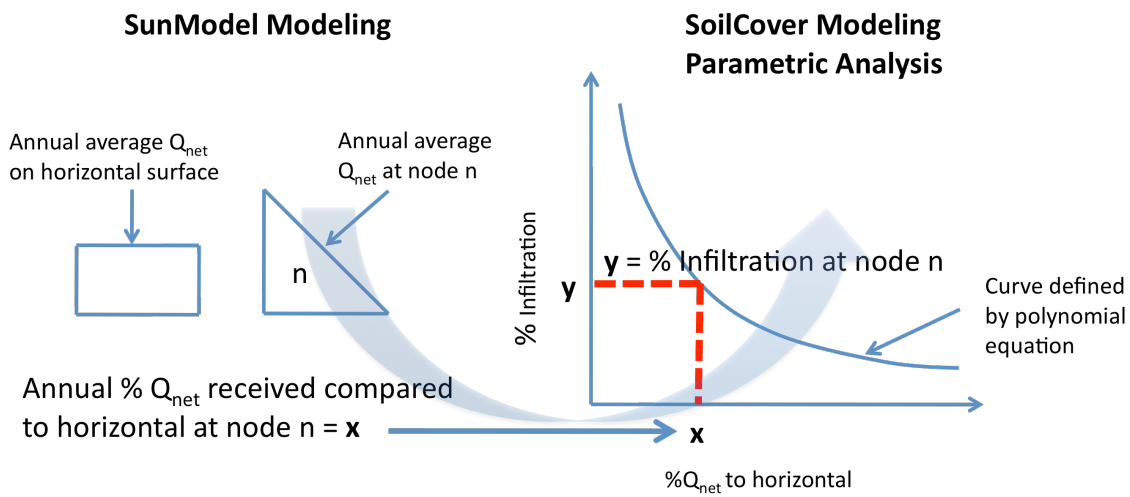

Figure 4.19 - Net radiation correlation between two streams of modeling

Taking the average % Q_{net} received on each node of the DEM, a net infiltration at each node was estimated by correlating the data to the % net infiltration versus % Q_{net} relationships produced from the parametric analyses. Polynomial equations were formulated for each parametric analysis of varying Q_{net} for each set of K_{sat} values, using Microsoft excel. The polynomial equations were then used to calculate the % net infiltration at each node of the DEM model, with the 'x' input being % Q_{net} of each node and the 'y' output being the resulting % net infiltration. Thus, the % Q_{net} to horizontal was the common parameter from each stream of modeling that connected the energy model and moisture flux model together, to enable the development of the 3D net infiltration models. Details of the calculations, as well as topographic data for the Equity Silver DEM, are found in Appendix D. Results of the model integration will be presented in the next chapter.

Chapter 5 MODEL APPLICATION AND DISCUSSION

Results of the 3D net infiltration modeling will be presented in this chapter. All models were generated using Tecplot, version 9.2. Net infiltration values for each node of the DEM was determined by correlating the average % Q_{net} values derived from SunModel calculations to % Q_{net} values used in the parametric analyses. With the net infiltration at each node of the DEM determined, the annual average % net infiltration over the entire surface of the waste dump was contoured.

The 3D models generated for this research are based on one dimensional moisture flux modeling carried out with SoilCover. All modeling have been completed with the assumption that daily temperature, humidity, and wind speed are approximately constant over the entire site. SoilCover calculated AE values with constant daily climate data. Therefore as the net infiltration is a function of AE and AE is a function of Q_{net}, net radiation becomes the single varying parameter from node to node for which net infiltrations are calculated. Further work that can be done to develop a fully 3D model for net infiltration will be discussed in the recommendations section in Chapter 5.

As described in Section 4.1.3, two sets of parametric analyses were run: one utilizing a higher value of K_{sat} equaled to $6.0X10^{-04}$ cm/s for upper uncompacted till layer, and the other with a lower value of K_{sat} equaled $6.0X10^{-05}$ cm/s for the uncompacted till layer. For each set of parametric analysis, K_{sat} for the lower compacted layer was varied four

times. Therefore, a total of eight 3D net infiltration models were generated for the year of 2004.

5.1 High K_{sat}

Figure 5.1 shows the resulting % net infiltration distribution for the most pervious case, having a K_{sat} of $6.0X10^{-04}$ cm/s for the upper uncompacted till and $2.0X10^{-05}$ cm/s for the lower compacted till. The legend shows the % net infiltration to total annual precipitation that occurs throughout the surface of the waste dump into the bottom waste rock layer. As discussed in Section 4.1.3.3, the most pervious case sees a dramatic difference in infiltration between amounts of Q_{net} received. As shown, % net infiltration ranges from approximately 6% to 31% over the three waste dumps. It can be seen that the northeast-facing side slope of the Main Dump is an area that experiences an overall higher percentage of infiltration. Furthermore, a number of concentrated areas appear to experience the highest amount of infiltration, namely the directly west-facing side slope of the Main Dump, the north-facing edge of the main dump, just west of the ridge between the Main Dump and the Bessemer Dump, and the west-facing slope on the opposite side of the same ridge. A few pockets of high infiltration areas are also found along the slope to the south of the south-facing side slope of the Main Dump. Contour levels for % net infiltration were adjusted in Tecplot so infiltration from about 15% and greater were represented by the same shade. This was done so the range in infiltrations could be evenly displayed, and not skewed by the areas with much higher infiltrations.

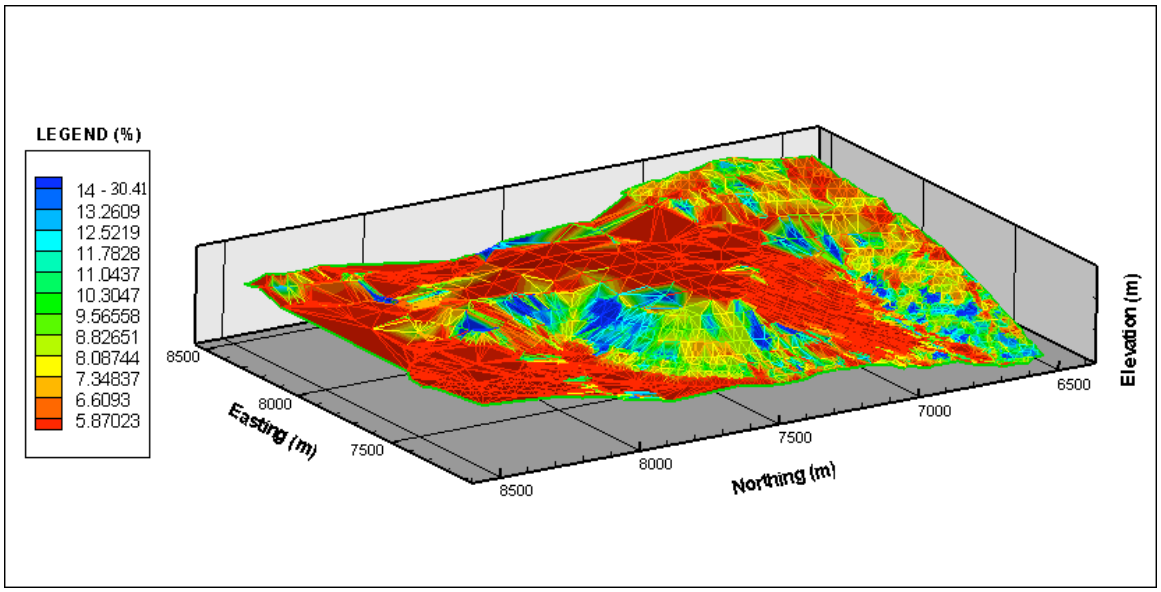

Figure 5.1 - 2004 Annual average % net infiltration at Equity Silver Mine waste dump, K_{sat} uncompacted = $6.0X10^{-04}$ cm/s, K_{sat} compacted = $2.0X10^{-05}$ cm/s

Across the top of and along the south-facing slope of the Main Dump, infiltration is at the lowest at approximately 6%. The top of the Main Dump is assumed to be relatively horizontal in slope, and a net infiltration value of 6% is only 1% higher than previous on-site estimation (O'Kane, 1995). A few localized areas on the top of the Main Dump show slightly higher infiltration values. This could be due to the slope and orientation of the areas, causing them to receive less energy, and hence yielded to a higher infiltration. This phenomenon is seen near the northeast edge of the top of the Main Dump, and also in the mid-section edge of the top of the south-facing slope. The vast majority of the south-facing slope of the Main Dump also shows low infiltration. This is to be expected since at Equity Silver it has been established that the south-facing side of the dump receives greater amounts of Q_{net} than slopes with other orientations (Weeks, 2006). There is a clear contrast between the amounts of infiltration that occurs between the north-facing side and the south-facing side of the Main Dump. As seen in the model, the

north-facing side slope of the Main Dump, of which contains much of the pre-mentioned areas of highest infiltration, receives much more infiltration than the south-facing side slope. It can also be observed that infiltration that take place on slopes, with the exception of the south-facing side slope of the Main Dump, tend to be higher than horizontal or near horizontal surfaces.

Figure 5.2 and Figure 5.3 show the 3D net infiltration model of the most pervious case from two other angles. In these, the disparity between the high and low amounts of infiltration received on the north-facing and south-facing side slopes of the Main Dump can be seen particularly clearly.

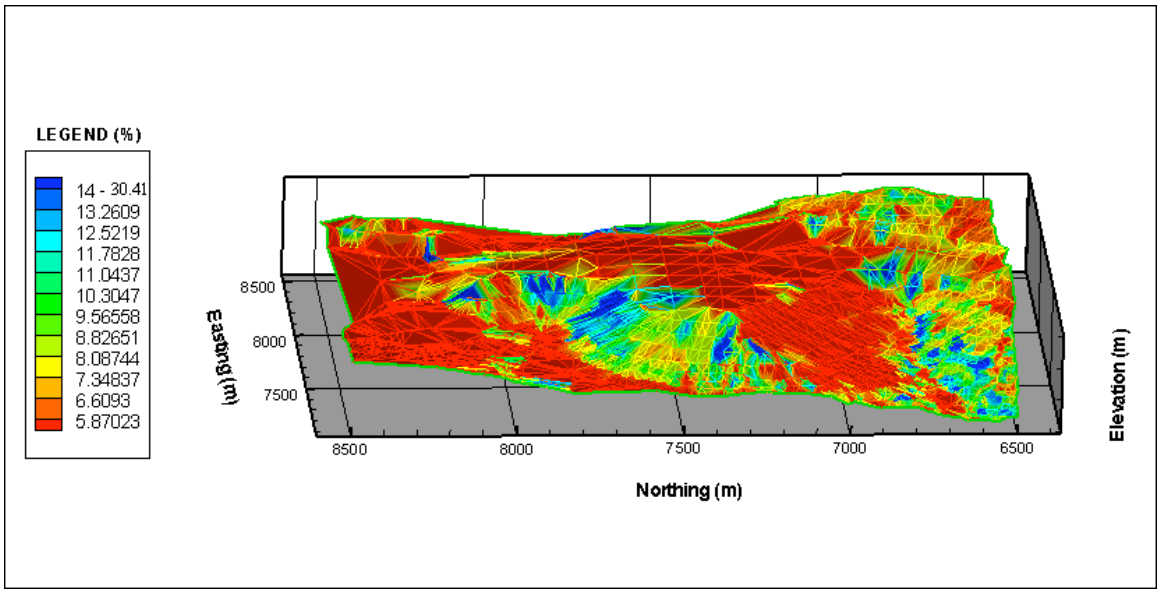

Figure 5.2 - 2004 annual average % net infiltration of the most pervious case

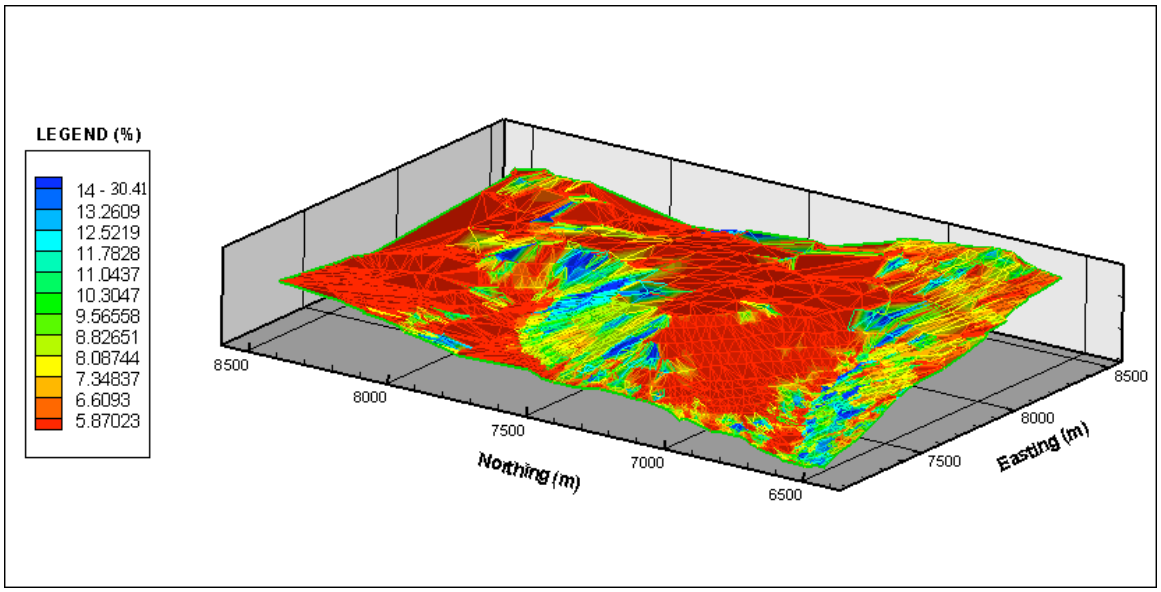

Figure 5.3 - % 2004 annual average % net infiltration of the most pervious case

Figure 5.4 through Figure 5.6 show the 3D % net infiltration distribution of the waste dump where K_{sat} of the uncompacted lower till layer were lowered to $2.0X10^{-06}$ cm/s, $2.0X10^{-07}$ cm/s, and $2.0X10^{-08}$ cm/s. Percent net infiltrations into the waste rock layer for each case range from approximately 8% to 16%, 1.6% to 2.3% and 0.068% to 0.074%, respectively. As with the most pervious case, contour levels of these three latter cases were also adjusted for better display of the varying infiltrations.

The infiltration received on the horizontal surface for the second-most pervious case (K_{sat} uncompacted = $2.0X10^{-06}$ cm/s) is higher than infiltration received on the horizontal surface of the most pervious case. Again, this is due to the fact that a more permeable uncompacted till layer would be more affected by the upward pull of moisture due to root uptake and increased Q_{net}.

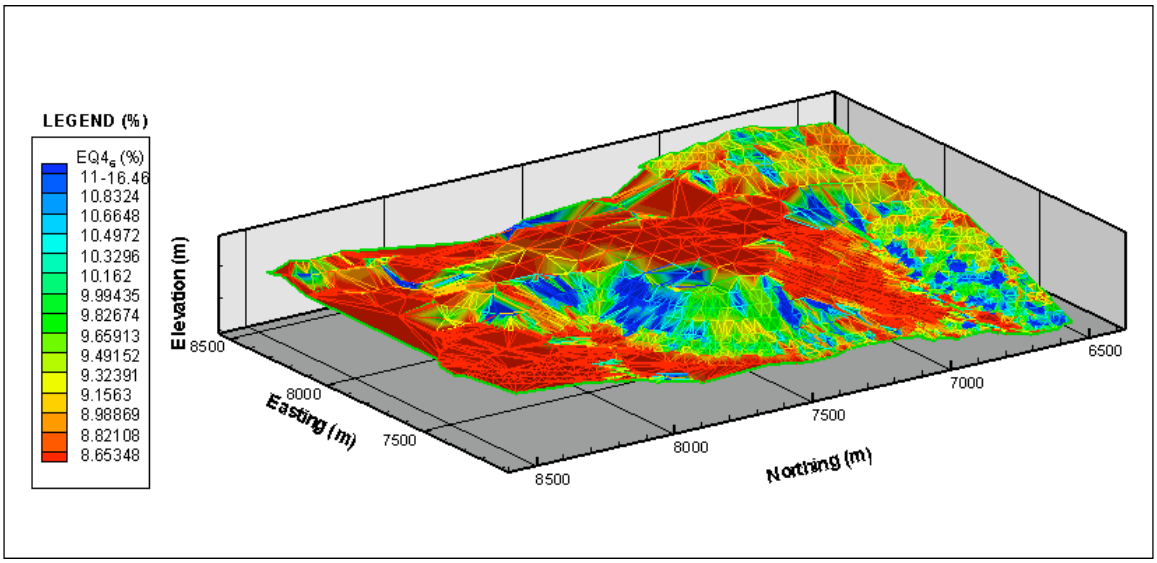

Figure 5.4 - 2004 annual average % net infiltration at Equity Silver Mine waste dump, K_{sat} compacted till = $2.0X10^{-04}$ cm/s, K_{sat} uncompacted till = $6.0X10^{-06}$ cm/s

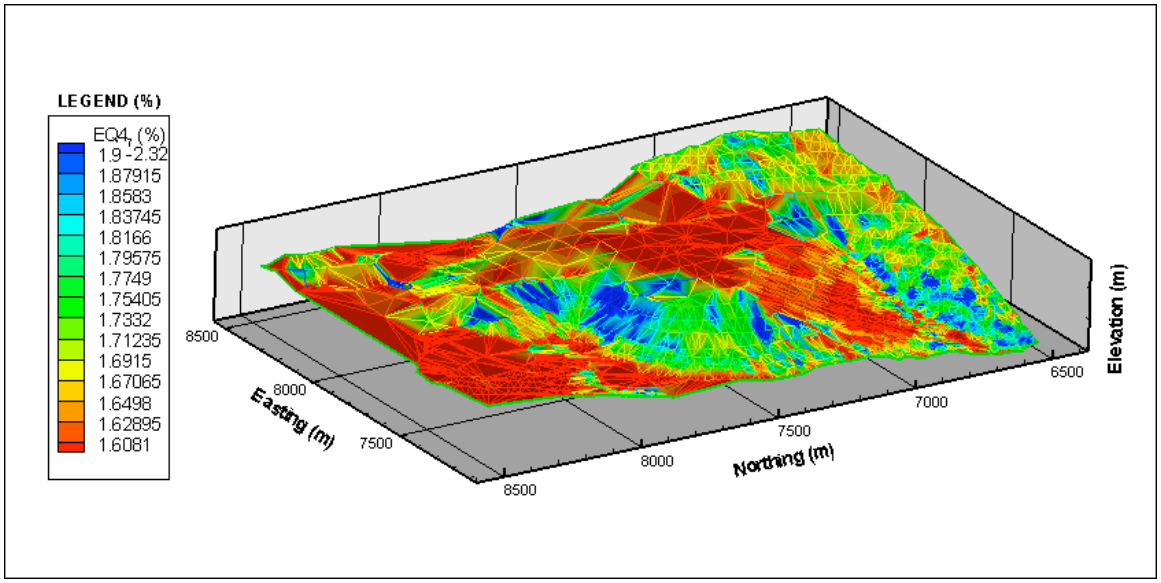

Figure 5.5 - 2004 annual average % net infiltration at Equity Silver Mine waste dump, Ksat compacted till - $2.0X10^{-04}$ cm/s, K_{sat} uncompacted till = $6.0X10^{-07}$ cm/s

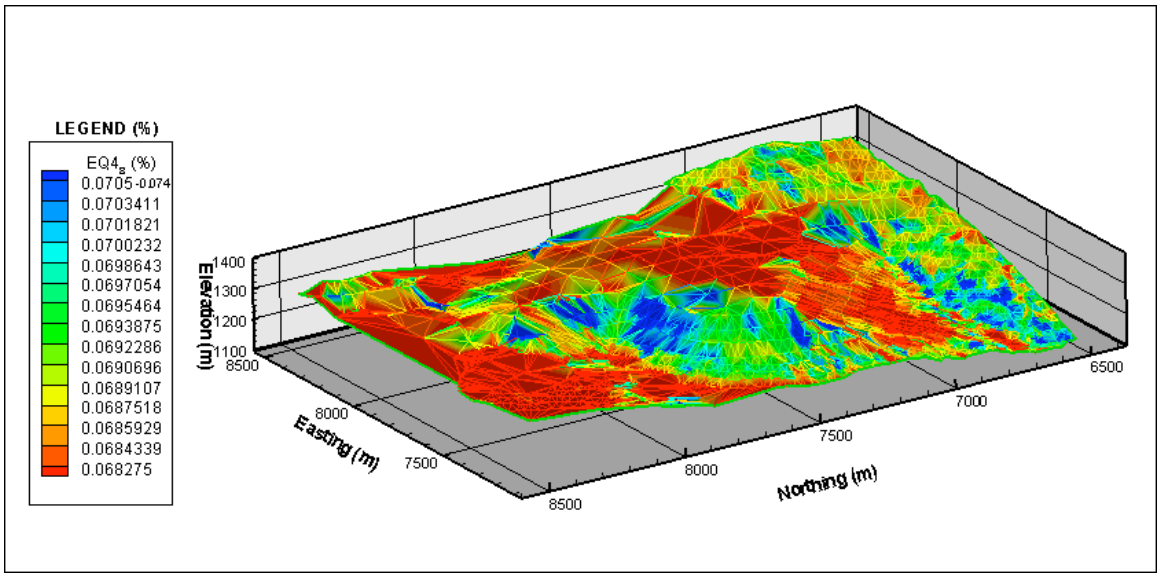

Figure 5.6 - 2004 annual average % net infiltration at Equity Silver Mine waste dump, K_{sat} compacted till = $6.0X10^{-04}$ cm/s, K_{sat} uncompacted till = $2.0X10^{-08}$ cm/s

For the two latter cases, shown in Figure 5.5 and Figure 5.6, net infiltrations are at highest still lower than 3%. It can be concluded to not be representative of field observation conditions, since it was estimated that a total of 15% of precipitation is annually infiltration into the waste rock. However, the models serve as good references in demonstrating that the primary effect of changing K_{sat} of the over tills is an increase and/or decrease in infiltration. In addition, the models show and confirm that areas of high and low infiltrations are consistent for all cases.

5.2 Low K_{sat}

The second set of parametric analyses had a K_{sat} of $6.0X10^{-05}$ cm/s for the uncompacted upper till layer. Figure 5.7 through Figure 5.10 show the resulting 3D % net infiltration models generated for the Low K_{sat} cases. Where the compacted layer had the highest

permeability, percent net infiltration ranged from approximately 10% to 17%. Decreasing the K_{sat} of the compacted till by one order of magnitude to $2.0X10^{-06}$ cm/s, the % net infiltration decreased also, ranging from approximately 5% to 9%. Models with compacted till K_{sat} values of $2.0X10^{-07}$ cm/s and $2.0X10^{-08}$ cm/s resulted in % net infiltration values ranging from 1.8% to 2.7% and 0.069% to 0.077%, respectively. As with the High K_{sat} models presented in the pervious, contour levels in Tecplot were adjusted in all four cases for the even display of infiltration levels. As expected, the models clearly show the difference in infiltration that occur between the north-facing and south-facing side slopes of the Main Dump, as it was with the Low K_{sat} models.

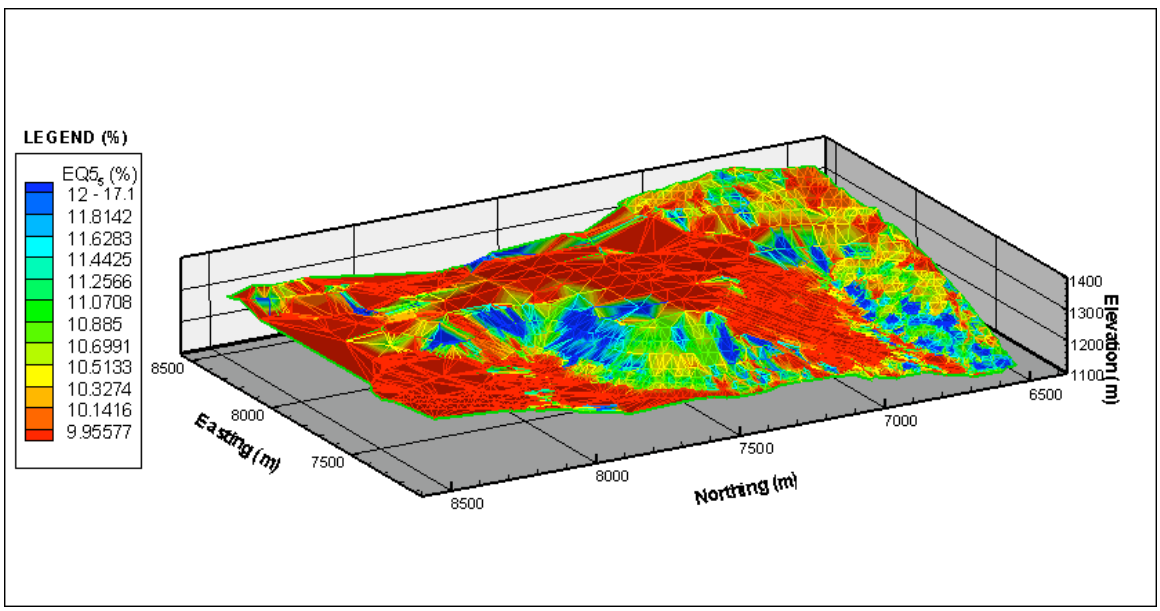

Figure 5.7 - 2004 annual average % net infiltration at Equity Silver Mine waste dump, K_{sat} compacted till = $6.0X10^{-05}$ cm/s, K_{sat} uncompacted till = $2.0X10^{-05}$ cm/s

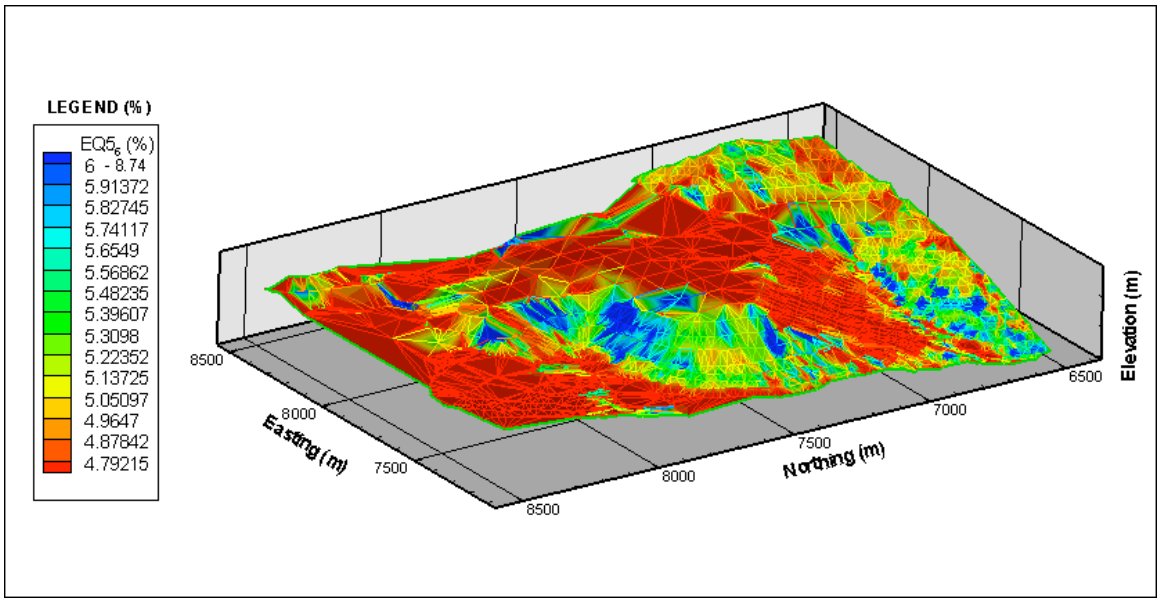

Figure 5.8 - 2004 annual average % net infiltration at Equity Silver Mine waste dump, K_{sat} uncompacted = $6.0X10^{-05}$ cm/s, K_{sat} compacted = $2.0X10^{-06}$ cm/s

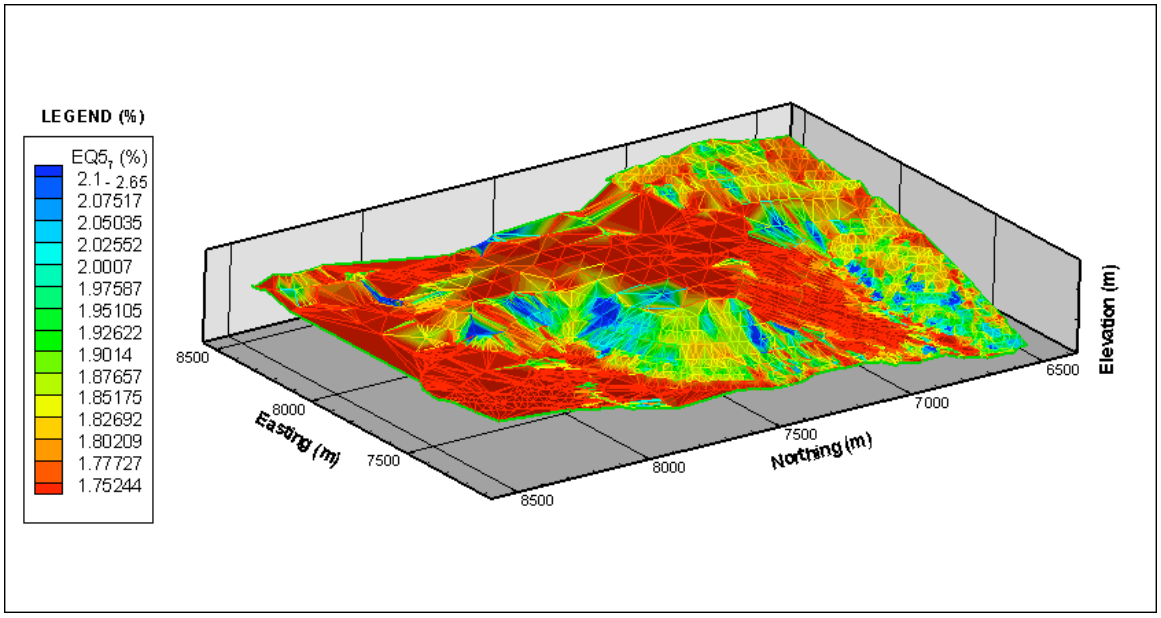

Figure 5.9 - 2004 annual average % net infiltration at Equity Silver Mine waste dump, K_{sat} uncompacted = $6.0X10^{-05}$ cm/s, K_{sat} compacted = $2.0X10^{-07}$ cm/s

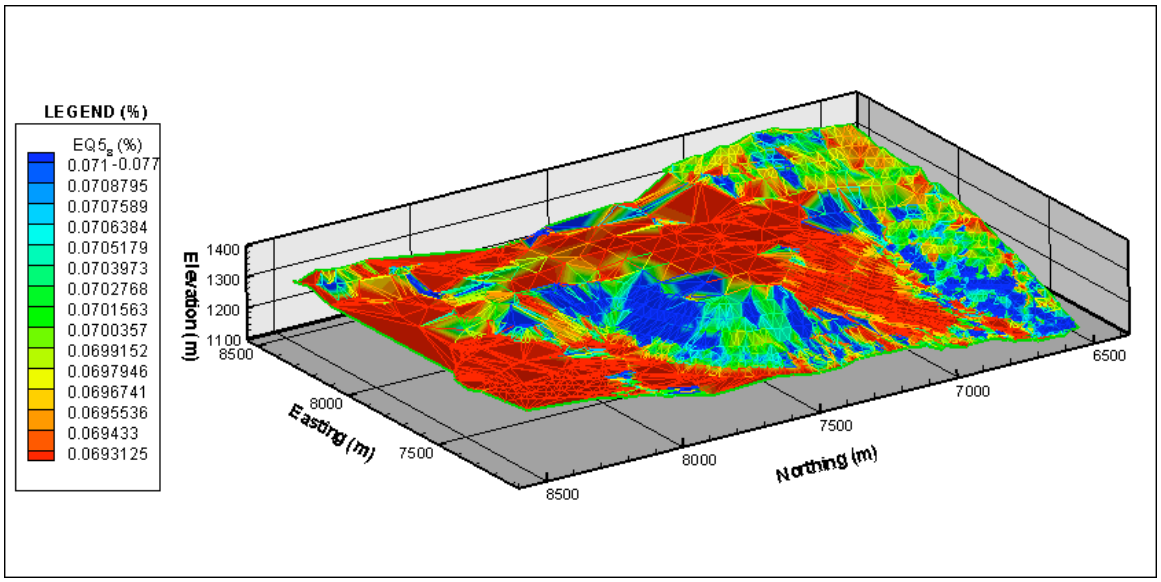

Figure 5.10 - 2004 annual average % net infiltration at Equity Silver Mine waste dump, K_{sat} uncompacted = $6.0X10^{-05}$ cm/s, K_{sat} compacted = $2.0X10^{-08}$ cm/s

Percent net infiltration models for the Low K_{sat} cases show that, similar to the High K_{sat} case models, specific areas over the surface of the waste dumps are allowing higher amounts of infiltration into the waste rock layer. In all Low K_{sat} cases, the south-facing side slope of the Main Dump experiences the least amount of infiltration into the waste rock layer, while the north-facing side slope of the Main Dump receives the most infiltration. As with the High K_{sat}, the slopes adjacent to the north and west of the ridge between the Main Dump and Bessemer Dump and the west-facing side slope of the Main Dump appear to experience the highest amounts of infiltration. Other areas of high infiltration have also remained the same - near the northeast edge of the top of the Main Dump, in the middle of the southeast edge of the top of the Main Dump, and localized areas on the slope south of the south-facing side slope of the Main Dump.

5.3 Discussion of Results

Table 5.1 shows a summary of the minimum and maximum infiltrations into the waste rock layer for all the 3D % net infiltration models. The High K_{sat} case with the highest K_{sat} for the compacted till layer resulted in the widest range of infiltration between slopes of different orientations. This is because, aswas previously concluded, that the waste cover for this particular case behaves like a store-and-release system where sufficiently high permeability of the till causes an increase not only in downward but also upward moisture flux. In general, there is a decrease in infiltration with a decrease in K_{sat} of the till cover. As K_{sat} falls below $2.0X10^{-07}$ cm/s, minimum and maximum infiltrations for the High K_{sat} becomes slightly lower than those for the Low K_{sat} cases. This can be explained by two reasons. First, K_{sat} of the compacted layer is so low that infiltration into the waste rock layer is reduced to small amounts (i.e. less than 2%). Second, while the compacted layer with low permeability is preventing moisture from infiltrating through into the waste rock layer, vegetation and energy from the sun continue to promote upward flux. Therefore, the case with the higher K_{sat} (more permeable upper till layer) would be more susceptible to a higher amount of upward flux and less downward infiltration.

Table 5.1 - Percent net infiltration of the 3D models

	Soil	Uncompacted Till	Compacted	Net Infiltration (%)	
				Lowest	Highest
High	Ksat (cm/s)	$6.00X10^{-04}$	$2.00X10^{-05}$	6	30
			$2.00X10^{-06}$	8	16
			$2.00X10^{-07}$	1.6	2.3
			$2.00X10^{-08}$	0.076	0.074
Low		$6.00X10^{-05}$	$2.00X10^{-05}$	10	17
			$2.00X10^{-06}$	5	9
			$2.00X10^{-07}$	1.8	2.7
			$2.00X10^{-08}$	0.069	0.077

The 3D % net infiltration models show that within the same site, there can be a difference of 15% net infiltration received at areas with varying slope orientations (most pervious case). Given that the total precipitation of the year 2004 was 512.2 mm, 15% would equal to a difference of approximately 77 mm. The second most pervious case also sees an 8% difference, or 41 mm, in infiltration over the waste dumps. For the Low K_{sat} models, the two most pervious cases differ in 7% and 4% between minimum and maximum infiltration, or 36 mm and 21 mm. As K_{sat} of the lower compacted till layer is decreased to $2.0X10^{-07}$ cm/s, the amount of infiltration dips below 3% and the difference between minimum and maximum infiltration also lessens. The cases where K_{sat} of the compacted layers are $6.0X10^{-08}$ cm/s infiltration becomes minimal, hovering around 0.07%, or 0.36 mm, between minimum and maximum for both High and Low K_{sat} cases.

5.4 Flow Quantification

The 3D net infiltration models for the Equity Silver Mine waste dumps have been developed and presented graphically. Quantification of the net infiltration occurring at the Equity Silver Mine waste dump could now be estimated. Calculations of flow were carried out using two different methods, using the nodal average and the area average.

5.4.1 Nodal Average

Table 5.2 shows the overall % net infiltrations of total precipitation into the waste dump layer, calculated as weighted averages of all the nodes on the surface of the Equilty Silver Mine waste dump DEM. The case yielding the highest amount of net infiltration of 10% (52 mm) has K_{sat} values for the uncompacted and compacted tills of $6X10^{-05}$ cm/s and $2X10^{-05}$ cm/s, respectively. It may seem counter-intuitive that the most pervious case did not yield the highest amount of flow into the waste rock layer. Once again, this can be explained by the fact that the store-and-release cover, while allowing high infiltration at low Q_{net}, also becomes more susceptible to expelling water from within the soil medium with the increase of Q_{net}, more so than the barrier covers. Thus, the overall percent infiltration of the most pervious case is lower than the second-most pervious case of the High K_{sat} runs, and also the most pervious case of the Low K_{sat} runs. Applying this average value to a total waste cover area of 118 hectares, a total flow of 61,230 m^3 was estimated to be seeping into the waste rock layer through the cover.

Table 5.2 - Overall percent infiltration of 3D models

	Soil	Uncompacted Till	Compacted Till	Overall percent infiltration into waste rock layer (%)	Volume of infiltration based on 118 HA (m^3)
High	K_{sat} (cm/s)	$6.00X10^{-04}$	$2.00X10^{-05}$	6.43*	38,890
			$2.00X10^{-06}$	8.99	54,370
			$2.00X10^{-07}$	1.66	10,063
			$2.00X10^{-08}$	0.07	415
Low		$6.00X10^{-05}$	*$2.00X10^{-05}$*	*10.12*	*61,230***
			$2.00X10^{-06}$	4.93	29,820
			$2.00X10^{-07}$	1.79	10,820
			$2.00X10^{-08}$	0.07	421

** Case with highest amount of infiltration*

5.4.2 Area Average

Manual calculations using a more defined waste cover boundary was carried out as a secondary, slightly more accurate method of estimating overall % net infiltration. The most pervious case was used for this calculation (K_{sat} uncompacted = $6X10^{-04}$ cm/s, K_{sat} compacted = $2X10^{-05}$ cm/s). The oblique view of the 3D net infiltration model (as presented in Figure 5.1), with the approximate outline of the waste cover area delineated, was underlain by 10:1 cm grid paper. Subsequently, the number of squares that fell within the various contour levels were counted, summed, and used to determine the total net infiltration over the surface of the waste dump. Details of the manual calculations are included in Appendix E. For this particular case (most pervious), the manual calculation resulted in an overall average infiltration of 8.31% of total precipitation, or 43 mm per unit area, into the waste rock layer of the dump. This translates into approximately 50,240 m^3 of flow collected from the waste rock layer. A comparison calculation was

also made for the total flow from the waste rock layer with the entire surface of the waste dump having the net filtration equivalent of that on a horizontal surface (i.e. assuming a uniform Q_{net} over the entire surface). The result yielded a total flow of 35,500 m^3. Thus, there is a 42% increase in the quantity of flow when equivalent Q_{net} received on slopes are applied to the model.

Comparing the net infiltration values calculated for the most pervious case between the two methods, there is a 2% increase in net infiltration resulting from the second, area average method. Assuming that there would be an increase in the average net infiltration with the application of the refined boundary, it was predicted that the case experiencing the highest amount of infiltration, as calculated to be 10% with the first method, would increase to approximately 12%. This would translate into 61.5 mm per unit area, or 72,570 m^2 of flow into the waste rock layer. A comparison of the flow quantities derived from both methods is shown in Table 5.3.

Table 5.3 - Calculated overall % infiltration from two different methods

	Soil	**Uncompacted Till**	**Compacted Till**	**% Infiltration**	
				Method 1 – Nodal Avg.	**Method 2 – Area Avg.**
High	K_{sat} (cm/s)	$6.00X10^{-04}$	$2.00X10^{-05}$	6.43	8.31
Low		$6.00X10^{-05}$	$2.00X10^{-05}$	10.12	*12 (predicted)**

** Highest predicted infiltration*

The calculated net infiltration quantities herein have been approximations based on the methods described above. The calculation method can and should be further polished, and carried out with more precision.

Chapter 6 CONCLUSIONS AND RECOMMENDATIONS

Understanding and accurately simulating the movement of moisture, both within a soil medium and between the interface of the soil medium and the atmosphere, is critical to the design of an engineered soil cover over waste disposal sites. At the Equity Silver Mine waste dump, it is currently estimated that the waste rock layer is annually receiving an infiltration of 15% of total precipitation. However, it was speculated that most infiltration is occurring on the north, shadier side of the dump, where the south side of the dump remains relatively dry throughout the year. In this thesis, 3D net infiltration models have been developed for the Equity Silver Mine waste dump and preliminary calculations have been made as an example to quantifying the amount of actual infiltration into the waste rock layer.

The 3D model development was the result of the continuation of previous research efforts completed for the Equity Silver Mine. The work done for this research had stemmed primarily from two major modeling processes, namely moisture flux modeling completed by Swanson and slope energy modeling completed by Weeks. Weeks had developed a 3D energy model showing the difference in PE and AE over the Equity Silver Mine waste dump, but did not include the effects of vegetation as part of his work. Replication of Weeks' soil-atmosphere moisture flux models resulted in good correlation between the old and new results, and gave the author confidence to continue further modeling built upon the old models. Effects of vegetation were analyzed by simulating root uptake with Weeks' soil-atmosphere moisture flux models, and it was found that the presence of

vegetation reduced net infiltration. Furthermore, transpiration increased as the amount of energy received on the dump surface increased.

A series of soil-atmosphere flux modeling were completed using weather data from the year 2004 and model set up parameters (including till cover soil properties) taken from Swanson's predictive model. Parametric analyses were completed for till cover soils of varying saturated K_{sat}'s, and for decreased and increased Q_{nets} as compared to the 2004 horizontal Q_{net} measurements. SunModel was applied to the 2004 Q_{net} measurements for the Equity Silver Mine waste dump DEM. By correlating the resulting % Q_{net} for each node of the DEM to the % Q_{net} in the parametric analyses for the moisture flux models, 3D net infiltration models were generated.

From the 3D models it was shown that for the most pervious case, infiltration could vary up to 15% between minimum and maximum values. On the north-facing side of the waste dump the infiltration values can go up to as high as 30% in certain localized areas. There is a clearly visible contrast between the high infiltration received on the north-facing side of the waste dump and the lower infiltration received on the south-facing side of the waste dump, due to the different amounts of energy received on different slope orientations. Comparing and contrasting between all 3D net infiltration models shows that the primary effect of changing the K_{sat} of the till cover is an increase and decrease in the % net infiltration, but in all cases areas of high and low infiltration remained the same.

A sample calculation was completed to quantify net infiltration into the waste rock layer at the Equity Silver waste dump for the year of 2004. From the 3D models, it was estimated that the waste dump would possibly experience a net infiltration of up to 72,570 m^2, or roughly 12%, of total annual precipitation based on climate data from 2004. It was also estimated that 65 % of the infiltration occurs within the shadier (approx. 50% in area) half of the waste dump, within the footprint of the high infiltration areas shown by the 3D net infiltration models. A comparison calculation between the total flow resulting from a model with only horizontal Q_{net}'s applied versus a model with sloped Q_{net}'s applied shows that the amount of infiltration/flow increases by 42% for the latter case. This further confirms the importance of taking sloped Q_{net} values into account with considering infiltration on sloped surfaces. With these problematic areas identified, efforts can be made to improve the performance of the engineered soil cover at these locations.

Work has been completed in developing a 3D model that shows the net infiltration distribution across the surface of the Equity Silver Mine waste dump, as affected by slope and orientation. Developing a 3D net infiltration model for the Equity Silver Mine waste dump has never before been carried out before the completion of this thesis. The completion of this research can provide Equity Silver with a model that will allow the identification of areas experiencing high infiltrations, and also serve as a tool for calculating the quantity of flow into the waste rock layer for any given year's climate data. The focus of the research has been on the Equity Silver Mine site. However, the development of the 3D model has also created a basic framework for building 3D net

infiltration models for any engineered cover, given that the required data are available from the site of interest.

The first step in creating a 3D net infiltration model for the Equity Silver waste dump leads towards opportunities for further research and development, continuing the long line of work that has been done for the Equity Silver Mine over the past decade and a half. The following recommendations are made for future work:

1. Investigation of the effects of changing the Air Entry Value (AEV) of the uncompacted and compacted tills on the resulting net infiltration. Increasing the AEV will increase the K_{sat} of a soil, while decreasing the AEV of a soil will decrease its K_{sat}. For the research conducted in this thesis, AEV values for the uncompated and compacted tills were kept constant between all models, and only the K_{sat} values were varied.
2. Extended calculations of net infiltrations at the Equity Silver waste dump – the development of a computation method that is based on precise definitions of waste dump boundaries, and regions of different net infiltrations. This may also include calibrating the 3D models to match current site infiltration conditions based on an updated site water balance.
3. Development of a computerized system based on the framework in Figure 4.19 – automating the generation of 3D net infiltration models for an engineered soil cover for a given set of required inputs (i.e. waste cover dimensions including topographic information, soil properties, climate data, boundary conditions, etc).

4. Development of a fully 3D numerical model for net infiltration through an engineered waste cover. Weeks showed that the variation in moisture distribution within a slope will likely have an effect on actual evaporation (Weeks, 2006). While PE is only a function of climatic conditions, AE is a function of soil properties, soil moisture, and climatic conditions. Since net infiltration is directly related to AE, it would be ideal to generate a model which will incorporate 3D mass and heat transfer equations with soils data over a ground surface, climatic data, and modeled net radiation.

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APPENDIX A – 1998 EQUITY SILVER CLIMATE DATA

Appendix A - 1998 Equity Silver Climate Data (As used in SoilCover Models)

Date	Julian Day	Running Day	Temperature (°C)			Relative Humidity (dec)			Net Radiation (MJ/m2/day)	Wind speed (km/hr)	Precipitation incl. snowmelt (mm)
			Max	Min	Average	Max	Min	Average			
15-Apr-98	108	1	6.05	-6.41	-0.18	0.95599998	0.32919998	0.6426	-1.681848	10.03830008	5
16-Apr-98	109	2	4.77	-2.32	1.23	0.95400002	0.40459999	0.6793	0.091152	21.21149988	5
17-Apr-98	110	3	4.57	-2.46	1.06	1	0.49200001	0.746	4.664412	16.94655029	5
18-Apr-98	111	4	7.92	-2.95	2.49	1	0.3768	0.6884	5.262768	10.74450008	5
19-Apr-98	112	5	8.85	3.28	6.06	0.56439999	0.3198	0.4421	10.158804	13.70399979	5.2
20-Apr-98	113	6	8.94	0.34	4.64	0.865	0.42650002	0.64575	8.581860	12.05730017	5
21-Apr-98	114	7	5.75	-3.57	1.09	1	0.4248	0.7124	6.582420	17.22015017	5.4
22-Apr-98	115	8	2.09	-4.09	-1.00	1	0.70300003	0.8515	4.824072	20.50079992	5.2
23-Apr-98	116	9	2.07	-0.73	0.67	1	0.90300003	0.9515	6.031728	25.67760025	5
24-Apr-98	117	10	2.68	-1.16	0.76	1	0.99900002	0.9995	6.933060	13.45215029	8.2
25-Apr-98	118	11	7.78	1.31	4.55	1	0.6982	0.8491	9.657900	25.64714996	0
26-Apr-98	119	12	12.29	1.22	6.75	1	0.5723	0.78615	17.507520	10.45335004	0.4
27-Apr-98	120	13	19.43	5.82	12.63	0.81	0.19629999	0.50315	15.956568	14.63519988	0
28-Apr-98	121	14	21.25	7.38	14.32	0.6075	0.21799999	0.41275	18.177372	8.185950167	0
29-Apr-98	122	15	14.94	5.74	10.34	0.57290001	0.20889999	0.3909	15.302088	14.91584992	0
30-Apr-98	123	16	15.68	4.62	10.15	0.69019997	0.1923	0.44125	19.896840	13.7046	0
01-May-98	124	17	18.22	5.72	11.97	0.5675	0.224	0.39575	16.847964	13.01130004	0
02-May-98	125	18	17.05	4.32	10.69	0.5641	0.2226	0.39335	14.866956	12.80429992	0
03-May-98	126	19	10.14	1.59	5.87	0.92699997	0.39540001	0.6612	10.197756	16.3953	0
04-May-98	127	20	9.65	-0.28	4.69	1	0.37799999	0.689	15.668136	9.624299917	0
05-May-98	128	21	9.78	-0.60	4.59	0.875	0.36330002	0.61915	9.970884	10.32119992	0
06-May-98	129	22	13.37	-0.60	6.39	0.82699997	0.3127	0.56985	16.933896	9.995100167	0
07-May-98	130	23	16.81	3.76	10.29	0.58439999	0.32080002	0.4526	14.215032	11.42775	0.2
08-May-98	131	24	12.87	5.83	9.35	1	0.57189999	0.78595	16.337484	6.849300042	3
09-May-98	132	25	14.93	4.39	9.66	1	0.53189999	0.76595	16.569936	6.3909	0.6
10-May-98	133	26	7.83	0.94	4.39	1	0.57	0.785	7.411644	12.28845	0.4
11-May-98	134	27	8.47	-1.03	3.72	0.96099998	0.42790001	0.69445	5.270796	6.22815	3
12-May-98	135	28	12.16	2.97	7.57	0.81	0.34389999	0.57695	12.069072	14.30385004	0.2
13-May-98	136	29	15.18	4.90	10.04	0.825	0.42189999	0.62345	10.556712	10.06920008	0
14-May-98	137	30	12.42	3.46	7.94	1	0.63099998	0.8155	9.607140	7.668300042	4.8
15-May-98	138	31	12.00	2.30	7.15	1	0.55220001	0.7761	19.962648	10.10759988	0.2
16-May-98	139	32	16.21	0.29	8.25	0.97900002	0.29799999	0.6385	19.739772	7.200449958	0
17-May-98	140	33	19.11	4.93	12.02	0.72400002	0.27360001	0.4988	13.013784	6.767850042	0
18-May-98	141	34	17.16	6.30	11.73	0.805	0.3152	0.5601	13.472712	12.16769979	0
19-May-98	142	35	12.65	3.94	8.30	0.93599998	0.5218	0.7289	10.885032	10.54665004	0
20-May-98	143	36	11.75	4.32	8.04	1	0.73900002	0.8695	8.659080	4.95405	1.8
21-May-98	144	37	15.81	6.30	11.06	1	0.39490002	0.69745	10.458324	12.07065017	1.2
22-May-98	145	38	15.19	6.22	10.71	1	0.58450001	0.79225	10.980252	16.42214983	3.6

Date	Julian Day	Running Day	Temperature (°C)			Relative Humidity (dec)			Net Radiation (MJ/m2/day)	Wind speed (km/hr)	Precipitation incl. snowmelt (mm)
			Max	Min	Average	Max	Min	Average			
23-May-98	146	39	20.14	8.57	14.36	1	0.40970001	0.70485	19.783368	24.52920004	0.4
24-May-98	147	40	21.75	9.94	15.85	0.88599998	0.43099998	0.6585	9.713304	21.14399992	0
25-May-98	148	41	19.67	10.35	15.01	1	0.54860001	0.7743	9.957744	12.25920004	1.2
26-May-98	149	42	20.48	8.69	14.59	1	0.42	0.71	19.494036	8.083949958	1.8
27-May-98	150	43	23.55	11.03	17.29	0.83099998	0.3673	0.59915	15.557256	11.31240013	0
28-May-98	151	44	14.78	6.58	10.68	0.87800003	0.42119999	0.6496	21.936708	22.82774996	0
29-May-98	152	45	14.53	3.04	8.79	0.83900002	0.48759998	0.6633	9.450576	11.43090008	0
30-May-98	153	46	18.13	6.50	12.32	0.895	0.35459999	0.6248	11.276928	7.109550042	0
31-May-98	154	47	17.25	8.86	13.06	0.78300003	0.41330002	0.59815	9.192276	7.972349917	0
01-Jun-98	155	48	19.67	8.44	14.06	0.66360001	0.33790001	0.50075	18.735228	10.28369996	0
02-Jun-98	156	49	21.54	9.96	15.75	0.77900002	0.3434	0.5612	16.075512	9.157050208	0.2
03-Jun-98	157	50	21.36	9.20	15.28	0.82699997	0.35279999	0.5899	17.867520	10.49325	0
04-Jun-98	158	51	23.08	10.59	16.84	0.77400002	0.3183	0.54615	16.275852	6.163949958	0
05-Jun-98	159	52	9.41	0.10	4.76	1	0.4959	0.74795	20.519352	5.5176	2.2
06-Jun-98	160	53	25.47	13.03	19.25	0.725	0.2685	0.49675	5.657580	3.198458333	0
07-Jun-98	161	54	13.36	7.38	10.37	1	0.708	0.854	14.479920	2.849375	4.6
08-Jun-98	162	55	13.41	5.45	9.43	1	0.6018	0.8009	18.392724	3.691125	0
09-Jun-98	163	56	12.69	1.74	7.22	0.923	0.4033	0.66315	18.716832	3.808291667	0
10-Jun-98	164	57	14.26	2.28	8.27	0.846	0.4405	0.64325	21.481308	3.896666667	2
11-Jun-98	165	58	16.87	2.99	9.93	0.842	0.3443	0.59315	12.146724	5.674791667	4.6
12-Jun-98	166	59	12.32	4.38	8.35	1	0.6346	0.8173	12.681468	3.993416667	2
13-Jun-98	167	60	11.62	-0.14	5.74	1	0.6202	0.8101	11.023704	1.827333333	2.4
14-Jun-98	168	61	16.44	4.47	10.46	0.993	0.4494	0.7212	11.686968	1.995875	0
15-Jun-98	169	62	13.21	5.91	9.56	0.942	0.5473	0.74465	10.609128	2.588333333	0.2
16-Jun-98	170	63	12.97	4.86	8.92	1	0.775	0.8875	19.304568	2.907541667	6.2
17-Jun-98	171	64	21.44	7.78	14.61	0.94	0.3916	0.6658	20.968632	2.001	0.8
18-Jun-98	172	65	22.19	9.51	15.85	0.849	0.3598	0.6044	21.614976	2.835708333	0
19-Jun-98	173	66	22.86	9.68	16.27	0.758	0.2362	0.4971	16.614936	3.529708333	0
20-Jun-98	174	67	18.14	7.19	12.67	0.935	0.4796	0.7073	10.174932	3.01425	0
21-Jun-98	175	68	13.09	4.71	8.90	1	0.535	0.7675	13.649040	1.505458333	1.6
22-Jun-98	176	69	12.76	3.51	8.14	1	0.5991	0.79955	9.289872	2.090416667	3.8
23-Jun-98	177	70	12.87	6.34	9.61	1	0.758	0.879	7.259472	1.706	14
24-Jun-98	178	71	12.03	7.20	9.62	1	0.906	0.953	16.863516	2.0875	23
25-Jun-98	179	72	16.54	5.65	11.10	1	0.5759	0.78795	14.638752	2.009583333	0.4
26-Jun-98	180	73	20.32	7.45	13.89	0.967	0.4401	0.70355	12.320964	4.043458333	1.2
27-Jun-98	181	74	18.47	11.61	15.04	1	0.4948	0.7474	11.124720	2.35525	6.2
28-Jun-98	182	75	16.61	11.02	13.82	1	0.813	0.9065	11.134260	3.446041667	17
29-Jun-98	183	76	16.88	10.49	13.69	1	0.856	0.928	14.443884	3.253333333	12.4
30-Jun-98	184	77	18.95	10.90	14.93	1	0.6661	0.83305	10.153512	2.372666667	2
01-Jul-98	185	78	20.66	12.12	16.39	0.99	0.5735	0.78175	14.085072	1.654625	0.6

Date	Julian Day	Running Day	Temperature (°C)			Relative Humidity (dec)			Net Radiation (MJ/m2/day)	Wind speed (km/hr)	Precipitation incl. snowmelt (mm)
			Max	Min	Average	Max	Min	Average			
02-Jul-98	186	79	20.91	11.82	16.37	0.965	0.5596	0.7623	18.559872	2.613458333	3.2
03-Jul-98	187	80	19.73	10.19	14.96	1	0.4319	0.71595	16.117740	2.69275	0.4
04-Jul-98	188	81	17.43	7.83	12.63	1	0.5662	0.7831	11.396772	2.233916667	2.4
05-Jul-98	189	82	11.77	4.62	8.20	0.944	0.6407	0.79235	24.052032	1.684875	0
06-Jul-98	190	83	18.82	4.35	11.59	0.985	0.3966	0.6908	17.553348	2.185333333	0
07-Jul-98	191	84	20.81	9.71	15.26	0.881	0.4103	0.64565	14.427828	3.514625	2.4
08-Jul-98	192	85	17.96	9.57	13.77	0.928	0.5807	0.75435	11.402604	3.504958333	0
09-Jul-98	193	86	12.96	5.60	9.28	0.996	0.6034	0.7997	12.264120	2.225666667	0
10-Jul-98	194	87	13.26	2.89	8.08	1	0.5203	0.76015	13.109616	3.866125	4.2
11-Jul-98	195	88	10.72	1.96	6.34	1	0.5594	0.7797	13.421196	3.506791667	1
12-Jul-98	196	89	12.25	1.15	6.70	1	0.4947	0.74735	14.696856	2.991541667	6.4
13-Jul-98	197	90	15.64	5.84	10.74	1	0.4779	0.73895	7.370532	3.583208333	0
14-Jul-98	198	91	12.92	6.02	9.47	1	0.6604	0.8302	19.229796	3.901541667	8.2
15-Jul-98	199	92	15.23	7.14	11.19	1	0.5055	0.75275	17.707212	1.943458333	2.8
16-Jul-98	200	93	18.53	6.58	12.56	0.986	0.4112	0.6986	13.437648	3.850166667	4
17-Jul-98	201	94	13.44	5.96	9.70	1	0.5653	0.78265	20.220840	2.070291667	4.8
18-Jul-98	202	95	15.80	4.24	10.02	0.974	0.4846	0.7293	12.032496	1.500875	0
19-Jul-98	203	96	19.18	6.96	13.07	0.921	0.4575	0.68925	19.088028	1.747708333	0
20-Jul-98	204	97	23.57	10.19	16.88	0.816	0.4232	0.6196	9.348192	1.884458333	2.8
21-Jul-98	205	98	17.34	11.24	14.29	0.898	0.6311	0.76455	19.076616	2.648	0.2
22-Jul-98	206	99	20.38	8.25	14.32	0.938	0.4878	0.7129	21.240360	2.0475	0
23-Jul-98	207	100	21.58	8.33	14.96	0.938	0.4985	0.71825	21.508920	2.761083333	0.4
24-Jul-98	208	101	26.96	11.99	19.48	0.791	0.2601	0.52555	20.786256	2.118083333	0.8
25-Jul-98	209	102	28.05	14.12	21.09	0.6391	0.24	0.43955	20.680380	2.092708333	1.2
26-Jul-98	210	103	27.98	16.00	21.99	0.6102	0.271	0.4406	20.547900	2.12775	2
27-Jul-98	211	104	26.33	15.62	20.98	0.621	0.2415	0.43125	19.485792	1.673	0
28-Jul-98	212	105	25.95	11.32	18.64	0.6444	0.1402	0.3923	19.540836	2.684958333	0
29-Jul-98	213	106	24.25	9.72	16.99	0.6367	0.2292	0.43295	18.965484	2.357625	0
30-Jul-98	214	107	19.79	5.56	12.68	0.849	0.1797	0.51435	18.346392	2.269833333	19.2
31-Jul-98	215	108	24.14	8.07	16.11	0.701	0.2424	0.4717	16.899300	2.753166667	13.8
01-Aug-98	216	109	23.79	11.80	17.80	0.5807	0.2582	0.41945	13.957344	2.730833333	0.2
02-Aug-98	217	110	18.95	10.05	14.50	0.714	0.3393	0.52665	6.260292	2.392041667	0
03-Aug-98	218	111	13.63	5.99	9.81	1	0.5023	0.75115	8.412444	3.336125	7.4
04-Aug-98	219	112	11.77	4.62	8.20	1	0.74	0.87	11.481084	3.039166667	0.4
05-Aug-98	220	113	13.92	4.19	9.06	1	0.5922	0.7961	4.666068	3.245583333	0.2
06-Aug-98	221	114	11.09	7.54	9.32	1	0.765	0.8825	9.385164	4.568125	2
07-Aug-98	222	115	14.72	5.52	10.12	1	0.744	0.872	16.823232	2.379333333	4.6
08-Aug-98	223	116	15.28	3.09	9.18	1	0.4655	0.73275	6.688116	3.8555	0
09-Aug-98	224	117	13.02	5.96	9.49	1	0.726	0.863	10.862424	3.513166667	2
10-Aug-98	225	118	18.45	9.74	14.10	1	0.5442	0.7721	17.645256	1.863916667	0.8

Date	Julian Day	Running Day	Temperature (°C)			Relative Humidity (dec)			Net Radiation (MJ/m2/day)	Wind speed (km/hr)	Precipitation incl. snowmelt (mm)
			Max	Min	Average	Max	Min	Average			
11-Aug-98	226	119	20.87	9.59	15.23	0.949	0.5623	0.75565	11.687832	2.832375	0
12-Aug-98	227	120	19.63	5.65	12.64	1	0.6061	0.80305	14.888484	1.573875	5.2
13-Aug-98	228	121	14.14	3.88	9.01	1	0.4876	0.7438	7.611660	2.122166667	0.2
14-Aug-98	229	122	15.32	5.49	10.41	1	0.6058	0.8029	10.410516	2.930041667	5
15-Aug-98	230	123	13.12	6.37	9.75	1	0.6649	0.83245	12.781512	3.140333333	0.2
16-Aug-98	231	124	15.92	5.67	10.80	1	0.5767	0.78835	17.900280	1.536083333	0
17-Aug-98	232	125	18.22	5.20	11.71	1	0.4264	0.7132	11.364300	2.238166667	0
18-Aug-98	233	126	19.72	8.75	14.24	0.852	0.4348	0.6434	13.980060	2.323208333	0
19-Aug-98	234	127	19.06	7.09	13.08	0.959	0.3132	0.6361	13.712940	2.200875	0
20-Aug-98	235	128	17.21	3.99	10.60	0.949	0.5012	0.7251	15.041700	2.686	0
21-Aug-98	236	129	17.03	5.38	11.20	0.977	0.403	0.69	7.533792	2.419166667	0
22-Aug-98	237	130	12.67	5.05	8.86	0.927	0.629	0.778	9.983556	2.591958333	0
23-Aug-98	238	131	12.62	5.33	8.98	1	0.81	0.905	8.108280	3.049125	18.2
24-Aug-98	239	132	10.20	3.53	6.86	1	0.6944	0.8472	10.051236	4.575666667	1.6
25-Aug-98	240	133	12.53	4.62	8.58	1	0.5059	0.75295	13.630752	5.542291667	0.4
26-Aug-98	241	134	17.56	5.42	11.49	0.998	0.4977	0.74785	9.426816	5.239916667	0.2
27-Aug-98	242	135	16.42	8.64	12.53	0.975	0.6591	0.81705	13.212936	1.779541667	0
28-Aug-98	243	136	16.88	2.61	9.75	0.972	0.3002	0.6361	13.617864	3.252916667	0.2
29-Aug-98	244	137	22.86	9.35	16.11	0.802	0.4019	0.60195	7.745004	3.905083333	0.2
30-Aug-98	245	138	17.51	9.57	13.54	0.904	0.4787	0.69135	13.014936	5.90075	0
31-Aug-98	246	139	13.14	3.23	8.19	0.916	0.3895	0.65275	5.844708	1.896083333	0
01-Sep-98	247	140	10.18	1.56	5.87	0.963	0.5795	0.77125	7.514712	1.57325	18.4
02-Sep-98	248	141	9.57	0.03	4.80	0.995	0.4908	0.7429	11.153808	2.963625	5.6
03-Sep-98	249	142	15.92	1.95	8.94	0.938	0.4067	0.67235	2.130624	5.540916667	0
04-Sep-98	250	143	12.79	7.86	10.33	1	0.456	0.728	8.242560	4.812125	7.6
05-Sep-98	251	144	11.83	2.88	7.36	0.931	0.5316	0.7313	7.517376	1.9755	0
06-Sep-98	252	145	10.39	0.22	5.31	0.986	0.4688	0.7274	3.255264	2.676875	0.2
07-Sep-98	253	146	9.25	1.20	5.23	1	0.6436	0.8218	5.380488	4.137708333	13.4
08-Sep-98	254	147	9.28	0.66	4.97	1	0.904	0.952	9.112608	4.213625	2.2
09-Sep-98	255	148	11.95	3.83	7.89	1	0.5434	0.7717	10.185192	6.143916667	0
10-Sep-98	256	149	13.75	3.40	8.58	0.967	0.523	0.745	10.948392	2.205458333	0
11-Sep-98	257	150	11.37	-0.29	5.54	0.927	0.4027	0.66485	11.201580	2.211416667	0
12-Sep-98	258	151	11.24	1.87	6.56	0.9	0.398	0.649	5.836536	2.995791667	0
13-Sep-98	259	152	7.89	1.09	4.49	0.845	0.5008	0.6729	10.151172	1.755916667	0
14-Sep-98	260	153	14.28	3.57	8.93	0.967	0.5582	0.7626	8.965044	2.606708333	0.2
15-Sep-98	261	154	13.01	5.65	9.33	0.898	0.4871	0.69255	9.081900	2.695375	0.6
16-Sep-98	262	155	15.43	5.71	10.57	0.892	0.5402	0.7161	10.519056	1.8635	0
17-Sep-98	263	156	15.92	4.57	10.25	1	0.4037	0.70185	9.436428	1.446041667	0.2
18-Sep-98	264	157	17.57	5.47	11.52	0.868	0.2392	0.5536	9.404064	2.198541667	0
19-Sep-98	265	158	14.95	5.47	10.21	0.849	0.4328	0.6409	8.834940	2.546	0

Date	Julian Day	Running Day	Temperature (°C)			Relative Humidity (dec)			Net Radiation (MJ/m2/day)	Wind speed (km/hr)	Precipitation incl. snowmelt (mm)
			Max	Min	Average	Max	Min	Average			
20-Sep-98	266	159	13.82	3.37	8.60	0.876	0.4647	0.67035	4.242348	2.315875	0
21-Sep-98	267	160	11.62	6.46	9.04	0.924	0.4811	0.70255	2.935548	3.3955	0
22-Sep-98	268	161	9.65	4.18	6.92	1	0.789	0.8945	7.499160	3.312875	1.4
23-Sep-98	269	162	11.64	2.72	7.18	0.997	0.4387	0.71785	7.875036	4.183833333	0.2
24-Sep-98	270	163	17.40	3.89	10.65	0.941	0.5621	0.75155	6.063336	4.014916667	0
25-Sep-98	271	164	12.89	3.43	8.16	0.926	0.4787	0.70235	7.397280	2.155583333	0
26-Sep-98	272	165	10.38	1.45	5.92	0.93	0.3149	0.62245	4.821912	2.415791667	0
27-Sep-98	273	166	7.26	1.25	4.26	1	0.708	0.854	6.120720	4.277708333	0.6
28-Sep-98	274	167	14.05	5.67	9.86	1	0.5804	0.7902	6.021144	2.312875	1.2
29-Sep-98	275	168	9.14	2.25	5.70	1	0.5206	0.7603	1.600056	2.288666667	0.4
30-Sep-98	276	169	3.37	0.96	2.17	1	0.827	0.9135	5.110020	3.071375	7.2
01-Oct-98	277	170	6.90	-0.17	3.37	1	0.586	0.793	2.469780	4.114458333	0.6
02-Oct-98	278	171	4.10	-1.42	1.34	1	0.6715	0.83575	3.928932	5.62975	0
03-Oct-98	279	172	7.81	0.08	3.95	1	0.983	0.9915	1.971900	5.377416667	10.2
04-Oct-98	280	173	7.84	0.53	4.19	1	0.941	0.9705	4.684032	1.720833333	6.6
05-Oct-98	281	174	6.31	-0.43	2.94	0.968	0.6102	0.7891	2.458080	5.47075	0
06-Oct-98	282	175	2.40	-1.86	0.27	1	0.86	0.93	1.000440	3.644666667	11.2
07-Oct-98	283	176	-1.60	-2.58	-2.09	1	1	1	1.331856	2.929791667	1.4
08-Oct-98	284	177	-1.81	-3.79	-2.80	1	1	1	1.010952	4.11575	3.2
09-Oct-98	285	178	-0.92	-3.94	-2.43	1	1	1	1.975716	3.651833333	0
10-Oct-98	286	179	4.28	-0.91	1.69	1	0.947	0.9735	4.325940	4.327875	12.8
11-Oct-98	287	180	7.43	0.41	3.92	1	0.6573	0.82865	5.567760	1.392458333	0
12-Oct-98	288	181	5.60	-3.09	1.26	1	0.6152	0.8076	4.094136	1.927583333	0.2
13-Oct-98	289	182	3.96	-2.65	0.66	1	0.6944	0.8472	2.810664	5.681625	0.8
14-Oct-98	290	183	3.65	-0.82	1.42	1	0.981	0.9905	2.168424	4.079291667	3
15-Oct-98	291	184	2.55	-3.57	-0.51	1	0.6315	0.81575	2.087712	6.576958333	0
16-Oct-98	292	185	3.70	-3.41	0.14	0.964	0.805	0.8845	0.747216	3.659125	0
17-Oct-98	293	186	5.80	2.68	4.24	1	0.831	0.9155	1.769256	4.063125	0.6
18-Oct-98	294	187	11.51	3.03	7.27	0.942	0.4875	0.71475	1.917792	2.688708333	0
19-Oct-98	295	188	13.69	5.61	9.65	0.713	0.3828	0.5479	2.054772	3.082875	6.2
20-Oct-98	296	189	14.60	6.95	10.77	0.707	0.3043	0.50565	1.148976	3.218208333	0.2
21-Oct-98	297	190	13.64	6.03	9.84	0.6262	0.2746	0.4504	0.650916	3.152875	0
22-Oct-98	298	191	10.69	3.94	7.32	0.6722	0.3787	0.52545	2.068020	7.863041667	0
23-Oct-98	299	192	8.71	1.93	5.32	0.894	0.6359	0.76495	1.287540	2.873791667	0
24-Oct-98	300	193	3.14	-0.04	1.55	1	0.755	0.8775	0.525780	5.688958333	3.8
25-Oct-98	301	194	5.85	-2.75	1.55	1	0.79	0.895	0.992088	4.251291667	2.6
26-Oct-98	302	195	1.48	-4.47	-1.50	1	0.5838	0.7919	0.347580	1.174458333	0
27-Oct-98	303	196	-0.10	-3.90	-2.00	1	0.927	0.9635	0.816084	4.247375	3.8
28-Oct-98	304	197	2.35	-1.51	0.42	1	0.806	0.903	-0.525708	2.630166667	2
29-Oct-98	305	198	1.59	-0.61	0.49	1	0.994	0.997	1.232604	0.985333333	5.8

Date	Julian Day	Running Day	Temperature (°C)			Relative Humidity (dec)			Net Radiation (MJ/m2/day)	Wind speed (km/hr)	Precipitation incl. snowmelt (mm)
			Max	Min	Average	Max	Min	Average			
30-Oct-98	306	199	1.64	-3.14	-0.75	1	1	1	0.594396	1.06126087	6.6

APPENDIX B – 2004 EQUITY SILVER CLIMATE DATA

Appendix B - 2004 Corrected Climate Data (As used in SoilCover Models)

Date	Julian Day	Running Day	Temperature (°C)			Relative Humidity (dec)			Net Radiation (MJ/m2/day)	Wind speed (km/hr)	Precipitation incl. snowmelt (mm)
			Max	Min	Average	Max	Min	Average			
01-May-04	122	1	19.8	8.22	14.01	0.4127	0.1977	0.3052	6.070788	13.932	3.46
02-May-04	123	2	18.5	5.695	12.0975	0.819	0.1998	0.5094	7.5151188	19.17	6.86
03-May-04	124	3	10.83	2.215	6.5225	0.904	0.3505	0.62725	4.41495936	17.5158	24.06
04-May-04	125	4	9.88	0.433	5.1565	0.967	0.5734	0.7702	0.779787	12.4848	8.76
05-May-04	126	5	8.21	-3.711	2.2495	0.977	0.6044	0.7907	4.46952384	25.272	2.36
06-May-04	127	6	3.674	-6.749	-1.5375	0.94	0.45	0.695	11.3361012	22.302	2.36
07-May-04	128	7	10.23	-1.535	4.3475	0.823	0.2991	0.56105	11.11139172	11.4858	2.36
08-May-04	129	8	13.45	0.932	7.191	0.707	0.209	0.458	5.2701804	14.076	2.36
09-May-04	130	9	7.22	2.424	4.822	0.721	0.4322	0.5766	3.3233652	20.592	3.86
10-May-04	131	10	6.114	0.269	3.1915	0.961	0.5786	0.7698	4.14008424	19.962	5.36
11-May-04	132	11	6.596	-0.596	3	0.959	0.5258	0.7424	7.7231025	20.7234	0
12-May-04	133	12	6.103	-2.976	1.5635	0.96	0.3782	0.6691	6.9416028	12.4848	0
13-May-04	134	13	11.46	-0.857	5.3015	0.6716	0.2534	0.4625	5.472873	8.4546	0.4
14-May-04	135	14	11.93	2.454	7.192	0.5674	0.3204	0.4439	7.076718	9.657	0
15-May-04	136	15	13.44	2.871	8.1555	0.6269	0.2976	0.46225	8.638173072	11.3814	0
16-May-04	137	16	14.06	3.025	8.5425	0.736	0.2672	0.5016	6.738462	10.7568	0
17-May-04	138	17	14.48	3.585	9.0325	0.704	0.2913	0.49765	11.61960192	11.394	0
18-May-04	139	18	17.25	4.114	10.682	0.731	0.1972	0.4641	11.2433346	11.3814	0
19-May-04	140	19	17.21	4.556	10.883	0.6114	0.1742	0.3928	8.22129084	10.8612	0
20-May-04	141	20	19.88	9.38	14.63	0.4584	0.2053	0.33185	9.05306904	14.184	0.5
21-May-04	142	21	17.01	7.21	12.11	0.764	0.2496	0.5068	5.16720456	17.5176	5.4
22-May-04	143	22	8.62	1.063	4.8415	0.95	0.4917	0.72085	11.2788252	24.552	0
23-May-04	144	23	9.45	-1.154	4.148	0.818	0.2091	0.51355	10.64227644	25.5492	0
24-May-04	145	24	13.76	0.216	6.988	0.5418	0.1959	0.36885	9.727218	11.0682	2.4
25-May-04	146	25	16.22	4.395	10.3075	0.927	0.2484	0.5877	5.574159072	13.518	1
26-May-04	147	26	11.02	4.391	7.7055	0.98	0.5726	0.7763	7.09948908	17.5068	2.6
27-May-04	148	27	10.88	1.739	6.3095	0.89	0.3413	0.61565	8.99867448	20.9556	1.2
28-May-04	149	28	9.98	0.757	5.3685	0.943	0.3731	0.65805	6.28860312	11.502	0
29-May-04	150	29	10.12	2.128	6.124	0.958	0.4495	0.70375	3.89925216	11.5578	0
30-May-04	151	30	8.12	-1.131	3.4945	0.959	0.4108	0.6849	7.257259656	13.338	5.4
31-May-04	152	31	7.8	-0.066	3.867	0.957	0.5659	0.76145	6.6512232	14.2578	0.4
01-Jun-04	153	32	8.23	-1.114	3.558	0.871	0.4565	0.66375	9.782828208	14.0328	0
02-Jun-04	154	33	10.06	0.357	5.2085	0.875	0.3255	0.60025	12.98249496	17.5716	0
03-Jun-04	155	34	12.41	-1.307	5.5515	0.849	0.2692	0.5591	11.9485116	9.5328	0
04-Jun-04	156	35	18.6	3.148	10.874	0.6065	0.2426	0.42455	7.3805544	12.3624	0
05-Jun-04	157	36	20.16	8.66	14.41	0.6179	0.2329	0.4254	4.1695128	16.686	0
06-Jun-04	158	37	13.52	5.474	9.497	0.936	0.47	0.703	0.718272684	13.5936	42
07-Jun-04	159	38	6.596	1.467	4.0315	0.98	0.829	0.9045	13.96268424	16.506	0

Date	Julian Day	Running Day	Temperature (°C)			Relative Humidity (dec)			Net Radiation (MJ/m2/day)	Wind speed (km/hr)	Precipitation incl. snowmelt (mm)
			Max	Min	Average	Max	Min	Average			
08-Jun-04	160	39	18.11	4.42	11.265	0.977	0.3104	0.6437	11.270952	11.2554	0
09-Jun-04	161	40	21.15	9.45	15.3	0.6918	0.2958	0.4938	13.5400752	14.328	0
10-Jun-04	162	41	18.35	7.95	13.15	0.738	0.2191	0.47855	13.67691084	12.3732	0
11-Jun-04	163	42	15.3	3.589	9.4445	0.754	0.211	0.4825	10.65883428	12.186	0
12-Jun-04	164	43	12.92	1.211	7.0655	0.843	0.3633	0.60315	3.47804406	11.448	0
13-Jun-04	165	44	9.98	3.706	6.843	0.934	0.6161	0.77505	4.710758868	13.248	10
14-Jun-04	166	45	8.75	1.173	4.9615	0.969	0.5223	0.74565	6.988086	18.774	0
15-Jun-04	167	46	9.63	-0.992	4.319	0.918	0.3982	0.6581	13.05221832	13.4496	0
16-Jun-04	168	47	13.54	1.712	7.626	0.89	0.4277	0.65885	9.031824	16.4088	0
17-Jun-04	169	48	17.9	3.932	10.916	0.839	0.3193	0.57915	11.1860244	11.8656	0
18-Jun-04	170	49	21.09	9.15	15.12	0.715	0.1956	0.4553	11.90325204	11.5164	0
19-Jun-04	171	50	22.33	10.74	16.535	0.5407	0.2045	0.3726	13.9731408	15.9948	0
20-Jun-04	172	51	25.47	13.08	19.275	0.4921	0.1925	0.3423	9.4127112	12.726	1.8
21-Jun-04	173	52	27.44	11.95	19.695	0.879	0.2194	0.5492	12.33422928	20.808	5.8
22-Jun-04	174	53	26.25	11.92	19.085	0.766	0.2685	0.51725	11.6029512	11.1078	0
23-Jun-04	175	54	24.5	12.09	18.295	0.761	0.2955	0.52825	13.7377872	10.4868	0
24-Jun-04	176	55	26.8	13.64	20.22	0.6188	0.1401	0.37945	7.14229416	12.0042	0
25-Jun-04	177	56	24.63	13.61	19.12	0.762	0.263	0.5125	7.33949064	12.537	0
26-Jun-04	178	57	24.54	12.14	18.34	0.859	0.281	0.57	9.62858916	16.1982	0
27-Jun-04	179	58	22.35	10.39	16.37	0.862	0.2272	0.5446	0.689505444	15.0696	14.8
28-Jun-04	180	59	10.36	6.779	8.5695	0.977	0.791	0.884	6.38648424	10.7604	0
29-Jun-04	181	60	12.9	6.03	9.465	0.98	0.5599	0.76995	4.94189208	9.8838	6.6
30-Jun-04	182	61	14.48	6.735	10.6075	0.97	0.5534	0.7617	9.17575164	11.6604	1.8
01-Jul-04	183	62	17.43	6.602	12.016	0.948	0.4377	0.69285	13.2541056	12.0096	3.2
02-Jul-04	184	63	19.88	5.976	12.928	0.919	0.3408	0.6299	6.178772772	13.392	0.8
03-Jul-04	185	64	14.65	7.52	11.085	0.961	0.5454	0.7532	6.9000732	10.5012	0
04-Jul-04	186	65	15.1	5.195	10.1475	0.949	0.483	0.716	7.76500092	11.6604	8.8
05-Jul-04	187	66	16.14	6.264	11.202	0.962	0.4751	0.71855	2.68712568	8.433	11.7
06-Jul-04	188	67	12.47	8.02	10.245	0.976	0.6466	0.8113	6.82917408	13.2894	1.8
07-Jul-04	189	68	9.7	3.127	6.4135	0.975	0.5055	0.74025	3.897999	22.1544	0.4
08-Jul-04	190	69	7.51	2.354	4.932	0.973	0.743	0.858	2.45156076	9.1764	8.8
09-Jul-04	191	70	8.49	3.465	5.9775	0.977	0.767	0.872	6.75687348	7.137	0
10-Jul-04	192	71	16.6	7.08	11.84	0.971	0.5698	0.7704	2.25962748	7.9542	0
11-Jul-04	193	72	14.77	6.682	10.726	0.975	0.6941	0.83455	7.369218	9.9684	7.6
12-Jul-04	194	73	13.83	5.401	9.6155	0.963	0.4898	0.7264	11.10969144	10.1412	0.4
13-Jul-04	195	74	17.53	7.45	12.49	0.972	0.4749	0.72345	6.59804796	8.5338	8.8
14-Jul-04	196	75	20.44	9.84	15.14	0.852	0.4264	0.6392	9.716382	11.673	0.3
15-Jul-04	197	76	22.8	10.22	16.51	0.816	0.2956	0.5558	9.56722032	17.766	3.8
16-Jul-04	198	77	23.75	12.54	18.145	0.785	0.3004	0.5427	4.95773028	15.786	2.8
17-Jul-04	199	78	15.28	9.08	12.18	0.969	0.4891	0.72905	8.57661588	9.7866	0

Date	Julian Day	Running Day	Temperature (°C)			Relative Humidity (dec)			Net Radiation (MJ/m2/day)	Wind speed (km/hr)	Precipitation incl. snowmelt (mm)
			Max	Min	Average	Max	Min	Average			
18-Jul-04	200	79	17.32	7.85	12.585	0.869	0.5475	0.70825	7.4244978	9.6822	1.8
19-Jul-04	201	80	20.1	8.41	14.255	0.953	0.4976	0.7253	5.79464028	11.3724	16.4
20-Jul-04	202	81	16.73	6.96	11.845	0.976	0.638	0.807	3.17866464	18.198	5.6
21-Jul-04	203	82	13.22	6.558	9.889	0.97	0.714	0.842	7.05394116	11.6694	0
22-Jul-04	204	83	16.66	6.635	11.6475	0.904	0.5912	0.7476	12.71248236	9.8316	0
23-Jul-04	205	84	22.42	8.25	15.335	0.908	0.3978	0.6529	13.43175624	7.9236	0
24-Jul-04	206	85	25.11	12.83	18.97	0.716	0.2831	0.49955	11.94819228	8.1306	0
25-Jul-04	207	86	23.9	12.39	18.145	0.6295	0.2444	0.43695	6.34331016	13.77	0.2
26-Jul-04	208	87	13.56	7.15	10.355	0.788	0.508	0.648	10.406196	16.2738	0
27-Jul-04	209	88	16.32	5.427	10.8735	0.84	0.415	0.6275	12.6137808	11.4372	0
28-Jul-04	210	89	21.56	7.19	14.375	0.788	0.2141	0.50105	12.87771156	8.91	0
29-Jul-04	211	90	23.05	11.28	17.165	0.794	0.4316	0.6128	10.3684608	12.5334	0
30-Jul-04	212	91	19.22	10.27	14.745	0.933	0.3773	0.65515	11.8498932	14.796	0
31-Jul-04	213	92	17.62	5.764	11.692	0.804	0.4037	0.60385	12.190176	12.4452	0
01-Aug-04	214	93	19.12	6.684	12.902	0.793	0.2848	0.5389	9.13573008	10.4544	0
02-Aug-04	215	94	19.69	8.05	13.87	0.722	0.3407	0.53135	6.8930928	9.3366	1.6
03-Aug-04	216	95	20.56	8.72	14.64	0.958	0.4124	0.6852	9.5128848	13.464	0.4
04-Aug-04	217	96	17.23	7.5	12.365	0.96	0.3838	0.6719	6.60230748	8.0442	8.7
05-Aug-04	218	97	18.48	7.93	13.205	0.974	0.3817	0.67785	5.641704216	10.9638	3
06-Aug-04	219	98	13.51	7.69	10.6	0.979	0.5457	0.76235	6.59263212	6.489	2.4
07-Aug-04	220	99	13.73	5.502	9.616	0.969	0.6086	0.7888	4.27056264	10.8378	4.2
08-Aug-04	221	100	11.98	6.499	9.2395	0.966	0.741	0.8535	6.7111704	7.218	0
09-Aug-04	222	101	16	5.279	10.6395	0.967	0.4945	0.73075	7.6669452	6.9012	0
10-Aug-04	223	102	19.1	7.69	13.395	0.874	0.3725	0.62325	7.9440804	10.5462	0
11-Aug-04	224	103	22.33	10.55	16.44	0.6279	0.329	0.47845	8.6374116	11.1096	0
12-Aug-04	225	104	22.84	10.54	16.69	0.6924	0.3446	0.5185	9.5247216	8.847	0
13-Aug-04	226	105	23.79	11.98	17.885	0.6784	0.2099	0.44415	9.60761592	9.729	0
14-Aug-04	227	106	24.52	11.67	18.095	0.63	0.3328	0.4814	8.83743876	7.7184	0
15-Aug-04	228	107	24.52	14.26	19.39	0.74	0.3589	0.54945	8.13106008	14.1606	0
16-Aug-04	229	108	24.74	13.68	19.21	0.789	0.2554	0.5222	9.141893892	10.5174	0
17-Aug-04	230	109	23.9	12.05	17.975	0.784	0.3231	0.55355	7.75519632	9.9702	0
18-Aug-04	231	110	26.56	13.61	20.085	0.806	0.2353	0.52065	9.366320844	9.738	0
19-Aug-04	232	111	23.92	11.5	17.71	0.898	0.2976	0.5978	7.3680336	10.161	0.4
20-Aug-04	233	112	22.37	10.42	16.395	0.749	0.2169	0.48295	9.77453712	8.2998	0
21-Aug-04	234	113	19.98	8.97	14.475	0.849	0.338	0.5935	4.58509968	13.8294	0
22-Aug-04	235	114	14.38	8.13	11.255	0.839	0.6013	0.72015	4.30665552	19.8198	0
23-Aug-04	236	115	9.34	4.078	6.709	0.835	0.5228	0.6789	5.47726284	24.39	0
24-Aug-04	237	116	11.8	1.933	6.8665	0.882	0.3884	0.6352	6.8061672	12.9042	0
25-Aug-04	238	117	16.66	3.088	9.874	0.859	0.3473	0.60315	4.6711512	8.1018	0
26-Aug-04	239	118	17.36	6.434	11.897	0.753	0.2726	0.5128	7.15387392	6.8004	0.2

Date	Julian Day	Running Day	Temperature (°C)			Relative Humidity (dec)			Net Radiation (MJ/m2/day)	Wind speed (km/hr)	Precipitation incl. snowmelt (mm)
			Max	Min	Average	Max	Min	Average			
27-Aug-04	240	119	18.56	7.71	13.135	0.758	0.3423	0.55015	1.7650584	12.96	4.4
28-Aug-04	241	120	13.89	6.54	10.215	0.968	0.6325	0.80025	6.3039024	15.7914	0
29-Aug-04	242	121	14.22	4.893	9.5565	0.887	0.4296	0.6583	1.161757008	10.008	32.6
30-Aug-04	243	122	8.97	4.692	6.831	0.979	0.848	0.9135	6.35923548	6.255	0.2
31-Aug-04	244	123	13.56	4.331	8.9455	0.981	0.496	0.7385	5.33556432	8.6166	0.7
01-Sep-04	245	124	13.86	4.206	9.033	0.962	0.512	0.737	4.10924232	9.7524	0.2
02-Sep-04	246	125	12.19	3.377	7.7835	0.965	0.5199	0.74245	7.91690616	10.8774	0
03-Sep-04	247	126	15.94	3.829	9.8845	0.915	0.3543	0.63465	6.06831552	11.5056	0
04-Sep-04	248	127	14.17	7.03	10.6	0.893	0.5189	0.70595	4.1371506	15.1416	0
05-Sep-04	249	128	11.15	3.95	7.55	0.975	0.5871	0.78105	3.28161564	18.882	0
06-Sep-04	250	129	11.12	2.899	7.0095	0.952	0.5103	0.73115	5.613264	9.9684	5.4
07-Sep-04	251	130	13.12	1.5	7.31	0.945	0.3848	0.6649	1.8708516	8.1702	21
08-Sep-04	252	131	10.54	2.962	6.751	0.961	0.5345	0.74775	1.62414252	10.2996	5.2
09-Sep-04	253	132	5.702	-1.5	2.101	0.978	0.939	0.9585	1.89668268	17.0406	0.4
10-Sep-04	254	133	2.03	-1.974	0.028	0.979	0.964	0.9715	1.068526044	6.6384	2
11-Sep-04	255	134	4.631	-0.157	2.237	0.981	0.927	0.954	2.7324576	18.702	0
12-Sep-04	256	135	7.21	1.242	4.226	0.967	0.00277	0.484885	2.13645132	22.8654	12.2
13-Sep-04	257	136	9.06	0.648	4.854	0.954	0.5859	0.76995	0.55123596	11.3148	8
14-Sep-04	258	137	7.26	3.096	5.178	0.972	0.704	0.838	4.75217424	8.7354	0
15-Sep-04	259	138	9.29	1.549	5.4195	0.974	0.5256	0.7498	3.7557216	10.8	2
16-Sep-04	260	139	10.3	0.881	5.5905	0.914	0.5305	0.72225	2.734293996	8.4636	7.6
17-Sep-04	261	140	6.661	0.689	3.675	0.963	0.5715	0.76725	-2.028228012	11.3382	6.9
18-Sep-04	262	141	2.657	-1.069	0.794	0.975	0.905	0.94	-0.045455832	13.446	0
19-Sep-04	263	142	0.024	-2.322	-1.149	0.975	0.95	0.9625	1.07526096	16.0218	5
20-Sep-04	264	143	2.006	-1.356	0.325	0.974	0.793	0.8835	-0.96199344	6.705	2.2
21-Sep-04	265	144	3.092	-1.71	0.691	0.963	0.6692	0.8161	1.96199352	11.6586	2
22-Sep-04	266	145	8.59	2.675	5.6325	1.104	0.6692	0.8866	2.17107864	32.364	0.8
23-Sep-04	267	146	9.06	1.242	5.151	0.926	0.5873	0.75665	1.3594374	15.3612	0
24-Sep-04	268	147	8.71	1.463	5.0865	0.966	0.5873	0.77665	1.5099084	21.7836	0
25-Sep-04	269	148	11.44	3.554	7.497	0.966	0.5873	0.77665	4.8922164	23.8176	0
26-Sep-04	270	149	10.88	2.1	6.49	0.799	0.5873	0.69315	2.9383956	9.3024	0
27-Sep-04	271	150	12.74	2.899	7.8195	0.799	0.3612	0.5801	1.2202668	10.8828	0
28-Sep-04	272	151	14.69	3.61	9.15	0.836	0.4975	0.66675	2.343564	14.4162	0
29-Sep-04	273	152	9.62	0.593	5.1065	0.891	0.3489	0.61995	2.3493348	11.3652	0
30-Sep-04	274	153	7.87	-0.677	3.5965	0.842	0.4127	0.62735	2.5471224	13.2822	0
01-Oct-04	275	154	11.12	0.675	5.8975	0.853	0.4153	0.63415	3.484476	10.449	0
02-Oct-04	276	155	16.52	3.684	10.102	0.6595	0.3284	0.49395	3.2142816	9.0666	0
03-Oct-04	277	156	18.11	6.625	12.3675	0.5633	0.189	0.37615	2.6941176	7.9812	0
04-Oct-04	278	157	17.56	7.66	12.61	0.507	0.277	0.392	-0.6261426	10.3302	0
05-Oct-04	279	158	9.74	4.749	7.2445	0.802	0.4799	0.64095	-0.198298548	14.8698	1.2

Date	Julian Day	Running Day	Temperature (°C)			Relative Humidity (dec)			Net Radiation (MJ/m2/day)	Wind speed (km/hr)	Precipitation incl. snowmelt (mm)
			Max	Min	Average	Max	Min	Average			
06-Oct-04	280	159	9.9	0.611	5.2555	0.959	0.4799	0.71945	-0.09022356	22.788	0
07-Oct-04	281	160	6.761	*0.611*	3.686	0.959	0.4799	0.71945	-0.706833	30.9996	6
08-Oct-04	282	161	4.178	-3.091	0.5435	0.959	0.4799	0.71945	1.5758136	13.4298	0
09-Oct-04	283	162	7.79	1.394	4.592	0.959	0.4799	0.71945	1.19473812	19.3698	1.8
10-Oct-04	284	163	6.983	0.72	3.8515	0.944	0.651	0.7975	-1.15268796	13.032	16.6
11-Oct-04	285	164	4.06	*0.72*	2.39	0.944	0.651	0.7975	2.33275032	20.8458	5.2
12-Oct-04	286	165	8.01	*19.3356*	13.6728	0.944	0.651	0.7975	-0.34421652	19.3356	6.9
13-Oct-04	287	166	8.82	5.535	7.1775	0.981	0.847	0.914	0.21001644	14.274	7.8
14-Oct-04	288	167	10.95	*15.606*	13.278	0.982	0.847	0.9145	0.47816208	15.606	0.4
15-Oct-04	289	168	10.53	4.366	7.448	0.982	0.795	0.8885	-1.11464676	10.4454	1.4
16-Oct-04	290	169	5.746	-0.916	2.415	0.963	0.811	0.887	1.25188056	9.0918	0
17-Oct-04	291	170	0.242	-5.107	-2.4325	0.96	0.667	0.8135	0.230398956	17.658	8
18-Oct-04	292	171	-4.245	-7.17	-5.7075	0.926	0.72	0.823	0.16526772	21.1914	8
19-Oct-04	293	172	-7.18	-10.69	-8.935	0.921	0.819	0.87	-1.30055292	24.6834	0
20-Oct-04	294	173	-6.849	-11.51	-9.1795	0.894	0.6165	0.75525	-0.94388436	17.1918	0
21-Oct-04	295	174	0.093	-10.06	-4.9835	0.892	0.5578	0.7249	-1.2396564	13.05	9
22-Oct-04	296	175	-0.865	-8.03	-4.4475	0.955	0.5684	0.7617	-1.01683926	16.794	0
23-Oct-04	297	176	-0.974	-3.888	-2.431	0.973	0.749	0.861	-1.18499832	20.6208	0
24-Oct-04	298	177	-2.22	-6.611	-4.4155	0.968	0.836	0.902	-1.86616584	10.0836	5
25-Oct-04	299	178	-0.893	-7.65	-4.2715	0.955	0.6528	0.8039	-0.752337	17.982	1
26-Oct-04	300	179	0.115	-2.767	-1.326	0.972	0.841	0.9065	0.123720948	16.236	0
27-Oct-04	301	180	-0.794	-2.869	-1.8315	0.972	0.957	0.9645	-2.00175696	12.816	0
28-Oct-04	302	181	-0.365	-4.214	-2.2895	0.975	0.808	0.8915	-3.00084552	9.5814	0
29-Oct-04	303	182	3.032	-4.051	-0.5095	0.974	0.808	0.891	-1.28356884	10.9386	0
30-Oct-04	304	183	0.333	-3.503	-1.585	0.974	0.808	0.891	-3.678288444	26.325	0
31-Oct-04	305	184	-0.46	-5.296	-2.878	0.955	0.808	0.8815	-2.414484	17.9676	0
01-Nov-04	306	185	-0.717	-7.02	-3.8685	0.955	0.808	0.8815	-0.97817148	17.8182	1
02-Nov-04	307	186	-0.717	-4.073	-2.395	0.962	0.808	0.885	-3.56867388	28.6326	0
03-Nov-04	308	187	-1	-5.401	-3.2005	0.856	0.808	0.832	-1.7217684	22.8888	0
04-Nov-04	309	188	0.726	*-5.401*	-2.3375	0.92	0.808	0.864	0.01673352	26.6022	15.8
05-Nov-04	310	189	3.067	*-5.401*	-1.167	0.92	0.808	0.864	-2.094043644	38.4264	7
06-Nov-04	311	190	1.477	*-5.401*	-1.962	0.92	0.808	0.864	-3.9206556	27.072	0
07-Nov-04	312	191	-6.699	-11.66	-9.1795	0.92	0.808	0.864	-0.363075156	0	13.6
08-Nov-04	313	192	-0.337	-9.3	-4.8185	0.92	0.808	0.864	-1.48714956	9.3888	0
09-Nov-04	314	193	3.349	-3.269	0.04	0.92	0.808	0.864	-4.2507108	18	0
10-Nov-04	315	194	1.961	-6.723	-2.381	0.854	0.808	0.831	-2.96725824	7.8012	0
11-Nov-04	316	195	0.214	-10.36	-5.073	0.964	0.808	0.886	-1.64939076	5.5404	0
12-Nov-04	317	196	-4.229	-12.69	-8.4595	0.939	0.808	0.8735	-0.683416476	5.5674	0
13-Nov-04	318	197	-6.746	-11.5	-9.123	0.928	0.877	0.9025	-1.26364464	8.0604	0
14-Nov-04	319	198	2.166	*-11.5*	-4.667	0.928	0.877	0.9025	-0.243350028	22.7916	6

Date	Julian Day	Running Day	Temperature (°C)			Relative Humidity (dec)			Net Radiation (MJ/m2/day)	Wind speed (km/hr)	Precipitation incl. snowmelt (mm)
			Max	Min	Average	Max	Min	Average			
15-Nov-04	320	199	2.152	*-11.5*	-4.674	0.928	0.877	0.9025	-2.387815092	21.609	4

*Data in *italics* indicate malfunction in logger and data is taken from the most recent day

*Precipitation data taken from manual weather station

APPENDIX C – RESULTS OF PARAMETRIC ANALYSES FOR BASE CASE, LOW AND HIGH KSAT CASES

Appendix C - Results of Parametric Analyses

Base Case

Qnet % of Hori	Ksat uncompacted	Ksat compacted	Ksat (cm/s) Waste rock	PE (mm)	AE (mm)	PT (mm)	AT (mm)	ET (mm)	Precip. (mm)	Runoff (mm)	Infil. (mm)
50	6.00E-06	2.00E-07	3.00E-03	-336.183	-139.374	-235.429	-201.623	-340.997	512.5	162.43	210.693
60	6.00E-06	2.00E-07	3.00E-03	-361.682	-142.538	-254.264	-205.266	-347.803	512.5	155.43	214.531
70	6.00E-06	2.00E-07	3.00E-03	-387.075	-145.713	-272.997	-207.998	-353.711	512.5	149.55	217.236
80	6.00E-06	2.00E-07	3.00E-03	-412.503	-149.768	-291.76	-210.178	-359.945	512.5	145.09	217.646
90	6.00E-06	2.00E-07	3.00E-03	-437.997	-153.409	-310.606	-210.325	-363.734	512.5	140.15	218.946
100	6.00E-06	2.00E-07	3.00E-03	-463.369	-156.892	-329.341	-210.303	-367.195	512.5	136.96	218.654
110	6.00E-06	2.00E-07	3.00E-03	-488.754	-160.561	-348.045	-210.685	-371.246	512.5	134.69	217.251
120	6.00E-06	2.00E-07	3.00E-03	-514.331	-163.822	-366.903	-208.965	-372.787	512.5	133.49	215.186
130	6.00E-06	2.00E-07	3.00E-03	-539.806	-166.698	-385.698	-207.321	-374.019	512.5	132.31	213.495
140	6.00E-06	2.00E-07	3.00E-03	-565.169	-169.507	-404.41	-205.154	-374.661	512.5	131.81	211.184
150	6.00E-06	2.00E-07	3.00E-03	-590.569	-172.335	-423.145	-202.684	-375.019	512.5	130.97	209.195

Qnet % of Hori	Bott Flow (mm)	User Node flux (mm)	Infiltration minus AT (mm)	%Infiltration	% Infiltration into waste rock layer
50	-9.534	-8.914	9.070	1.7697561	1.86029268
60	-9.037	-8.449	9.265	1.8078049	1.76331707
70	-8.608	-8.051	9.238	1.8025366	1.67960976
80	-8.037	-7.510	7.468	1.4571707	1.56819512
90	-7.448	-6.952	8.621	1.6821463	1.45326829
100	-6.893	-6.428	8.351	1.6294634	1.34497561
110	-6.336	-5.895	6.566	1.2811707	1.23629268
120	-5.790	-5.368	6.221	1.2138537	1.1297561
130	-5.411	-5.002	6.174	1.2046829	1.05580488
140	-5.104	-4.706	6.030	1.1765854	0.99590244
150	-4.893	-4.503	6.511	1.270439	0.95473171

HIGH Ksat (Ksat uncompacted till = 6.0E-04 cm/s)

Qnet % of Hori	Ksat uncompacted	Ksat compacted	Ksat (cm/s) Waste rock	PE (mm)	AE (mm)	PT (mm)	AT (mm)	ET (mm)	Precip. (mm)	Runoff (mm)	Infil. (mm)
50	6.00E-04	**2.00E-05**	3.00E-03	-335.942	-170.596	-235.261	-225.046	-395.642	512.5	0.986	340.919
60	6.00E-04	**2.00E-05**	3.00E-03	-361.447	-182.698	-254.082	-236.254	-418.951	512.5	0.678	329.124
70	6.00E-04	**2.00E-05**	3.00E-03	-386.961	-194.617	-272.894	-244.338	-438.955	512.5	0.806	317.077
80	6.00E-04	**2.00E-05**	3.00E-03	-412.156	-205.591	-291.47	-249.836	-455.426	512.5	0.667	306.243
90	6.00E-04	**2.00E-05**	3.00E-03	-437.516	-215.275	-310.254	-253.373	-468.648	512.5	0.59	296.634
100	6.00E-04	**2.00E-05**	3.00E-03	-462.821	-224.069	-328.948	-255.375	-479.444	512.5	0.253	288.178
110	6.00E-04	**2.00E-05**	3.00E-03	-488.301	-232.196	-347.691	-256.705	-488.9	512.5	0.429	279.876
120	6.00E-04	**2.00E-05**	3.00E-03	-513.861	-239.211	-366.602	-257.704	-496.915	512.5	0.348	272.941
130	6.00E-04	**2.00E-05**	3.00E-03	-539.269	-245.458	-385.354	-258.399	-503.857	512.5	0.183	266.858
140	6.00E-04	**2.00E-05**	3.00E-03	-565.185	-251.421	-404.445	-258.699	-510.121	512.5	0.172	260.906
150	6.00E-04	**2.00E-05**	3.00E-03	-590.29	-256.751	-423.034	-258.802	-515.552	512.5	0.04	255.709

Qnet % of Hori	Bott Flow (mm)	User Node flux (mm)	Infiltration minus AT (mm)	%Infiltration	% Infiltration into waste rock layer
50	-110.716	-106.445	115.873	22.609366	21.603122
60	-89.127	-84.280	92.870	18.120976	17.3906341
70	-69.174	-64.431	72.739	14.192976	13.4973659
80	-52.377	-47.657	56.407	11.006244	10.2199024
90	-38.736	-34.000	43.261	8.4411707	7.5582439
100	-26.964	-22.614	32.803	6.4005854	5.26126829
110	-18.229	-13.420	23.171	4.5211707	3.55687805
120	-10.017	-5.151	15.237	2.9730732	1.95453659
130	-2.817	2.101	8.459	1.6505366	0.54965854
140	3.619	8.602	2.207	0.4306341	-0.7061463
150	9.271	14.302	-3.093	-0.6035122	-1.8089756

Qnet % of Hori	Ksat uncompacted	Ksat compacted	Ksat (cm/s) Waste rock	PE (mm)	AE (mm)	PT (mm)	AT (mm)	ET (mm)	Precip. (mm)	Runoff (mm)	Infil. (mm)
50	6.00E-04	**2.00E-06**	3.00E-03	-336.083	-170.029	-235.376	-209.384	-379.414	512.5	49.018	293.452
60	6.00E-04	**2.00E-06**	3.00E-03	-361.598	-179.614	-254.149	-210.594	-390.208	512.5	44.921	287.965
70	6.00E-04	**2.00E-06**	3.00E-03	-387.06	-188.164	-272.938	-208.977	-397.141	512.5	51.203	273.134
80	6.00E-04	**2.00E-06**	3.00E-03	-412.432	-196.356	-291.589	-206.273	-402.629	512.5	50.756	265.388
90	6.00E-04	**2.00E-06**	3.00E-03	-437.906	-203.632	-310.407	-203.646	-407.278	512.5	46.004	262.865
100	6.00E-04	**2.00E-06**	3.00E-03	-463.51	-210.199	-329.342	-201.294	-411.493	512.5	34.5	267.801
110	6.00E-04	**2.00E-06**	3.00E-03	-489.103	-216.23	-348.221	-199.168	-415.399	512.5	27.552	268.718
120	6.00E-04	**2.00E-06**	3.00E-03	-514.655	-221.887	-367.056	-196.911	-418.798	512.5	48.669	241.943
130	6.00E-04	**2.00E-06**	3.00E-03	-539.813	-227.181	-385.66	-194.69	-421.872	512.5	56.127	229.191
140	6.00E-04	**2.00E-06**	3.00E-03	-565.25	-232.48	-404.41	-192.121	-424.601	512.5	53.106	226.914
150	6.00E-04	**2.00E-06**	3.00E-03	-590.702	-237.251	-423.259	-190.008	-427.259	512.5	45.806	229.443

Qnet % of Hori	Bott Flow (mm)	User Node flux (mm)	Infiltration minus AT (mm)	%Infiltration	% Infiltration into waste rock layer
50	-73.471	-69.173	84.068	16.403512	14.3358049
60	-64.742	-60.608	77.371	15.09678	12.6325854
70	-59.717	-55.659	64.157	12.518439	11.6520976
80	-55.003	-51.052	59.115	11.534634	10.7322927
90	-50.873	-47.111	59.219	11.554927	9.92643902
100	-46.182	-42.613	66.507	12.976976	9.01112195
110	-42.745	-39.287	69.550	13.570732	8.3404878
120	-39.825	-36.354	45.032	8.7867317	7.77073171
130	-37.010	-33.650	34.501	6.7319024	7.22146341
140	-33.967	-30.724	34.793	6.788878	6.62770732
150	-32.279	-29.023	39.435	7.6946341	6.29834146

Qnet % of Hori	Ksat uncompacted	Ksat compacted	Ksat (cm/s) Waste rock	PE (mm)	AE (mm)	PT (mm)	AT (mm)	ET (mm)	Precip. (mm)	Runoff (mm)	Infil. (mm)
50	6.00E-04	**2.00E-07**	3.00E-03	-336.017	-169.259	-235.333	-205.341	-374.6	512.5	80.163	263.078
60	6.00E-04	**2.00E-07**	3.00E-03	-361.735	-177.976	-254.267	-204.308	-382.284	512.5	69.854	264.671
70	6.00E-04	**2.00E-07**	3.00E-03	-387.173	-186.125	-272.941	-201.044	-387.169	512.5	67.379	258.997
80	6.00E-04	**2.00E-07**	3.00E-03	-412.566	-194.078	-291.689	-197.205	-391.283	512.5	75.948	242.474
90	6.00E-04	**2.00E-07**	3.00E-03	-437.807	-200.99	-310.45	-194.07	-395.06	512.5	42.897	268.61
100	6.00E-04	**2.00E-07**	3.00E-03	-463.384	-207.226	-329.255	-191.273	-398.499	512.5	88.326	216.948
110	6.00E-04	**2.00E-07**	3.00E-03	-488.75	-212.905	-347.96	-188.974	-401.879	512.5	56.085	243.51
120	6.00E-04	**2.00E-07**	3.00E-03	-514.232	-218.439	-366.804	-186.522	-404.961	512.5	68.69	225.371
130	6.00E-04	**2.00E-07**	3.00E-03	-539.545	-223.682	-385.559	-183.653	-407.335	512.5	90.375	198.443
140	6.00E-04	**2.00E-07**	3.00E-03	-565.085	-229.071	-404.409	-181.465	-410.537	512.5	60.814	222.615
150	6.00E-04	**2.00E-07**	3.00E-03	-590.499	-233.591	-423.151	-178.297	-411.888	512.5	110.78	168.127

Qnet % of Hori	Bott Flow (mm)	User Node flux (mm)	Infiltration minus AT (mm)	%Infiltration	% Infiltration into waste rock layer
50	-11.666	-11.015	57.737	11.265756	2.27629268
60	-10.557	-9.962	60.363	11.778146	2.05990244
70	-10.116	-9.553	57.953	11.307902	1.97385366
80	-9.655	-9.120	45.269	8.8329756	1.88390244
90	-9.038	-8.536	74.540	14.54439	1.7635122
100	-8.606	-8.126	25.675	5.0097561	1.67921951
110	-8.227	-7.772	54.536	10.641171	1.60526829
120	-7.836	-7.398	38.849	7.5802927	1.52897561
130	-7.191	-6.767	14.790	2.8858537	1.40312195
140	-6.620	-6.214	41.150	8.0292683	1.29170732
150	-5.767	-5.384	-10.170	-1.9843902	1.12526829

Qnet % of Hori	Ksat uncompacted	Ksat compacted	Ksat (cm/s) Waste rock	PE (mm)	AE (mm)	PT (mm)	AT (mm)	ET (mm)	Precip. (mm)	Runoff (mm)	Infil. (mm)
50	6.00E-04	**2.00E-08**	3.00E-03	-336.022	-168.878	-235.313	-203.222	-372.1	512.5	139.47	204.149
60	6.00E-04	**2.00E-08**	3.00E-03	-361.764	-177.397	-254.287	-201.455	-378.852	512.5	127.58	207.52
70	6.00E-04	**2.00E-08**	3.00E-03	-387.147	-185.415	-272.982	-197.63	-383.045	512.5	156.61	170.478
80	6.00E-04	**2.00E-08**	3.00E-03	-412.406	-193.263	-291.654	-193.509	-386.772	512.5	133.66	185.573
90	6.00E-04	**2.00E-08**	3.00E-03	-437.807	-200.083	-310.399	-190.136	-390.219	512.5	160.72	151.696
100	6.00E-04	**2.00E-08**	3.00E-03	-463.276	-206.148	-329.216	-187.317	-393.465	512.5	209.93	96.421
110	6.00E-04	**2.00E-08**	3.00E-03	-488.909	-211.853	-348.074	-184.851	-396.704	512.5	325.39	-24.744
120	6.00E-04	**2.00E-08**	3.00E-03	-514.168	-217.282	-366.798	-182.412	-399.694	512.5	253.24	41.98
130	6.00E-04	**2.00E-08**	3.00E-03	-539.761	-222.665	-385.673	-179.43	-402.095	512.5	502.36	-212.522
140	6.00E-04	**2.00E-08**	3.00E-03	-564.995	-227.759	-404.3	-176.593	-404.352	512.5	402.27	-117.527
150	6.00E-04	**2.00E-08**	3.00E-03	-590.634	-232.22	-423.2	-173.93	-406.15	512.5	656.73	-376.445

Qnet % of Hori	Bott Flow (mm)	User Node flux (mm)	Infiltration minus AT (mm)	%Infiltration	% Infiltration into waste rock layer
50	-0.359	-0.363	0.927	0.180878	0.07004878
60	-0.449	-0.373	6.065	1.1834146	0.08760976
70	-0.443	-0.367	-27.152	-5.2979512	0.08643902
80	-0.438	-0.362	-7.936	-1.5484878	0.08546341
90	-0.431	-0.355	-38.440	-7.5004878	0.08409756
100	-0.427	-0.350	-90.896	-17.735805	0.08331707
110	-0.422	-0.347	-209.595	-40.896585	0.08234146
120	-0.418	-0.344	-140.432	-27.401366	0.08156098
130	-0.415	-0.341	-391.952	-76.478439	0.08097561
140	-0.411	-0.338	-294.120	-57.389268	0.08019512
150	-0.408	-0.334	-550.375	-107.39024	0.07960976

LOW Ksat (Ksat uncompacted till = 6.0E-05 cm/s)

Qnet % of Hori	Ksat uncompacted	Ksat compacted	Ksat (cm/s) Waste rock	PE (mm)	AE (mm)	PT (mm)	AT (mm)	ET (mm)	Precip. (mm)	Runoff (mm)	Infil. (mm)
50	6.00E-05	**2.00E-05**	3.00E-03	-336.366	-162.998	-235.556	-154.372	-317.37	512.5	153.83	195.674
60	6.00E-05	**2.00E-05**	3.00E-03	-361.934	-171.035	-254.42	-156.451	-327.485	512.5	143.93	197.541
70	6.00E-05	**2.00E-05**	3.00E-03	-387.231	-178.316	-273.03	-158.237	-336.553	512.5	141	193.186
80	6.00E-05	**2.00E-05**	3.00E-03	-412.643	-184.428	-291.798	-160.016	-344.444	512.5	136.24	191.833
90	6.00E-05	**2.00E-05**	3.00E-03	-438.239	-190.073	-310.695	-161.509	-351.582	512.5	131.51	190.913
100	6.00E-05	**2.00E-05**	3.00E-03	-463.58	-195.154	-329.389	-162.125	-357.279	512.5	124.85	192.5
110	6.00E-05	**2.00E-05**	3.00E-03	-489.091	-199.746	-348.235	-162.668	-362.415	512.5	122.45	190.307
120	6.00E-05	**2.00E-05**	3.00E-03	-514.584	-203.85	-367.031	-162.518	-366.368	512.5	115.14	193.516
130	6.00E-05	**2.00E-05**	3.00E-03	-540.206	-207.847	-385.939	-161.414	-369.261	512.5	117.47	187.185
140	6.00E-05	**2.00E-05**	3.00E-03	-565.502	-211.502	-404.649	-160.342	-371.844	512.5	114.04	186.959
150	6.00E-05	**2.00E-05**	3.00E-03	-590.803	-215.051	-423.319	-159.169	-374.22	512.5	114.09	183.355

Qnet % of Hori	Bott Flow (mm)	User Node flux (mm)	Infiltration minus AT (mm)	%Infiltration	% Infiltration into waste rock layer
50	-40.644	-36.228	41.302	8.0589268	7.93053659
60	-36.984	-32.743	41.090	8.017561	7.21639024
70	-33.956	-29.886	34.949	6.8193171	6.62556098
80	-31.368	-27.495	31.817	6.2081951	6.12058537
90	-29.204	-25.486	29.404	5.7373659	5.69834146
100	-26.790	-23.240	30.375	5.9268293	5.22731707
110	-25.201	-21.789	27.639	5.3929756	4.91726829
120	-23.794	-20.521	30.998	6.0483902	4.64273171
130	-22.599	-19.453	25.771	5.0284878	4.40956098
140	-21.562	-18.562	26.617	5.193561	4.20721951
150	-20.859	-17.965	24.186	4.7192195	4.07004878

Qnet % of Hori	Ksat uncompacted	Ksat compacted	Ksat (cm/s) Waste rock	PE (mm)	AE (mm)	PT (mm)	AT (mm)	ET (mm)	Precip. (mm)	Runoff (mm)	Infil. (mm)
50	6.00E-05	**2.00E-06**	3.00E-03	-336.155	-158.701	-235.39	-211.338	-370.038	512.5	65.027	288.77
60	6.00E-05	**2.00E-06**	3.00E-03	-361.516	-164.823	-254.111	-216.964	-381.786	512.5	61.851	285.827
70	6.00E-05	**2.00E-06**	3.00E-03	-387.078	-169.219	-272.971	-219.66	-388.879	512.5	53.92	289.361
80	6.00E-05	**2.00E-06**	3.00E-03	-412.408	-173.167	-291.668	-221.302	-394.47	512.5	57.39	281.943
90	6.00E-05	**2.00E-06**	3.00E-03	-437.719	-176.983	-310.329	-222.898	-399.881	512.5	59.42	276.097
100	6.00E-05	**2.00E-06**	3.00E-03	-463.365	-180.088	-329.256	-224.317	-404.405	512.5	51.314	281.098
110	6.00E-05	**2.00E-06**	3.00E-03	-488.808	-183.215	-348.018	-224.671	-407.886	512.5	57.307	271.979
120	6.00E-05	**2.00E-06**	3.00E-03	-514.087	-186.018	-366.674	-225.227	-411.245	512.5	54.23	272.252
130	6.00E-05	**2.00E-06**	3.00E-03	-539.714	-189.198	-385.587	-225	-414.198	512.5	54.057	269.246
140	6.00E-05	**2.00E-06**	3.00E-03	-565.258	-192.029	-404.467	-225.578	-417.607	512.5	57.105	263.366
150	6.00E-05	**2.00E-06**	3.00E-03	-590.737	-194.754	-423.286	-224.334	-419.088	512.5	52.103	265.642

Qnet % of Hori	Bott Flow (mm)	User Node flux (mm)	Infiltration minus AT (mm)	%Infiltration	% Infiltration into waste rock layer
50	-79.236	-74.785	77.432	15.108683	15.4606829
60	-69.513	-65.356	68.863	13.436683	13.5635122
70	-63.980	-60.035	69.701	13.600195	12.4839024
80	-59.566	-55.788	60.641	11.83239	11.6226341
90	-55.810	-52.180	53.199	10.380293	10.8897561
100	-52.952	-49.447	56.781	11.07922	10.3320976
110	-49.518	-46.142	47.308	9.2308293	9.66204878
120	-46.409	-43.166	47.025	9.1756098	9.05541463
130	-43.215	-40.115	44.246	8.6333659	8.43219512
140	-40.070	-37.090	37.788	7.3732683	7.81853659
150	-37.228	-34.339	41.308	8.0600976	7.264

Qnet % of Hori	Ksat uncompacted	Ksat compacted	Ksat (cm/s) Waste rock	PE (mm)	AE (mm)	PT (mm)	AT (mm)	ET (mm)	Precip. (mm)	Runoff (mm)	Infil. (mm)
50	6.00E-05	**2.00E-07**	3.00E-03	-336.16	-158.22	-235.38	-208.79	-367.01	512.5	111.27	243.01
60	6.00E-05	**2.00E-07**	3.00E-03	-361.586	-164.205	-254.148	-212.854	-377.059	512.5	100.15	248.147
70	6.00E-05	**2.00E-07**	3.00E-03	-387.036	-168.468	-272.949	-214.237	-382.705	512.5	79.175	264.857
80	6.00E-05	**2.00E-07**	3.00E-03	-412.366	-172.403	-291.651	-214.05	-386.453	512.5	93.195	246.902
90	6.00E-05	**2.00E-07**	3.00E-03	-437.802	-176.004	-310.424	-214.329	-390.333	512.5	98.355	238.14
100	6.00E-05	**2.00E-07**	3.00E-03	-463.047	-179.147	-329.067	-214.783	-393.929	512.5	108.49	224.861
110	6.00E-05	**2.00E-07**	3.00E-03	-488.745	-182.561	-348.03	-215.377	-397.938	512.5	91.218	238.721
120	6.00E-05	**2.00E-07**	3.00E-03	-514.049	-185.557	-366.697	-214.336	-399.893	512.5	86.197	240.747
130	6.00E-05	**2.00E-07**	3.00E-03	-539.723	-188.783	-385.661	-213.968	-402.75	512.5	57.408	266.309
140	6.00E-05	**2.00E-07**	3.00E-03	-565.075	-191.827	-404.375	-213.744	-405.571	512.5	90.639	230.034
150	6.00E-05	**2.00E-07**	3.00E-03	-590.613	-194.54	-423.214	-212.498	-407.038	512.5	90.455	227.504

Qnet % of Hori	Bott Flow (mm)	User Node flux (mm)	Infiltration minus AT (mm)	%Infiltration	% Infiltration into waste rock layer
50	-12.420	-11.831	34.220	6.6770732	2.42341463
60	-11.413	-10.805	35.293	6.886439	2.22692683
70	-10.675	-10.102	50.620	9.8770732	2.08292683
80	-10.088	-9.561	32.852	6.4101463	1.96839024
90	-9.446	-8.934	23.811	4.6460488	1.84312195
100	-9.085	-8.593	10.078	1.966439	1.77268293
110	-8.771	-8.301	23.344	4.5549268	1.71141463
120	-8.481	-8.028	26.411	5.1533659	1.65482927
130	-8.015	-7.574	52.341	10.212878	1.56390244
140	-7.629	-7.199	16.290	3.1785366	1.48858537
150	-7.266	-6.848	15.006	2.928	1.4177561

Qnet % of Hori	Ksat uncompacted	Ksat compacted	Ksat (cm/s) Waste rock	PE (mm)	AE (mm)	PT (mm)	AT (mm)	ET (mm)	Precip. (mm)	Runoff (mm)	Infil. (mm)
50	6.00E-05	**2.00E-08**	3.00E-03	-336.16	-157.691	-235.405	-206.826	-364.517	512.5	78.284	276.525
60	6.00E-05	**2.00E-08**	3.00E-03	-361.606	-163.702	-254.149	-210.514	-374.216	512.5	95.645	253.152
70	6.00E-05	**2.00E-08**	3.00E-03	-386.947	-167.885	-272.906	-211.241	-379.126	512.5	103.43	241.189
80	6.00E-05	**2.00E-08**	3.00E-03	-412.343	-172.026	-291.665	-211.599	-383.625	512.5	96.981	243.493
90	6.00E-05	**2.00E-08**	3.00E-03	-437.542	-175.541	-310.273	-211.522	-387.064	512.5	100.76	236.195
100	6.00E-05	**2.00E-08**	3.00E-03	-463.093	-178.526	-329.122	-211.31	-389.836	512.5	98.474	235.5
110	6.00E-05	**2.00E-08**	3.00E-03	-488.773	-181.67	-348.056	-210.756	-392.426	512.5	90.103	240.727
120	6.00E-05	**2.00E-08**	3.00E-03	-514.226	-185.202	-366.829	-210.929	-396.131	512.5	115.73	211.567
130	6.00E-05	**2.00E-08**	3.00E-03	-539.512	-188.283	-385.511	-209.419	-397.703	512.5	86.584	237.633
140	6.00E-05	**2.00E-08**	3.00E-03	-565.226	-191.173	-404.483	-207.99	-399.163	512.5	102.51	218.815
150	6.00E-05	**2.00E-08**	3.00E-03	-590.453	-194.052	-423.09	-207.124	-401.175	512.5	56.598	261.85

Qnet % of Hori	Bott Flow (mm)	User Node flux (mm)	Infiltration minus AT (mm)	%Infiltration	% Infiltration into waste rock layer
50	-0.454	-0.378	69.699	13.599805	0.08858537
60	-0.448	-0.372	42.638	8.3196098	0.08741463
70	-0.443	-0.368	29.948	5.8435122	0.08643902
80	-0.438	-0.362	31.894	6.2232195	0.08546341
90	-0.432	-0.356	24.673	4.8142439	0.08429268
100	-0.426	-0.351	24.190	4.72	0.08312195
110	-0.421	-0.347	29.971	5.848	0.08214634
120	-0.417	-0.344	0.638	0.1244878	0.08136585
130	-0.414	-0.341	28.214	5.5051707	0.08078049
140	-0.410	-0.337	10.825	2.1121951	0.08
150	-0.407	-0.334	54.726	10.678244	0.07941463

APPENDIX D – MODEL INTEGRATION CALULATIONS

Appendix D - Model Integration Calculations

* Due to the large amount of data, daily Qnet measurements for each node has not been included. Only the average Qnet of the 199 days is shown here.

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1	7.13E+03	7.41E+03	1.20E+03	2.03E+01	1.44E+02	3.20E+02	5.18E+00	1.03E+03	102.23		3.994	8.216	1.572	0.068	9.387	4.566	1.702	0.069
2	7.13E+03	7.43E+03	1.20E+03	3.24E+01	1.73E+02	6.00E+01	5.03E+00	1.00E+03	99.31		4.645	8.430	1.601	0.068	9.593	4.662	1.725	0.069
3	7.13E+03	7.46E+03	1.20E+03	3.35E+01	1.81E+02	2.00E+01	5.01E+00	9.97E+02	98.84		4.751	8.465	1.605	0.068	9.626	4.678	1.729	0.069
4	7.13E+03	7.38E+03	1.20E+03	2.99E+01	1.78E+02	1.30E+02	5.09E+00	1.01E+03	100.38		4.403	8.351	1.590	0.068	9.517	4.626	1.717	0.069
5	7.14E+03	7.48E+03	1.20E+03	2.39E+01	1.56E+02	1.88E+02	5.17E+00	1.03E+03	101.92		4.061	8.238	1.575	0.068	9.408	4.576	1.704	0.069
6	7.14E+03	7.01E+03	1.17E+03	4.43E+01	1.72E+02	6.67E+01	4.69E+00	9.33E+02	92.54		6.277	8.957	1.668	0.069	10.098	4.905	1.784	0.070
7	7.14E+03	7.35E+03	1.20E+03	3.52E+01	1.76E+02	1.80E+02	4.97E+00	9.89E+02	98.05		4.935	8.524	1.613	0.068	9.684	4.705	1.736	0.069
8	7.14E+03	7.51E+03	1.20E+03	2.16E+01	1.86E+02	7.00E+01	5.20E+00	1.04E+03	102.66		3.899	8.185	1.568	0.068	9.357	4.552	1.698	0.069
9	7.15E+03	7.00E+03	1.17E+03	4.10E+01	2.04E+02	7.00E+01	4.79E+00	9.54E+02	94.54		5.776	8.796	1.648	0.069	9.944	4.830	1.766	0.069
10	7.15E+03	7.52E+03	1.20E+03	1.90E+01	1.96E+02	4.00E+01	5.22E+00	1.04E+03	102.95		3.837	8.164	1.565	0.068	9.337	4.543	1.696	0.069
11	7.15E+03	7.33E+03	1.20E+03	3.24E+01	1.68E+02	6.00E+01	5.03E+00	1.00E+03	99.30		4.646	8.430	1.601	0.068	9.593	4.662	1.725	0.069
12	7.15E+03	8.01E+03	1.24E+03	2.99E+01	1.50E+02	1.30E+02	5.06E+00	1.01E+03	99.90		4.510	8.386	1.595	0.068	9.550	4.642	1.720	0.069
13	7.15E+03	7.06E+03	1.19E+03	6.39E+01	1.91E+02	7.14E+00	3.81E+00	7.58E+02	75.14		11.241	10.508	1.839	0.070	11.567	5.651	1.959	0.071
14	7.15E+03	7.15E+03	1.20E+03	1.50E+01	1.31E+02	2.40E+02	5.19E+00	1.03E+03	102.31		3.977	8.210	1.571	0.068	9.381	4.563	1.701	0.069
15	7.15E+03	7.17E+03	1.20E+03	9.67E+00	1.34E+02	1.00E+02	5.19E+00	1.03E+03	102.47		3.940	8.198	1.569	0.068	9.370	4.558	1.700	0.069
16	7.15E+03	8.16E+03	1.27E+03	2.80E+01	1.60E+02	1.40E+02	5.11E+00	1.02E+03	100.83		4.301	8.317	1.586	0.068	9.484	4.611	1.713	0.069
17	7.15E+03	6.56E+03	1.11E+03	3.84E+01	2.58E+02	6.67E+01	4.66E+00	9.27E+02	91.93		6.432	9.007	1.674	0.069	10.145	4.928	1.789	0.070
18	7.15E+03	7.13E+03	1.20E+03	3.42E+01	1.66E+02	2.40E+02	4.99E+00	9.93E+02	98.43		4.848	8.496	1.609	0.068	9.656	4.692	1.733	0.069
19	7.15E+03	7.19E+03	1.20E+03	2.19E+01	1.90E+02	1.50E+02	5.20E+00	1.03E+03	102.58		3.917	8.191	1.568	0.068	9.362	4.555	1.699	0.069
20	7.16E+03	7.97E+03	1.23E+03	4.56E+01	1.68E+02	2.92E+02	4.64E+00	9.24E+02	91.58		6.521	9.035	1.677	0.069	10.172	4.941	1.793	0.070
21	7.16E+03	7.21E+03	1.20E+03	3.12E+01	1.56E+02	1.13E+02	5.05E+00	1.00E+03	99.57		4.585	8.410	1.598	0.068	9.574	4.653	1.723	0.069
22	7.16E+03	7.91E+03	1.22E+03	5.67E+01	1.70E+02	9.29E+01	4.17E+00	8.30E+02	82.31		9.062	9.835	1.769	0.070	10.932	5.322	1.883	0.071
23	7.16E+03	7.83E+03	1.20E+03	1.42E+01	4.24E+01	9.40E+02	4.87E+00	9.68E+02	95.99		5.424	8.683	1.634	0.068	9.836	4.778	1.753	0.069
24	7.16E+03	6.77E+03	1.14E+03	1.84E+01	1.80E+02	4.00E+01	5.23E+00	1.04E+03	103.15		3.795	8.150	1.563	0.068	9.323	4.537	1.694	0.069
25	7.16E+03	6.99E+03	1.17E+03	1.40E+01	1.80E+02	1.86E+02	5.24E+00	1.04E+03	103.39		3.742	8.133	1.560	0.068	9.307	4.529	1.693	0.069
26	7.16E+03	6.68E+03	1.12E+03	1.84E+01	1.80E+02	6.43E+01	5.23E+00	1.04E+03	103.15		3.795	8.150	1.563	0.068	9.323	4.537	1.694	0.069
27	7.16E+03	7.12E+03	1.20E+03	5.19E+01	2.11E+02	7.50E+01	4.39E+00	8.73E+02	86.51		7.870	9.462	1.727	0.069	10.579	5.143	1.841	0.070
28	7.16E+03	7.24E+03	1.20E+03	3.57E+01	1.85E+02	6.00E+01	4.96E+00	9.86E+02	97.78		4.998	8.545	1.616	0.068	9.703	4.715	1.738	0.069
29	7.16E+03	8.04E+03	1.25E+03	6.39E+01	1.69E+02	0.00E+00	3.81E+00	7.58E+02	75.14		11.241	10.508	1.839	0.070	11.567	5.651	1.959	0.071
30	7.16E+03	6.91E+03	1.15E+03	2.51E+01	1.29E+02	1.44E+02	5.09E+00	1.01E+03	100.45		4.386	8.345	1.589	0.068	9.511	4.624	1.716	0.069
31	7.16E+03	8.23E+03	1.28E+03	3.92E+01	1.69E+02	1.67E+02	4.86E+00	9.66E+02	95.81		5.467	8.697	1.635	0.068	9.849	4.784	1.755	0.069
32	7.16E+03	7.31E+03	1.20E+03	2.98E+01	1.62E+02	6.00E+01	5.08E+00	1.01E+03	100.24		4.433	8.361	1.592	0.068	9.526	4.631	1.718	0.069
33	7.16E+03	6.74E+03	1.13E+03	9.46E+00	1.80E+02	2.50E+01	5.23E+00	1.04E+03	103.17		3.790	8.149	1.563	0.068	9.322	4.536	1.694	0.069
34	7.16E+03	7.25E+03	1.20E+03	3.49E+01	1.87E+02	2.00E+01	4.98E+00	9.90E+02	98.17		4.909	8.516	1.612	0.068	9.675	4.701	1.735	0.069
35	7.16E+03	7.04E+03	1.19E+03	5.02E+01	2.14E+02	1.17E+02	4.45E+00	8.86E+02	87.83		7.509	9.348	1.714	0.069	10.471	5.089	1.828	0.070
36	7.16E+03	6.65E+03	1.11E+03	1.74E+01	9.44E+01	2.86E+01	5.03E+00	1.00E+03	99.32		4.642	8.429	1.601	0.068	9.592	4.662	1.725	0.069
37	7.16E+03	7.28E+03	1.20E+03	3.68E+01	1.72E+02	2.00E+01	4.93E+00	9.80E+02	97.18		5.140	8.591	1.622	0.068	9.747	4.736	1.743	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
38	7.16E+03	6.52E+03	1.12E+03	4.59E+01	3.46E+02	1.42E+02	3.47E+00	6.91E+02	68.54		13.413	11.170	1.904	0.071	12.189	5.981	2.035	0.072
39	7.16E+03	6.50E+03	1.12E+03	4.62E+01	3.17E+02	0.00E+00	3.70E+00	7.37E+02	73.08		11.903	10.711	1.860	0.070	11.758	5.752	1.982	0.071
40	7.16E+03	7.11E+03	1.20E+03	4.56E+01	1.91E+02	4.00E+01	4.65E+00	9.24E+02	91.64		6.505	9.030	1.677	0.069	10.167	4.939	1.792	0.070
41	7.16E+03	6.57E+03	1.11E+03	2.99E+01	1.88E+02	2.50E+01	5.09E+00	1.01E+03	100.33		4.414	8.354	1.591	0.068	9.520	4.628	1.717	0.069
42	7.16E+03	6.58E+03	1.11E+03	3.26E+01	1.76E+02	1.25E+02	5.03E+00	1.00E+03	99.23		4.662	8.436	1.602	0.068	9.598	4.665	1.726	0.069
43	7.16E+03	7.30E+03	1.20E+03	3.87E+01	2.03E+02	2.00E+01	4.87E+00	9.68E+02	95.98		5.426	8.684	1.634	0.068	9.836	4.778	1.753	0.069
44	7.16E+03	8.10E+03	1.26E+03	2.81E+01	1.59E+02	2.92E+02	5.11E+00	1.02E+03	100.79		4.310	8.320	1.586	0.068	9.487	4.613	1.713	0.069
45	7.16E+03	6.76E+03	1.14E+03	2.66E+01	1.80E+02	6.67E+01	5.14E+00	1.02E+03	101.49		4.154	8.269	1.579	0.068	9.438	4.590	1.708	0.069
46	7.16E+03	7.54E+03	1.20E+03	1.95E+01	1.98E+02	6.00E+01	5.21E+00	1.04E+03	102.85		3.858	8.171	1.566	0.068	9.344	4.546	1.697	0.069
47	7.16E+03	6.53E+03	1.12E+03	4.65E+01	3.42E+02	1.25E+02	3.46E+00	6.88E+02	68.19		13.533	11.207	1.908	0.071	12.223	5.999	2.039	0.072
48	7.16E+03	7.04E+03	1.19E+03	5.02E+01	2.14E+02	7.00E+01	4.45E+00	8.86E+02	87.83		7.509	9.348	1.714	0.069	10.471	5.089	1.828	0.070
49	7.16E+03	8.16E+03	1.27E+03	2.46E+01	1.51E+02	1.67E+02	5.15E+00	1.02E+03	101.60		4.131	8.261	1.578	0.068	9.430	4.586	1.707	0.069
50	7.16E+03	8.04E+03	1.25E+03	3.53E+01	1.35E+02	6.00E+01	4.91E+00	9.78E+02	96.96		5.191	8.608	1.624	0.068	9.764	4.743	1.745	0.069
51	7.16E+03	6.65E+03	1.11E+03	1.91E+01	7.52E+01	3.00E+01	4.90E+00	9.76E+02	96.75		5.242	8.624	1.626	0.068	9.779	4.751	1.747	0.069
52	7.16E+03	6.91E+03	1.15E+03	2.01E+01	1.22E+02	8.75E+01	5.13E+00	1.02E+03	101.12		4.237	8.296	1.583	0.068	9.464	4.602	1.711	0.069
53	7.16E+03	6.67E+03	1.12E+03	2.66E+01	1.80E+02	5.00E+01	5.14E+00	1.02E+03	101.49		4.154	8.269	1.579	0.068	9.438	4.590	1.708	0.069
54	7.17E+03	7.93E+03	1.22E+03	5.53E+01	1.70E+02	1.50E+02	4.24E+00	8.44E+02	83.62		8.681	9.716	1.756	0.069	10.820	5.265	1.869	0.070
55	7.17E+03	7.09E+03	1.20E+03	3.10E+01	2.14E+02	5.00E+01	5.04E+00	1.00E+03	99.36		4.634	8.426	1.600	0.068	9.589	4.661	1.725	0.069
56	7.17E+03	6.88E+03	1.15E+03	2.20E+01	1.44E+02	1.25E+02	5.17E+00	1.03E+03	101.96		4.052	8.235	1.575	0.068	9.405	4.575	1.704	0.069
57	7.17E+03	6.73E+03	1.13E+03	4.56E+01	1.91E+02	5.83E+01	4.65E+00	9.24E+02	91.64		6.505	9.030	1.677	0.069	10.167	4.939	1.792	0.070
58	7.17E+03	6.82E+03	1.15E+03	4.00E+01	1.80E+02	4.00E+01	4.83E+00	9.62E+02	95.38		5.571	8.730	1.640	0.068	9.881	4.800	1.759	0.069
59	7.17E+03	8.24E+03	1.28E+03	2.04E+01	1.53E+02	2.00E+02	5.20E+00	1.03E+03	102.53		3.928	8.194	1.569	0.068	9.366	4.556	1.699	0.069
60	7.17E+03	6.89E+03	1.15E+03	3.08E+01	2.20E+02	1.50E+01	5.03E+00	1.00E+03	99.19		4.673	8.439	1.602	0.068	9.602	4.666	1.726	0.069
61	7.17E+03	6.80E+03	1.15E+03	4.65E+01	1.98E+02	1.00E+01	4.61E+00	9.17E+02	90.90		6.697	9.091	1.684	0.069	10.226	4.968	1.799	0.070
62	7.17E+03	6.64E+03	1.11E+03	2.37E+01	7.93E+01	4.29E+01	4.84E+00	9.63E+02	95.43		5.558	8.726	1.639	0.068	9.877	4.798	1.758	0.069
63	7.17E+03	6.55E+03	1.12E+03	4.82E+01	2.97E+02	4.00E+01	3.91E+00	7.79E+02	77.22		10.589	10.308	1.819	0.070	11.379	5.553	1.936	0.071
64	7.17E+03	6.86E+03	1.15E+03	3.65E+01	2.04E+02	1.17E+02	4.92E+00	9.80E+02	97.12		5.154	8.596	1.622	0.068	9.752	4.738	1.744	0.069
65	7.17E+03	7.35E+03	1.21E+03	4.71E+01	2.48E+02	9.17E+01	4.45E+00	8.86E+02	87.81		7.515	9.350	1.714	0.069	10.472	5.090	1.828	0.070
66	7.17E+03	7.38E+03	1.21E+03	3.55E+01	2.91E+02	2.50E+01	4.44E+00	8.84E+02	87.59		7.576	9.369	1.717	0.069	10.491	5.099	1.830	0.070
67	7.17E+03	6.66E+03	1.12E+03	5.92E+01	2.07E+02	6.43E+01	4.06E+00	8.07E+02	80.00		9.741	10.046	1.791	0.070	11.131	5.425	1.907	0.071
68	7.17E+03	7.36E+03	1.21E+03	6.37E+01	2.78E+02	7.14E+00	3.49E+00	6.94E+02	68.85		13.309	11.139	1.901	0.071	12.160	5.965	2.031	0.072
69	7.17E+03	6.97E+03	1.17E+03	6.37E+01	1.89E+02	2.30E+02	3.82E+00	7.59E+02	75.27		11.199	10.495	1.838	0.070	11.555	5.645	1.958	0.071
70	7.17E+03	7.56E+03	1.20E+03	1.63E+01	1.65E+02	1.25E+02	5.23E+00	1.04E+03	103.22		3.779	8.145	1.562	0.068	9.318	4.534	1.694	0.069
71	7.17E+03	6.56E+03	1.12E+03	5.13E+01	3.07E+02	3.13E+01	3.64E+00	7.24E+02	71.80		12.320	10.838	1.872	0.070	11.878	5.815	1.997	0.072
72	7.17E+03	6.75E+03	1.14E+03	6.46E+01	1.98E+02	4.17E+01	3.77E+00	7.51E+02	74.42		11.470	10.578	1.846	0.070	11.633	5.686	1.967	0.071
73	7.17E+03	6.83E+03	1.15E+03	5.06E+01	2.39E+02	8.33E+01	4.37E+00	8.70E+02	86.25		7.943	9.485	1.730	0.069	10.600	5.154	1.843	0.070
74	7.17E+03	7.41E+03	1.21E+03	4.59E+01	2.84E+02	7.14E+01	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
75	7.17E+03	7.08E+03	1.20E+03	3.53E+01	2.25E+02	4.17E+01	4.91E+00	9.78E+02	96.96		5.191	8.608	1.624	0.068	9.764	4.743	1.745	0.069
76	7.17E+03	6.61E+03	1.11E+03	3.28E+01	1.42E+02	2.50E+01	4.99E+00	9.93E+02	98.46		4.840	8.494	1.609	0.068	9.654	4.691	1.732	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
77	7.17E+03	7.84E+03	1.20E+03	1.18E+01	3.54E+01	1.50E+02	4.91E+00	9.77E+02	96.84		5.222	8.617	1.625	0.068	9.773	4.748	1.746	0.069
78	7.17E+03	7.02E+03	1.19E+03	5.73E+01	2.39E+02	2.14E+01	4.09E+00	8.15E+02	80.79		9.508	9.973	1.784	0.070	11.063	5.390	1.898	0.071
79	7.18E+03	8.11E+03	1.26E+03	2.78E+01	1.62E+02	1.17E+02	5.12E+00	1.02E+03	100.94		4.278	8.310	1.585	0.068	9.477	4.608	1.712	0.069
80	7.18E+03	7.45E+03	1.21E+03	6.35E+01	2.64E+02	2.86E+01	3.64E+00	7.24E+02	71.78		12.326	10.840	1.872	0.070	11.879	5.816	1.997	0.072
81	7.18E+03	6.64E+03	1.11E+03	2.30E+01	8.12E+01	4.29E+01	4.87E+00	9.68E+02	95.99		5.424	8.683	1.634	0.068	9.836	4.778	1.753	0.069
82	7.18E+03	8.02E+03	1.24E+03	4.61E+01	1.64E+02	7.50E+01	4.62E+00	9.20E+02	91.20		6.618	9.066	1.681	0.069	10.202	4.956	1.796	0.070
83	7.18E+03	7.93E+03	1.22E+03	6.36E+01	1.74E+02	9.29E+01	3.82E+00	7.61E+02	75.44		11.146	10.479	1.836	0.070	11.540	5.637	1.956	0.071
84	7.18E+03	7.33E+03	1.21E+03	4.71E+01	2.48E+02	2.86E+01	4.45E+00	8.86E+02	87.81		7.515	9.350	1.714	0.069	10.472	5.090	1.828	0.070
85	7.18E+03	7.98E+03	1.23E+03	6.35E+01	1.74E+02	1.86E+02	3.83E+00	7.61E+02	75.46		11.138	10.476	1.836	0.070	11.538	5.636	1.955	0.071
86	7.18E+03	7.07E+03	1.20E+03	3.26E+01	2.31E+02	7.50E+01	4.95E+00	9.86E+02	97.74		5.007	8.548	1.616	0.068	9.706	4.716	1.738	0.069
87	7.18E+03	6.78E+03	1.15E+03	3.98E+01	2.33E+02	2.14E+01	4.77E+00	9.48E+02	94.01		5.907	8.838	1.653	0.069	9.984	4.850	1.771	0.070
88	7.18E+03	8.05E+03	1.25E+03	4.65E+01	1.62E+02	1.83E+02	4.61E+00	9.17E+02	90.90		6.697	9.091	1.684	0.069	10.226	4.968	1.799	0.070
89	7.18E+03	6.61E+03	1.11E+03	3.03E+01	1.17E+02	1.67E+01	4.95E+00	9.86E+02	97.71		5.014	8.550	1.617	0.068	9.708	4.717	1.739	0.069
90	7.18E+03	7.02E+03	1.19E+03	4.85E+01	2.25E+02	7.50E+01	4.50E+00	8.96E+02	88.79		7.251	9.267	1.705	0.069	10.393	5.051	1.819	0.070
91	7.18E+03	6.72E+03	1.13E+03	2.92E+01	2.07E+02	1.10E+02	5.08E+00	1.01E+03	100.26		4.428	8.359	1.591	0.068	9.525	4.630	1.717	0.069
92	7.18E+03	7.47E+03	1.21E+03	3.81E+01	2.87E+02	5.00E+01	4.39E+00	8.74E+02	86.66		7.829	9.449	1.726	0.069	10.566	5.137	1.839	0.070
93	7.18E+03	6.63E+03	1.11E+03	2.88E+01	1.46E+02	1.88E+01	5.08E+00	1.01E+03	100.17		4.449	8.366	1.592	0.068	9.531	4.633	1.718	0.069
94	7.18E+03	6.66E+03	1.12E+03	6.41E+01	1.94E+02	8.33E+01	3.80E+00	7.56E+02	74.91		11.315	10.531	1.842	0.070	11.589	5.663	1.962	0.071
95	7.18E+03	8.17E+03	1.27E+03	2.83E+01	1.58E+02	2.58E+02	5.10E+00	1.02E+03	100.70		4.331	8.327	1.587	0.068	9.494	4.616	1.714	0.069
96	7.18E+03	6.78E+03	1.15E+03	5.69E+01	1.93E+02	0.00E+00	4.16E+00	8.28E+02	82.12		9.117	9.852	1.771	0.070	10.948	5.331	1.885	0.071
97	7.18E+03	7.23E+03	1.21E+03	3.98E+01	3.07E+02	1.75E+02	4.10E+00	8.15E+02	80.84		9.491	9.968	1.783	0.070	11.058	5.387	1.898	0.071
98	7.18E+03	6.96E+03	1.17E+03	4.71E+01	2.02E+02	9.29E+01	4.58E+00	9.12E+02	90.41		6.824	9.131	1.689	0.069	10.264	4.987	1.803	0.070
99	7.18E+03	7.21E+03	1.21E+03	7.17E+01	2.78E+02	9.38E+01	3.09E+00	6.16E+02	61.04		16.077	11.973	1.978	0.071	12.940	6.386	2.127	0.073
100	7.18E+03	6.62E+03	1.11E+03	3.64E+01	1.52E+02	3.57E+01	4.92E+00	9.79E+02	97.09		5.161	8.598	1.623	0.068	9.754	4.739	1.744	0.069
101	7.18E+03	7.32E+03	1.21E+03	3.98E+01	2.33E+02	6.43E+01	4.77E+00	9.48E+02	94.01		5.907	8.838	1.653	0.069	9.984	4.850	1.771	0.070
102	7.18E+03	7.27E+03	1.21E+03	6.41E+01	2.56E+02	1.29E+02	3.68E+00	7.32E+02	72.58		12.065	10.760	1.864	0.070	11.805	5.776	1.988	0.071
103	7.18E+03	7.30E+03	1.21E+03	4.82E+01	2.43E+02	9.38E+01	4.44E+00	8.84E+02	87.61		7.569	9.367	1.716	0.069	10.489	5.098	1.830	0.070
104	7.18E+03	7.58E+03	1.20E+03	1.70E+01	1.96E+02	5.00E+01	5.23E+00	1.04E+03	103.15		3.794	8.150	1.563	0.068	9.323	4.537	1.694	0.069
105	7.18E+03	6.63E+03	1.11E+03	4.40E+01	2.08E+02	7.00E+01	4.69E+00	9.34E+02	92.56		6.270	8.955	1.667	0.069	10.096	4.904	1.784	0.070
106	7.18E+03	6.59E+03	1.12E+03	6.46E+01	2.88E+02	1.43E+01	3.32E+00	6.60E+02	65.42		14.497	11.498	1.935	0.071	12.496	6.146	2.072	0.072
107	7.19E+03	7.11E+03	1.21E+03	7.60E+01	2.75E+02	1.88E+02	2.91E+00	5.79E+02	57.37		17.456	12.384	2.014	0.071	13.324	6.597	2.174	0.073
108	7.19E+03	6.84E+03	1.16E+03	4.82E+01	2.43E+02	1.67E+01	4.44E+00	8.84E+02	87.61		7.569	9.367	1.716	0.069	10.489	5.098	1.830	0.070
109	7.19E+03	6.84E+03	1.16E+03	6.41E+01	2.84E+02	9.17E+01	3.40E+00	6.76E+02	67.01		13.941	11.330	1.919	0.071	12.339	6.061	2.053	0.072
110	7.19E+03	8.25E+03	1.28E+03	2.34E+01	1.57E+02	4.00E+02	5.17E+00	1.03E+03	102.05		4.031	8.228	1.574	0.068	9.399	4.572	1.703	0.069
111	7.19E+03	7.19E+03	1.21E+03	1.40E+01	2.70E+02	5.00E+01	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
112	7.19E+03	6.74E+03	1.14E+03	4.94E+01	2.11E+02	6.88E+01	4.49E+00	8.93E+02	88.55		7.315	9.287	1.707	0.069	10.412	5.060	1.821	0.070
113	7.19E+03	7.84E+03	1.20E+03	4.16E+01	1.11E+02	1.25E+02	4.63E+00	9.21E+02	91.33		6.585	9.055	1.680	0.069	10.192	4.951	1.795	0.070
114	7.19E+03	7.15E+03	1.21E+03	4.59E+01	2.56E+02	2.50E+01	4.44E+00	8.84E+02	87.61		7.571	9.368	1.716	0.069	10.489	5.098	1.830	0.070
115	7.19E+03	7.17E+03	1.21E+03	1.40E+01	2.70E+02	1.38E+02	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
116	7.19E+03	6.85E+03	1.16E+03	4.82E+01	2.97E+02	2.00E+01	3.91E+00	7.79E+02	77.22		10.589	10.308	1.819	0.070	11.379	5.553	1.936	0.071
117	7.19E+03	6.92E+03	1.16E+03	3.53E+01	2.38E+02	5.00E+01	4.87E+00	9.68E+02	95.98		5.425	8.683	1.634	0.068	9.836	4.778	1.753	0.069
118	7.19E+03	6.50E+03	1.13E+03	4.65E+01	2.88E+02	0.00E+00	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
119	7.19E+03	6.82E+03	1.16E+03	6.41E+01	2.84E+02	5.00E+01	3.40E+00	6.76E+02	67.01		13.941	11.330	1.919	0.071	12.339	6.061	2.053	0.072
120	7.19E+03	8.49E+03	1.29E+03	9.32E+00	1.43E+02	1.49E+03	5.21E+00	1.04E+03	102.71		3.888	8.181	1.567	0.068	9.353	4.550	1.698	0.069
121	7.19E+03	7.49E+03	1.21E+03	2.46E+01	2.99E+02	9.29E+01	4.68E+00	9.31E+02	92.32		6.333	8.975	1.670	0.069	10.115	4.913	1.786	0.070
122	7.19E+03	6.98E+03	1.18E+03	5.77E+01	2.52E+02	1.00E+02	4.01E+00	7.97E+02	79.05		10.028	10.135	1.801	0.070	11.215	5.468	1.917	0.071
123	7.19E+03	7.05E+03	1.20E+03	3.53E+01	2.38E+02	6.25E+00	4.87E+00	9.68E+02	95.98		5.425	8.683	1.634	0.068	9.836	4.778	1.753	0.069
124	7.19E+03	6.72E+03	1.13E+03	2.18E+01	2.14E+02	1.43E+01	5.17E+00	1.03E+03	102.06		4.030	8.228	1.574	0.068	9.399	4.571	1.703	0.069
125	7.19E+03	8.12E+03	1.26E+03	4.53E+01	1.72E+02	2.08E+02	4.66E+00	9.27E+02	91.85		6.451	9.013	1.674	0.069	10.151	4.931	1.790	0.070
126	7.19E+03	6.52E+03	1.13E+03	6.37E+01	2.79E+02	2.14E+01	3.47E+00	6.91E+02	68.46		13.440	11.178	1.905	0.071	12.197	5.985	2.036	0.072
127	7.19E+03	6.86E+03	1.16E+03	4.82E+01	2.97E+02	5.83E+01	3.91E+00	7.79E+02	77.22		10.589	10.308	1.819	0.070	11.379	5.553	1.936	0.071
128	7.19E+03	6.65E+03	1.12E+03	5.02E+01	2.14E+02	3.57E+01	4.45E+00	8.86E+02	87.83		7.509	9.348	1.714	0.069	10.471	5.089	1.828	0.070
129	7.19E+03	7.01E+03	1.19E+03	4.94E+01	2.11E+02	1.43E+01	4.49E+00	8.93E+02	88.55		7.315	9.287	1.707	0.069	10.412	5.060	1.821	0.070
130	7.19E+03	7.10E+03	1.21E+03	3.98E+01	2.33E+02	6.43E+01	4.77E+00	9.48E+02	94.01		5.907	8.838	1.653	0.069	9.984	4.850	1.771	0.070
131	7.19E+03	6.61E+03	1.12E+03	7.21E+01	2.84E+02	1.88E+01	3.01E+00	5.98E+02	59.33		16.714	12.163	1.995	0.071	13.118	6.483	2.149	0.073
132	7.19E+03	6.81E+03	1.16E+03	4.94E+01	2.39E+02	6.67E+01	4.42E+00	8.79E+02	87.18		7.688	9.405	1.721	0.069	10.524	5.116	1.834	0.070
133	7.19E+03	7.93E+03	1.22E+03	7.60E+01	1.77E+02	1.14E+02	3.10E+00	6.17E+02	61.13		16.045	11.963	1.977	0.071	12.931	6.381	2.126	0.073
134	7.19E+03	7.51E+03	1.21E+03	2.99E+01	3.00E+02	3.57E+01	4.52E+00	8.99E+02	89.10		7.169	9.241	1.702	0.069	10.368	5.038	1.816	0.070
135	7.19E+03	6.55E+03	1.13E+03	7.17E+01	2.62E+02	5.56E+01	3.25E+00	6.47E+02	64.13		14.956	11.636	1.948	0.071	12.625	6.215	2.088	0.072
136	7.20E+03	6.87E+03	1.16E+03	3.67E+01	2.97E+02	2.14E+01	4.33E+00	8.62E+02	85.47		8.159	9.553	1.737	0.069	10.665	5.187	1.851	0.070
137	7.20E+03	6.94E+03	1.17E+03	4.03E+01	2.25E+02	3.57E+01	4.78E+00	9.51E+02	94.26		5.845	8.819	1.651	0.069	9.965	4.841	1.768	0.069
138	7.20E+03	6.91E+03	1.16E+03	3.10E+01	2.36E+02	5.83E+01	4.97E+00	9.89E+02	98.03		4.941	8.527	1.613	0.068	9.686	4.706	1.736	0.069
139	7.20E+03	6.71E+03	1.13E+03	2.41E+01	2.07E+02	8.13E+01	5.16E+00	1.03E+03	101.80		4.088	8.247	1.576	0.068	9.417	4.580	1.705	0.069
140	7.20E+03	7.60E+03	1.20E+03	1.77E+01	2.29E+02	3.33E+01	5.17E+00	1.03E+03	102.02		4.039	8.231	1.574	0.068	9.401	4.573	1.703	0.069
141	7.20E+03	6.56E+03	1.13E+03	3.79E+01	3.01E+02	7.14E+00	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070
142	7.20E+03	8.18E+03	1.27E+03	3.45E+01	1.66E+02	2.56E+02	4.98E+00	9.92E+02	98.30		4.878	8.506	1.611	0.068	9.666	4.697	1.734	0.069
143	7.20E+03	7.84E+03	1.20E+03	3.98E+01	1.17E+02	6.43E+01	4.72E+00	9.39E+02	93.11		6.132	8.911	1.662	0.069	10.054	4.883	1.779	0.070
144	7.20E+03	6.97E+03	1.18E+03	4.82E+01	2.43E+02	4.17E+01	4.44E+00	8.84E+02	87.61		7.569	9.367	1.716	0.069	10.489	5.098	1.830	0.070
145	7.20E+03	8.05E+03	1.25E+03	3.79E+01	1.49E+02	1.78E+02	4.88E+00	9.71E+02	96.22		5.368	8.665	1.631	0.068	9.819	4.770	1.751	0.069
146	7.20E+03	6.81E+03	1.16E+03	3.10E+01	2.14E+02	3.33E+01	5.04E+00	1.00E+03	99.36		4.634	8.426	1.600	0.068	9.589	4.661	1.725	0.069
147	7.20E+03	6.62E+03	1.12E+03	6.41E+01	2.84E+02	1.43E+01	3.40E+00	6.76E+02	67.01		13.941	11.330	1.919	0.071	12.339	6.061	2.053	0.072
148	7.20E+03	6.88E+03	1.16E+03	4.65E+01	2.88E+02	1.00E+02	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
149	7.20E+03	6.65E+03	1.12E+03	3.53E+01	2.25E+02	5.00E+01	4.91E+00	9.78E+02	96.96		5.191	8.608	1.624	0.068	9.764	4.743	1.745	0.069
150	7.20E+03	6.90E+03	1.16E+03	4.65E+01	2.52E+02	8.33E+00	4.45E+00	8.86E+02	87.80		7.518	9.351	1.714	0.069	10.473	5.091	1.828	0.070
151	7.20E+03	8.02E+03	1.24E+03	4.65E+01	1.62E+02	5.00E+01	4.61E+00	9.17E+02	90.90		6.697	9.091	1.684	0.069	10.226	4.968	1.799	0.070
152	7.20E+03	7.08E+03	1.21E+03	4.20E+01	2.36E+02	8.75E+01	4.69E+00	9.32E+02	92.43		6.304	8.966	1.669	0.069	10.106	4.909	1.785	0.070
153	7.20E+03	7.04E+03	1.20E+03	3.34E+01	2.21E+02	1.88E+01	4.97E+00	9.89E+02	98.07		4.930	8.523	1.613	0.068	9.682	4.705	1.736	0.069
154	7.20E+03	7.84E+03	1.20E+03	3.00E+01	8.72E+01	6.71E+02	4.76E+00	9.47E+02	93.87		5.942	8.850	1.655	0.069	9.995	4.855	1.772	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
155	7.20E+03	7.99E+03	1.23E+03	5.65E+01	1.74E+02	2.31E+02	4.18E+00	8.33E+02	82.55		8.990	9.812	1.766	0.069	10.911	5.312	1.880	0.071
156	7.21E+03	6.89E+03	1.16E+03	1.40E+01	2.70E+02	2.14E+01	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
157	7.21E+03	6.90E+03	1.16E+03	4.57E+01	2.56E+02	0.00E+00	4.44E+00	8.84E+02	87.63		7.564	9.366	1.716	0.069	10.487	5.097	1.830	0.070
158	7.21E+03	7.00E+03	1.19E+03	3.79E+01	2.11E+02	7.14E+01	4.88E+00	9.71E+02	96.22		5.368	8.665	1.631	0.068	9.819	4.770	1.751	0.069
159	7.21E+03	8.26E+03	1.28E+03	2.02E+01	1.44E+02	7.50E+01	5.18E+00	1.03E+03	102.27		3.984	8.213	1.571	0.068	9.384	4.565	1.701	0.069
160	7.21E+03	6.81E+03	1.16E+03	3.60E+01	2.03E+02	6.25E+01	4.94E+00	9.83E+02	97.42		5.082	8.572	1.619	0.068	9.730	4.727	1.741	0.069
161	7.21E+03	7.93E+03	1.22E+03	6.36E+01	1.86E+02	3.00E+01	3.82E+00	7.61E+02	75.44		11.146	10.479	1.836	0.070	11.540	5.637	1.956	0.071
162	7.21E+03	6.74E+03	1.14E+03	4.69E+01	2.01E+02	5.71E+01	4.59E+00	9.14E+02	90.60		6.774	9.116	1.687	0.069	10.249	4.979	1.802	0.070
163	7.21E+03	6.71E+03	1.13E+03	3.45E+01	1.94E+02	8.57E+01	4.98E+00	9.92E+02	98.30		4.878	8.506	1.611	0.068	9.666	4.697	1.734	0.069
164	7.21E+03	6.64E+03	1.12E+03	4.65E+01	2.52E+02	5.00E+01	4.45E+00	8.86E+02	87.80		7.518	9.351	1.714	0.069	10.473	5.091	1.828	0.070
165	7.21E+03	6.64E+03	1.12E+03	4.65E+01	2.52E+02	8.33E+00	4.45E+00	8.86E+02	87.80		7.518	9.351	1.714	0.069	10.473	5.091	1.828	0.070
166	7.21E+03	6.93E+03	1.17E+03	4.33E+01	2.25E+02	3.57E+01	4.68E+00	9.32E+02	92.42		6.307	8.967	1.669	0.069	10.107	4.909	1.785	0.070
167	7.21E+03	7.54E+03	1.21E+03	2.92E+01	2.97E+02	1.25E+01	4.57E+00	9.09E+02	90.13		6.898	9.155	1.692	0.069	10.287	4.998	1.806	0.070
168	7.21E+03	8.12E+03	1.26E+03	6.35E+01	1.76E+02	8.57E+01	3.83E+00	7.62E+02	75.51		11.124	10.472	1.836	0.070	11.533	5.634	1.955	0.071
169	7.21E+03	7.40E+03	1.22E+03	6.36E+01	2.63E+02	5.71E+01	3.65E+00	7.26E+02	71.97		12.264	10.821	1.870	0.070	11.862	5.806	1.995	0.072
170	7.21E+03	7.62E+03	1.20E+03	1.58E+01	2.11E+02	4.00E+01	5.22E+00	1.04E+03	102.91		3.845	8.167	1.565	0.068	9.339	4.544	1.696	0.069
171	7.21E+03	7.38E+03	1.22E+03	1.40E+01	2.70E+02	1.00E+02	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
172	7.21E+03	7.43E+03	1.22E+03	1.59E+01	2.70E+02	1.08E+02	5.03E+00	1.00E+03	99.26		4.656	8.433	1.601	0.068	9.596	4.664	1.726	0.069
173	7.21E+03	6.59E+03	1.13E+03	4.71E+01	2.92E+02	3.75E+01	4.02E+00	8.00E+02	79.28		9.958	10.113	1.798	0.070	11.195	5.457	1.914	0.071
174	7.21E+03	7.37E+03	1.22E+03	1.40E+01	2.70E+02	8.57E+01	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
175	7.21E+03	6.50E+03	1.14E+03	4.82E+01	2.97E+02	2.00E+02	3.91E+00	7.79E+02	77.22		10.589	10.308	1.819	0.070	11.379	5.553	1.936	0.071
176	7.21E+03	6.96E+03	1.18E+03	4.82E+01	2.43E+02	6.43E+01	4.44E+00	8.84E+02	87.61		7.569	9.367	1.716	0.069	10.489	5.098	1.830	0.070
177	7.21E+03	7.45E+03	1.22E+03	4.65E+01	2.88E+02	5.00E+01	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
178	7.21E+03	6.77E+03	1.15E+03	7.17E+01	1.86E+02	1.50E+02	3.36E+00	6.69E+02	66.36		14.168	11.399	1.926	0.071	12.403	6.096	2.061	0.072
179	7.21E+03	7.35E+03	1.22E+03	7.16E+01	2.65E+02	6.25E+00	3.23E+00	6.43E+02	63.76		15.089	11.676	1.951	0.071	12.663	6.236	2.093	0.072
180	7.21E+03	7.47E+03	1.22E+03	1.84E+01	2.70E+02	9.17E+01	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
181	7.21E+03	7.03E+03	1.20E+03	4.71E+01	2.02E+02	1.43E+01	4.58E+00	9.12E+02	90.41		6.824	9.131	1.689	0.069	10.264	4.987	1.803	0.070
182	7.21E+03	7.07E+03	1.21E+03	3.79E+01	2.11E+02	8.57E+01	4.88E+00	9.71E+02	96.22		5.368	8.665	1.631	0.068	9.819	4.770	1.751	0.069
183	7.21E+03	6.61E+03	1.13E+03	6.46E+01	2.88E+02	7.14E+00	3.32E+00	6.60E+02	65.42		14.497	11.498	1.935	0.071	12.496	6.146	2.072	0.072
184	7.21E+03	7.32E+03	1.22E+03	4.65E+01	2.52E+02	1.08E+02	4.45E+00	8.86E+02	87.80		7.518	9.351	1.714	0.069	10.473	5.091	1.828	0.070
185	7.22E+03	7.30E+03	1.22E+03	1.40E+01	2.70E+02	8.00E+01	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
186	7.22E+03	7.28E+03	1.22E+03	6.36E+01	2.77E+02	1.94E+02	3.50E+00	6.97E+02	69.13		13.214	11.110	1.898	0.071	12.133	5.951	2.028	0.072
187	7.22E+03	7.26E+03	1.22E+03	4.59E+01	2.56E+02	1.71E+02	4.44E+00	8.84E+02	87.61		7.571	9.368	1.716	0.069	10.489	5.098	1.830	0.070
188	7.22E+03	7.24E+03	1.22E+03	4.59E+01	2.56E+02	1.25E+02	4.44E+00	8.84E+02	87.61		7.571	9.368	1.716	0.069	10.489	5.098	1.830	0.070
189	7.22E+03	7.33E+03	1.22E+03	6.36E+01	2.63E+02	1.19E+02	3.65E+00	7.26E+02	71.97		12.264	10.821	1.870	0.070	11.862	5.806	1.995	0.072
190	7.22E+03	7.48E+03	1.22E+03	1.59E+01	2.70E+02	2.86E+01	5.03E+00	1.00E+03	99.26		4.656	8.433	1.601	0.068	9.596	4.664	1.726	0.069
191	7.22E+03	7.22E+03	1.22E+03	1.40E+01	2.70E+02	1.75E+02	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
192	7.22E+03	7.64E+03	1.20E+03	2.02E+01	2.19E+02	4.17E+01	5.18E+00	1.03E+03	102.14		4.012	8.222	1.573	0.068	9.393	4.569	1.702	0.069
193	7.22E+03	6.74E+03	1.14E+03	1.84E+01	1.80E+02	2.86E+01	5.23E+00	1.04E+03	103.15		3.795	8.150	1.563	0.068	9.323	4.537	1.694	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
194	7.22E+03	7.93E+03	1.22E+03	4.57E+01	1.93E+02	2.57E+02	4.64E+00	9.23E+02	91.54		6.531	9.038	1.678	0.069	10.175	4.943	1.793	0.070
195	7.22E+03	6.77E+03	1.15E+03	6.39E+01	1.69E+02	1.58E+02	3.81E+00	7.58E+02	75.14		11.241	10.508	1.839	0.070	11.567	5.651	1.959	0.071
196	7.22E+03	7.20E+03	1.22E+03	1.59E+01	2.70E+02	4.38E+01	5.03E+00	1.00E+03	99.26		4.656	8.433	1.601	0.068	9.596	4.664	1.726	0.069
197	7.22E+03	7.55E+03	1.21E+03	2.26E+01	3.23E+02	0.00E+00	4.59E+00	9.13E+02	90.56		6.785	9.119	1.687	0.069	10.252	4.981	1.802	0.070
198	7.22E+03	6.52E+03	1.14E+03	3.67E+01	2.97E+02	1.43E+01	4.33E+00	8.62E+02	85.47		8.159	9.553	1.737	0.069	10.665	5.187	1.851	0.070
199	7.22E+03	6.63E+03	1.13E+03	3.37E+01	2.70E+02	7.14E+00	4.69E+00	9.33E+02	92.53		6.278	8.957	1.668	0.069	10.098	4.905	1.784	0.070
200	7.22E+03	6.91E+03	1.17E+03	5.82E+01	2.48E+02	0.00E+00	4.00E+00	7.97E+02	78.99		10.047	10.140	1.801	0.070	11.221	5.471	1.917	0.071
201	7.22E+03	8.12E+03	1.26E+03	4.54E+01	1.71E+02	2.00E+02	4.65E+00	9.26E+02	91.77		6.471	9.019	1.675	0.069	10.157	4.934	1.791	0.070
202	7.22E+03	7.50E+03	1.22E+03	1.84E+01	2.70E+02	7.50E+01	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
203	7.22E+03	8.28E+03	1.28E+03	1.85E+01	1.32E+02	1.08E+02	5.17E+00	1.03E+03	101.95		4.054	8.236	1.575	0.068	9.406	4.575	1.704	0.069
204	7.22E+03	7.99E+03	1.23E+03	2.47E+01	1.55E+02	1.20E+02	5.16E+00	1.03E+03	101.71		4.107	8.254	1.577	0.068	9.423	4.583	1.706	0.069
205	7.22E+03	6.95E+03	1.18E+03	4.33E+01	2.25E+02	2.14E+01	4.68E+00	9.32E+02	92.42		6.307	8.967	1.669	0.069	10.107	4.909	1.785	0.070
206	7.22E+03	7.02E+03	1.20E+03	2.18E+01	1.80E+02	5.00E+01	5.20E+00	1.04E+03	102.65		3.901	8.186	1.568	0.068	9.357	4.552	1.698	0.069
207	7.22E+03	6.85E+03	1.17E+03	7.87E+01	2.74E+02	2.22E+01	2.77E+00	5.51E+02	54.64		18.513	12.699	2.041	0.072	13.617	6.758	2.211	0.073
208	7.22E+03	7.18E+03	1.22E+03	1.84E+01	2.70E+02	2.57E+02	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
209	7.23E+03	8.06E+03	1.25E+03	1.84E+01	1.80E+02	2.56E+02	5.23E+00	1.04E+03	103.15		3.795	8.150	1.563	0.068	9.323	4.537	1.694	0.069
210	7.23E+03	6.86E+03	1.17E+03	3.67E+01	2.97E+02	5.83E+01	4.33E+00	8.62E+02	85.47		8.159	9.553	1.737	0.069	10.665	5.187	1.851	0.070
211	7.23E+03	6.71E+03	1.13E+03	2.04E+01	2.07E+02	2.00E+02	5.20E+00	1.03E+03	102.53		3.928	8.194	1.569	0.068	9.366	4.556	1.699	0.069
212	7.23E+03	6.64E+03	1.13E+03	2.66E+01	2.70E+02	2.14E+01	4.86E+00	9.66E+02	95.81		5.468	8.697	1.635	0.068	9.849	4.784	1.755	0.069
213	7.23E+03	6.54E+03	1.14E+03	4.59E+01	2.84E+02	8.33E+00	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
214	7.23E+03	7.17E+03	1.22E+03	4.59E+01	2.56E+02	2.14E+01	4.44E+00	8.84E+02	87.61		7.571	9.368	1.716	0.069	10.489	5.098	1.830	0.070
215	7.23E+03	6.99E+03	1.19E+03	2.95E+01	2.25E+02	1.14E+02	5.04E+00	1.00E+03	99.40		4.624	8.423	1.600	0.068	9.586	4.659	1.725	0.069
216	7.23E+03	6.55E+03	1.14E+03	6.37E+01	2.78E+02	1.14E+02	3.49E+00	6.94E+02	68.85		13.309	11.139	1.901	0.071	12.160	5.965	2.031	0.072
217	7.23E+03	8.20E+03	1.27E+03	2.12E+01	1.57E+02	3.50E+02	5.20E+00	1.03E+03	102.49		3.936	8.197	1.569	0.068	9.368	4.558	1.700	0.069
218	7.23E+03	8.30E+03	1.28E+03	1.83E+01	1.20E+02	1.33E+02	5.13E+00	1.02E+03	101.28		4.201	8.284	1.581	0.068	9.453	4.597	1.709	0.069
219	7.23E+03	7.52E+03	1.22E+03	6.37E+01	2.79E+02	8.33E+01	3.47E+00	6.91E+02	68.46		13.440	11.178	1.905	0.071	12.197	5.985	2.036	0.072
220	7.23E+03	6.90E+03	1.17E+03	6.41E+01	2.56E+02	5.56E+01	3.68E+00	7.32E+02	72.58		12.065	10.760	1.864	0.070	11.805	5.776	1.988	0.071
221	7.23E+03	6.84E+03	1.17E+03	3.39E+01	2.43E+02	2.57E+02	4.87E+00	9.70E+02	96.12		5.392	8.673	1.632	0.068	9.826	4.773	1.752	0.069
222	7.23E+03	7.15E+03	1.22E+03	1.40E+01	2.70E+02	7.00E+01	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
223	7.23E+03	6.87E+03	1.17E+03	4.65E+01	2.88E+02	8.33E+00	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
224	7.23E+03	7.06E+03	1.21E+03	2.95E+01	2.25E+02	5.71E+01	5.04E+00	1.00E+03	99.40		4.624	8.423	1.600	0.068	9.586	4.659	1.725	0.069
225	7.23E+03	7.93E+03	1.22E+03	8.29E+01	1.79E+02	7.50E+01	2.65E+00	5.28E+02	52.37		19.414	12.966	2.063	0.072	13.865	6.896	2.242	0.074
226	7.23E+03	8.03E+03	1.24E+03	6.37E+01	1.72E+02	5.63E+01	3.82E+00	7.60E+02	75.35		11.174	10.487	1.837	0.070	11.548	5.641	1.957	0.071
227	7.23E+03	7.67E+03	1.20E+03	2.10E+01	2.00E+02	1.00E+01	5.20E+00	1.03E+03	102.59		3.916	8.190	1.568	0.068	9.362	4.555	1.699	0.069
228	7.23E+03	6.60E+03	1.14E+03	2.66E+01	2.70E+02	2.50E+01	4.86E+00	9.66E+02	95.81		5.468	8.697	1.635	0.068	9.849	4.784	1.755	0.069
229	7.23E+03	6.89E+03	1.17E+03	6.39E+01	2.59E+02	5.00E+01	3.67E+00	7.30E+02	72.40		12.123	10.778	1.866	0.070	11.821	5.785	1.990	0.071
230	7.23E+03	6.61E+03	1.14E+03	5.02E+01	3.04E+02	5.00E+01	3.73E+00	7.43E+02	73.62		11.727	10.657	1.854	0.070	11.707	5.725	1.976	0.071
231	7.23E+03	6.58E+03	1.14E+03	6.39E+01	2.59E+02	3.57E+01	3.67E+00	7.30E+02	72.40		12.123	10.778	1.866	0.070	11.821	5.785	1.990	0.071
232	7.23E+03	7.57E+03	1.21E+03	2.52E+01	3.15E+02	1.33E+02	4.54E+00	9.04E+02	89.64		7.028	9.196	1.696	0.069	10.326	5.017	1.811	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
233	7.23E+03	8.32E+03	1.28E+03	1.75E+01	1.15E+02	5.31E+02	5.12E+00	1.02E+03	101.04		4.255	8.302	1.584	0.068	9.470	4.605	1.711	0.069
234	7.23E+03	6.59E+03	1.14E+03	2.66E+01	2.70E+02	5.00E+01	4.86E+00	9.66E+02	95.81		5.468	8.697	1.635	0.068	9.849	4.784	1.755	0.069
235	7.23E+03	8.12E+03	1.26E+03	9.46E+00	1.80E+02	0.00E+00	5.23E+00	1.04E+03	103.17		3.790	8.149	1.563	0.068	9.322	4.536	1.694	0.069
236	7.23E+03	6.65E+03	1.13E+03	6.39E+01	2.59E+02	1.67E+01	3.67E+00	7.30E+02	72.40		12.123	10.778	1.866	0.070	11.821	5.785	1.990	0.071
237	7.23E+03	6.94E+03	1.18E+03	3.98E+01	2.17E+02	0.00E+00	4.81E+00	9.58E+02	94.93		5.681	8.766	1.644	0.069	9.915	4.816	1.763	0.069
238	7.23E+03	6.75E+03	1.14E+03	6.36E+01	1.73E+02	4.29E+01	3.82E+00	7.61E+02	75.40		11.158	10.482	1.837	0.070	11.543	5.639	1.956	0.071
239	7.24E+03	7.14E+03	1.22E+03	2.83E+01	2.48E+02	2.14E+01	4.96E+00	9.88E+02	97.90		4.970	8.536	1.615	0.068	9.694	4.710	1.737	0.069
240	7.24E+03	6.83E+03	1.17E+03	3.79E+01	2.11E+02	1.42E+02	4.88E+00	9.71E+02	96.22		5.368	8.665	1.631	0.068	9.819	4.770	1.751	0.069
241	7.24E+03	7.53E+03	1.22E+03	3.79E+01	3.01E+02	3.57E+01	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070
242	7.24E+03	6.71E+03	1.13E+03	3.48E+01	2.03E+02	2.50E+01	4.97E+00	9.89E+02	98.02		4.942	8.527	1.614	0.068	9.686	4.706	1.736	0.069
243	7.24E+03	6.77E+03	1.15E+03	2.18E+01	1.80E+02	3.57E+01	5.20E+00	1.04E+03	102.65		3.901	8.186	1.568	0.068	9.357	4.552	1.698	0.069
244	7.24E+03	7.01E+03	1.20E+03	6.39E+01	1.91E+02	1.75E+02	3.81E+00	7.58E+02	75.14		11.241	10.508	1.839	0.070	11.567	5.651	1.959	0.071
245	7.24E+03	7.83E+03	1.20E+03	1.88E+01	4.43E+01	4.36E+02	4.74E+00	9.44E+02	93.59		6.012	8.872	1.657	0.069	10.017	4.865	1.774	0.070
246	7.24E+03	7.05E+03	1.21E+03	2.95E+01	2.25E+02	5.00E+01	5.04E+00	1.00E+03	99.40		4.624	8.423	1.600	0.068	9.586	4.659	1.725	0.069
247	7.24E+03	6.62E+03	1.14E+03	4.33E+01	3.15E+02	3.33E+01	3.85E+00	7.67E+02	76.03		10.959	10.422	1.831	0.070	11.486	5.609	1.949	0.071
248	7.24E+03	7.83E+03	1.20E+03	2.03E+01	4.46E+01	1.50E+02	4.70E+00	9.35E+02	92.72		6.232	8.943	1.666	0.069	10.084	4.898	1.782	0.070
249	7.24E+03	6.80E+03	1.16E+03	3.45E+01	2.09E+02	6.88E+01	4.97E+00	9.89E+02	98.01		4.945	8.528	1.614	0.068	9.687	4.707	1.736	0.069
250	7.24E+03	6.66E+03	1.13E+03	4.59E+01	2.56E+02	1.43E+01	4.44E+00	8.84E+02	87.61		7.571	9.368	1.716	0.069	10.489	5.098	1.830	0.070
251	7.24E+03	6.98E+03	1.19E+03	2.95E+01	2.25E+02	9.29E+01	5.04E+00	1.00E+03	99.40		4.624	8.423	1.600	0.068	9.586	4.659	1.725	0.069
252	7.24E+03	7.13E+03	1.22E+03	1.85E+01	2.28E+02	8.57E+01	5.17E+00	1.03E+03	101.95		4.054	8.236	1.575	0.068	9.406	4.575	1.704	0.069
253	7.24E+03	7.69E+03	1.20E+03	1.86E+01	1.67E+02	7.58E+02	5.22E+00	1.04E+03	103.04		3.818	8.158	1.564	0.068	9.331	4.540	1.695	0.069
254	7.24E+03	8.12E+03	1.26E+03	9.46E+00	1.80E+02	5.83E+01	5.23E+00	1.04E+03	103.17		3.790	8.149	1.563	0.068	9.322	4.536	1.694	0.069
255	7.24E+03	7.58E+03	1.21E+03	2.37E+01	3.11E+02	7.14E+00	4.62E+00	9.20E+02	91.19		6.620	9.067	1.681	0.069	10.202	4.956	1.796	0.070
256	7.24E+03	7.54E+03	1.22E+03	4.82E+01	2.97E+02	2.00E+01	3.91E+00	7.79E+02	77.22		10.589	10.308	1.819	0.070	11.379	5.553	1.936	0.071
257	7.24E+03	6.69E+03	1.13E+03	1.95E+01	2.25E+02	3.13E+01	5.17E+00	1.03E+03	101.98		4.047	8.234	1.574	0.068	9.404	4.574	1.704	0.069
258	7.25E+03	6.93E+03	1.18E+03	2.95E+01	2.25E+02	2.50E+01	5.04E+00	1.00E+03	99.40		4.624	8.423	1.600	0.068	9.586	4.659	1.725	0.069
259	7.25E+03	6.82E+03	1.17E+03	6.41E+01	1.94E+02	2.08E+02	3.80E+00	7.56E+02	74.91		11.315	10.531	1.842	0.070	11.589	5.663	1.962	0.071
260	7.25E+03	7.94E+03	1.22E+03	1.03E+01	1.80E+02	5.10E+02	5.23E+00	1.04E+03	103.25		3.773	8.143	1.562	0.068	9.316	4.534	1.694	0.069
261	7.25E+03	8.34E+03	1.28E+03	1.64E+01	1.22E+02	8.71E+02	5.15E+00	1.03E+03	101.64		4.122	8.258	1.578	0.068	9.428	4.585	1.706	0.069
262	7.25E+03	6.63E+03	1.14E+03	3.80E+01	3.20E+02	5.56E+00	4.01E+00	7.98E+02	79.11		10.009	10.129	1.800	0.070	11.210	5.465	1.916	0.071
263	7.25E+03	8.06E+03	1.25E+03	4.65E+01	1.98E+02	1.29E+02	4.61E+00	9.17E+02	90.90		6.697	9.091	1.684	0.069	10.226	4.968	1.799	0.070
264	7.25E+03	8.21E+03	1.27E+03	1.92E+01	1.25E+02	3.83E+02	5.14E+00	1.02E+03	101.45		4.164	8.272	1.580	0.068	9.441	4.591	1.708	0.069
265	7.25E+03	6.80E+03	1.16E+03	6.37E+01	1.89E+02	3.57E+01	3.82E+00	7.59E+02	75.27		11.199	10.495	1.838	0.070	11.555	5.645	1.958	0.071
266	7.25E+03	7.83E+03	1.20E+03	2.36E+01	9.40E+01	6.43E+01	4.94E+00	9.83E+02	97.47		5.072	8.569	1.619	0.068	9.726	4.726	1.741	0.069
267	7.25E+03	6.66E+03	1.13E+03	2.52E+01	1.81E+02	0.00E+00	5.16E+00	1.03E+03	101.89		4.068	8.240	1.575	0.068	9.410	4.577	1.704	0.069
268	7.25E+03	7.12E+03	1.22E+03	1.74E+01	2.25E+02	7.50E+01	5.18E+00	1.03E+03	102.25		3.989	8.215	1.572	0.068	9.385	4.565	1.702	0.069
269	7.25E+03	7.40E+03	1.23E+03	4.59E+01	2.56E+02	1.79E+02	4.44E+00	8.84E+02	87.61		7.571	9.368	1.716	0.069	10.489	5.098	1.830	0.070
270	7.25E+03	6.69E+03	1.13E+03	2.07E+01	1.85E+02	2.57E+02	5.21E+00	1.04E+03	102.83		3.863	8.173	1.566	0.068	9.345	4.547	1.697	0.069
271	7.25E+03	7.42E+03	1.23E+03	5.67E+01	2.79E+02	1.64E+02	3.79E+00	7.54E+02	74.74		11.367	10.547	1.843	0.070	11.604	5.670	1.963	0.071

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
272	7.25E+03	7.38E+03	1.23E+03	6.36E+01	2.63E+02	4.17E+01	3.65E+00	7.26E+02	71.97		12.264	10.821	1.870	0.070	11.862	5.806	1.995	0.072
273	7.25E+03	7.32E+03	1.23E+03	4.06E+01	2.49E+02	4.44E+01	4.66E+00	9.27E+02	91.93		6.430	9.006	1.674	0.069	10.145	4.928	1.789	0.070
274	7.25E+03	7.01E+03	1.20E+03	1.59E+01	1.80E+02	1.07E+02	5.24E+00	1.04E+03	103.34		3.753	8.137	1.561	0.068	9.310	4.531	1.693	0.069
275	7.25E+03	7.55E+03	1.22E+03	4.71E+01	2.92E+02	0.00E+00	4.02E+00	8.00E+02	79.28		9.958	10.113	1.798	0.070	11.195	5.457	1.914	0.071
276	7.25E+03	6.74E+03	1.14E+03	4.65E+01	1.98E+02	5.00E+01	4.61E+00	9.17E+02	90.90		6.697	9.091	1.684	0.069	10.226	4.968	1.799	0.070
277	7.25E+03	7.83E+03	1.20E+03	8.78E+00	2.77E+01	6.67E+01	4.97E+00	9.89E+02	98.05		4.935	8.525	1.613	0.068	9.684	4.705	1.736	0.069
278	7.25E+03	8.00E+03	1.23E+03	3.51E+01	1.62E+02	1.36E+02	4.96E+00	9.88E+02	97.94		4.961	8.533	1.614	0.068	9.692	4.709	1.737	0.069
279	7.25E+03	6.68E+03	1.13E+03	3.16E+01	2.34E+02	4.00E+01	4.97E+00	9.89E+02	98.01		4.944	8.527	1.614	0.068	9.687	4.707	1.736	0.069
280	7.25E+03	8.03E+03	1.24E+03	4.71E+01	1.58E+02	3.57E+01	4.58E+00	9.12E+02	90.41		6.824	9.131	1.689	0.069	10.264	4.987	1.803	0.070
281	7.25E+03	7.33E+03	1.23E+03	1.84E+01	2.70E+02	5.00E+01	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
282	7.25E+03	7.04E+03	1.21E+03	4.00E+01	2.07E+02	2.57E+02	4.82E+00	9.60E+02	95.13		5.633	8.750	1.642	0.069	9.900	4.809	1.761	0.069
283	7.25E+03	6.77E+03	1.15E+03	4.65E+01	1.62E+02	1.07E+02	4.61E+00	9.17E+02	90.90		6.697	9.091	1.684	0.069	10.226	4.968	1.799	0.070
284	7.25E+03	6.92E+03	1.18E+03	3.53E+01	2.25E+02	4.17E+01	4.91E+00	9.78E+02	96.96		5.191	8.608	1.624	0.068	9.764	4.743	1.745	0.069
285	7.25E+03	7.37E+03	1.23E+03	4.59E+01	2.56E+02	1.50E+02	4.44E+00	8.84E+02	87.61		7.571	9.368	1.716	0.069	10.489	5.098	1.830	0.070
286	7.25E+03	6.80E+03	1.16E+03	4.65E+01	1.62E+02	3.33E+01	4.61E+00	9.17E+02	90.90		6.697	9.091	1.684	0.069	10.226	4.968	1.799	0.070
287	7.25E+03	7.35E+03	1.23E+03	4.61E+01	2.54E+02	6.43E+01	4.45E+00	8.85E+02	87.71		7.542	9.358	1.715	0.069	10.480	5.094	1.829	0.070
288	7.25E+03	8.23E+03	1.27E+03	1.64E+01	1.22E+02	1.00E+02	5.15E+00	1.03E+03	101.64		4.122	8.258	1.578	0.068	9.428	4.585	1.706	0.069
289	7.25E+03	8.12E+03	1.26E+03	2.20E+01	1.54E+02	1.86E+02	5.18E+00	1.03E+03	102.29		3.980	8.212	1.571	0.068	9.382	4.564	1.701	0.069
290	7.26E+03	7.60E+03	1.21E+03	2.18E+01	3.04E+02	7.14E+00	4.72E+00	9.40E+02	93.17		6.116	8.905	1.661	0.069	10.049	4.881	1.778	0.070
291	7.26E+03	7.82E+03	1.20E+03	7.99E+00	1.94E+01	0.00E+00	4.98E+00	9.91E+02	98.26		4.887	8.509	1.611	0.068	9.669	4.698	1.734	0.069
292	7.26E+03	8.36E+03	1.28E+03	1.64E+01	1.22E+02	1.00E+02	5.15E+00	1.03E+03	101.64		4.122	8.258	1.578	0.068	9.428	4.585	1.706	0.069
293	7.26E+03	6.97E+03	1.19E+03	2.62E+01	2.34E+02	1.06E+02	5.06E+00	1.01E+03	99.87		4.518	8.388	1.595	0.068	9.553	4.644	1.721	0.069
294	7.26E+03	7.94E+03	1.22E+03	2.78E+01	1.61E+02	2.94E+02	5.12E+00	1.02E+03	100.91		4.283	8.311	1.585	0.068	9.479	4.609	1.712	0.069
295	7.26E+03	7.44E+03	1.23E+03	4.56E+01	2.81E+02	8.33E+01	4.21E+00	8.37E+02	82.97		8.869	9.775	1.762	0.069	10.875	5.293	1.876	0.070
296	7.26E+03	6.81E+03	1.17E+03	7.64E+01	1.66E+02	1.17E+02	3.08E+00	6.13E+02	60.81		16.162	11.998	1.980	0.071	12.964	6.399	2.130	0.073
297	7.26E+03	7.56E+03	1.22E+03	3.79E+01	3.01E+02	2.14E+01	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070
298	7.26E+03	8.37E+03	1.28E+03	1.96E+01	1.11E+02	9.00E+02	5.08E+00	1.01E+03	100.29		4.422	8.357	1.591	0.068	9.523	4.629	1.717	0.069
299	7.26E+03	7.11E+03	1.22E+03	1.85E+01	2.22E+02	1.50E+02	5.18E+00	1.03E+03	102.28		3.983	8.213	1.571	0.068	9.384	4.564	1.701	0.069
300	7.26E+03	7.82E+03	1.20E+03	5.36E+00	1.27E+01	3.33E+01	5.04E+00	1.00E+03	99.34		4.637	8.427	1.600	0.068	9.590	4.661	1.725	0.069
301	7.26E+03	6.56E+03	1.15E+03	6.37E+01	2.79E+02	3.57E+01	3.47E+00	6.91E+02	68.46		13.440	11.178	1.905	0.071	12.197	5.985	2.036	0.072
302	7.26E+03	7.71E+03	1.20E+03	1.67E+01	1.11E+02	4.30E+02	5.11E+00	1.02E+03	100.90		4.285	8.312	1.585	0.068	9.479	4.609	1.712	0.069
303	7.26E+03	6.54E+03	1.15E+03	6.37E+01	2.79E+02	4.29E+01	3.47E+00	6.91E+02	68.46		13.440	11.178	1.905	0.071	12.197	5.985	2.036	0.072
304	7.26E+03	6.92E+03	1.18E+03	3.10E+01	2.36E+02	5.00E+01	4.97E+00	9.89E+02	98.03		4.941	8.527	1.613	0.068	9.686	4.706	1.736	0.069
305	7.26E+03	6.50E+03	1.15E+03	4.57E+01	2.83E+02	1.08E+02	4.19E+00	8.33E+02	82.60		8.976	9.808	1.766	0.069	10.907	5.310	1.880	0.071
306	7.26E+03	6.59E+03	1.15E+03	6.37E+01	2.61E+02	1.43E+01	3.66E+00	7.29E+02	72.23		12.178	10.794	1.868	0.070	11.837	5.793	1.992	0.072
307	7.26E+03	6.52E+03	1.15E+03	4.61E+01	2.86E+02	1.43E+01	4.13E+00	8.22E+02	81.48		9.303	9.910	1.777	0.070	11.003	5.359	1.891	0.071
308	7.26E+03	7.45E+03	1.23E+03	4.56E+01	2.81E+02	2.14E+01	4.21E+00	8.37E+02	82.97		8.869	9.775	1.762	0.069	10.875	5.293	1.876	0.070
309	7.26E+03	6.64E+03	1.14E+03	3.98E+01	3.23E+02	6.43E+01	3.90E+00	7.77E+02	77.01		10.655	10.328	1.821	0.070	11.398	5.563	1.939	0.071
310	7.26E+03	7.47E+03	1.23E+03	6.36E+01	2.76E+02	2.14E+01	3.51E+00	6.99E+02	69.34		13.143	11.088	1.896	0.071	12.113	5.940	2.025	0.072

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
311	7.26E+03	6.60E+03	1.15E+03	4.73E+01	2.93E+02	7.78E+01	4.00E+00	7.96E+02	78.95		10.059	10.144	1.802	0.070	11.224	5.473	1.918	0.071
312	7.26E+03	7.95E+03	1.22E+03	1.80E+01	1.52E+02	2.83E+02	5.21E+00	1.04E+03	102.81		3.868	8.175	1.566	0.068	9.347	4.547	1.697	0.069
313	7.27E+03	8.13E+03	1.26E+03	1.59E+01	1.39E+02	4.94E+02	5.20E+00	1.03E+03	102.56		3.922	8.192	1.569	0.068	9.364	4.555	1.699	0.069
314	7.27E+03	6.77E+03	1.15E+03	1.84E+01	1.80E+02	8.57E+01	5.23E+00	1.04E+03	103.15		3.795	8.150	1.563	0.068	9.323	4.537	1.694	0.069
315	7.27E+03	7.11E+03	1.22E+03	1.87E+01	2.12E+02	1.42E+02	5.20E+00	1.03E+03	102.60		3.913	8.190	1.568	0.068	9.361	4.554	1.699	0.069
316	7.27E+03	7.62E+03	1.21E+03	2.83E+01	2.92E+02	1.71E+02	4.64E+00	9.23E+02	91.49		6.545	9.043	1.678	0.069	10.179	4.945	1.793	0.070
317	7.27E+03	6.91E+03	1.18E+03	3.55E+01	2.49E+02	5.00E+01	4.80E+00	9.55E+02	94.67		5.744	8.786	1.647	0.069	9.934	4.825	1.765	0.069
318	7.27E+03	7.81E+03	1.20E+03	2.67E+00	6.44E+00	6.67E+01	5.09E+00	1.01E+03	100.37		4.405	8.351	1.590	0.068	9.517	4.627	1.717	0.069
319	7.27E+03	6.80E+03	1.16E+03	1.84E+01	1.80E+02	4.00E+01	5.23E+00	1.04E+03	103.15		3.795	8.150	1.563	0.068	9.323	4.537	1.694	0.069
320	7.27E+03	6.74E+03	1.14E+03	2.38E+01	2.12E+02	9.44E+01	5.16E+00	1.03E+03	101.72		4.105	8.253	1.577	0.068	9.422	4.582	1.706	0.069
321	7.27E+03	7.49E+03	1.23E+03	3.17E+01	2.92E+02	1.15E+02	4.53E+00	9.02E+02	89.46		7.074	9.211	1.698	0.069	10.340	5.024	1.812	0.070
322	7.27E+03	8.01E+03	1.23E+03	4.57E+01	1.67E+02	1.43E+01	4.64E+00	9.23E+02	91.54		6.531	9.038	1.678	0.069	10.175	4.943	1.793	0.070
323	7.27E+03	7.58E+03	1.22E+03	4.82E+01	2.97E+02	5.00E+01	3.91E+00	7.79E+02	77.22		10.589	10.308	1.819	0.070	11.379	5.553	1.936	0.071
324	7.27E+03	8.06E+03	1.25E+03	6.39E+01	1.91E+02	8.33E+01	3.81E+00	7.58E+02	75.14		11.241	10.508	1.839	0.070	11.567	5.651	1.959	0.071
325	7.27E+03	6.95E+03	1.19E+03	3.20E+01	2.33E+02	7.14E+01	4.96E+00	9.87E+02	97.87		4.977	8.538	1.615	0.068	9.697	4.711	1.737	0.069
326	7.27E+03	7.00E+03	1.20E+03	4.65E+01	1.98E+02	1.25E+02	4.61E+00	9.17E+02	90.90		6.697	9.091	1.684	0.069	10.226	4.968	1.799	0.070
327	7.27E+03	8.40E+03	1.28E+03	1.96E+01	1.11E+02	6.44E+02	5.08E+00	1.01E+03	100.29		4.422	8.357	1.591	0.068	9.523	4.629	1.717	0.069
328	7.27E+03	7.04E+03	1.21E+03	4.61E+01	1.96E+02	8.57E+01	4.62E+00	9.20E+02	91.20		6.618	9.066	1.681	0.069	10.202	4.956	1.796	0.070
329	7.27E+03	7.64E+03	1.21E+03	3.51E+01	2.88E+02	5.71E+01	4.47E+00	8.90E+02	88.25		7.397	9.313	1.710	0.069	10.437	5.072	1.824	0.070
330	7.27E+03	7.96E+03	1.22E+03	1.99E+01	1.57E+02	3.58E+02	5.21E+00	1.04E+03	102.69		3.893	8.183	1.567	0.068	9.355	4.551	1.698	0.069
331	7.27E+03	6.89E+03	1.18E+03	1.40E+01	2.70E+02	9.00E+01	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
332	7.27E+03	7.52E+03	1.23E+03	3.20E+01	3.07E+02	5.00E+00	4.38E+00	8.71E+02	86.39		7.903	9.472	1.728	0.069	10.588	5.148	1.842	0.070
333	7.27E+03	8.40E+03	1.28E+03	1.74E+01	1.22E+02	4.25E+02	5.15E+00	1.02E+03	101.51		4.150	8.268	1.579	0.068	9.437	4.589	1.707	0.069
334	7.27E+03	6.61E+03	1.15E+03	3.53E+01	3.15E+02	1.33E+02	4.18E+00	8.31E+02	82.37		9.042	9.829	1.768	0.070	10.926	5.319	1.882	0.071
335	7.28E+03	8.25E+03	1.27E+03	1.60E+01	1.41E+02	6.43E+01	5.20E+00	1.04E+03	102.62		3.908	8.188	1.568	0.068	9.360	4.553	1.699	0.069
336	7.28E+03	7.73E+03	1.20E+03	9.36E+00	8.97E+01	5.83E+01	5.10E+00	1.01E+03	100.54		4.367	8.339	1.589	0.068	9.505	4.621	1.715	0.069
337	7.28E+03	8.04E+03	1.24E+03	6.39E+01	1.69E+02	7.78E+01	3.81E+00	7.58E+02	75.14		11.241	10.508	1.839	0.070	11.567	5.651	1.959	0.071
338	7.28E+03	8.14E+03	1.26E+03	1.46E+01	1.30E+02	4.00E+01	5.18E+00	1.03E+03	102.25		3.988	8.214	1.572	0.068	9.385	4.565	1.702	0.069
339	7.28E+03	6.80E+03	1.16E+03	6.37E+01	1.89E+02	5.71E+01	3.82E+00	7.59E+02	75.27		11.199	10.495	1.838	0.070	11.555	5.645	1.958	0.071
340	7.28E+03	7.81E+03	1.20E+03	2.43E+00	6.70E+00	1.44E+02	5.09E+00	1.01E+03	100.46		4.385	8.345	1.589	0.068	9.511	4.624	1.716	0.069
341	7.28E+03	8.01E+03	1.23E+03	4.59E+01	1.66E+02	1.10E+02	4.63E+00	9.22E+02	91.40		6.567	9.049	1.679	0.069	10.186	4.948	1.794	0.070
342	7.28E+03	7.59E+03	1.22E+03	3.98E+01	3.23E+02	2.86E+01	3.90E+00	7.77E+02	77.01		10.655	10.328	1.821	0.070	11.398	5.563	1.939	0.071
343	7.28E+03	7.10E+03	1.22E+03	2.25E+01	2.05E+02	1.00E+02	5.18E+00	1.03E+03	102.19		4.002	8.219	1.572	0.068	9.390	4.567	1.702	0.069
344	7.28E+03	6.88E+03	1.18E+03	1.13E+01	2.70E+02	1.29E+02	5.08E+00	1.01E+03	100.24		4.434	8.361	1.592	0.068	9.526	4.631	1.718	0.069
345	7.28E+03	6.77E+03	1.15E+03	6.37E+01	1.89E+02	5.00E+01	3.82E+00	7.59E+02	75.27		11.199	10.495	1.838	0.070	11.555	5.645	1.958	0.071
346	7.28E+03	7.66E+03	1.21E+03	2.87E+01	2.94E+02	6.25E+00	4.61E+00	9.17E+02	90.89		6.698	9.091	1.684	0.069	10.226	4.968	1.799	0.070
347	7.28E+03	6.74E+03	1.14E+03	2.12E+01	2.11E+02	1.25E+02	5.18E+00	1.03E+03	102.26		3.986	8.214	1.572	0.068	9.384	4.565	1.701	0.069
348	7.28E+03	6.88E+03	1.18E+03	1.89E+01	2.27E+02	2.23E+02	5.17E+00	1.03E+03	101.97		4.050	8.235	1.574	0.068	9.405	4.574	1.704	0.069
349	7.28E+03	6.99E+03	1.20E+03	3.53E+01	2.25E+02	1.25E+02	4.91E+00	9.78E+02	96.96		5.191	8.608	1.624	0.068	9.764	4.743	1.745	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
350	7.28E+03	6.62E+03	1.15E+03	3.79E+01	3.01E+02	6.43E+01	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070
351	7.28E+03	6.94E+03	1.19E+03	3.34E+01	2.21E+02	6.25E+00	4.97E+00	9.89E+02	98.07		4.930	8.523	1.613	0.068	9.682	4.705	1.736	0.069
352	7.28E+03	7.54E+03	1.23E+03	3.79E+01	3.01E+02	2.14E+01	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070
353	7.29E+03	8.06E+03	1.25E+03	5.92E+01	1.53E+02	1.86E+02	4.06E+00	8.07E+02	80.00		9.741	10.046	1.791	0.070	11.131	5.425	1.907	0.071
354	7.29E+03	6.66E+03	1.14E+03	4.59E+01	2.84E+02	1.31E+02	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
355	7.29E+03	6.49E+03	1.16E+03	4.65E+01	2.88E+02	6.25E+01	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
356	7.29E+03	6.51E+03	1.16E+03	1.84E+01	2.70E+02	7.14E+00	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
357	7.29E+03	6.53E+03	1.16E+03	1.84E+01	2.70E+02	5.00E+01	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
358	7.29E+03	7.68E+03	1.21E+03	2.92E+01	2.97E+02	4.29E+01	4.57E+00	9.09E+02	90.13		6.898	9.155	1.692	0.069	10.287	4.998	1.806	0.070
359	7.29E+03	6.64E+03	1.15E+03	5.02E+01	3.04E+02	1.67E+01	3.73E+00	7.43E+02	73.62		11.727	10.657	1.854	0.070	11.707	5.725	1.976	0.071
360	7.29E+03	8.42E+03	1.28E+03	2.32E+01	1.11E+02	3.93E+02	5.04E+00	1.00E+03	99.46		4.611	8.419	1.599	0.068	9.582	4.657	1.724	0.069
361	7.29E+03	8.16E+03	1.26E+03	1.38E+01	1.30E+02	7.50E+01	5.19E+00	1.03E+03	102.31		3.975	8.210	1.571	0.068	9.381	4.563	1.701	0.069
362	7.29E+03	6.55E+03	1.16E+03	1.84E+01	2.70E+02	1.50E+02	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
363	7.29E+03	7.74E+03	1.20E+03	1.09E+01	1.26E+02	4.29E+01	5.18E+00	1.03E+03	102.21		3.996	8.217	1.572	0.068	9.388	4.566	1.702	0.069
364	7.29E+03	7.04E+03	1.21E+03	3.51E+01	1.98E+02	2.86E+01	4.96E+00	9.88E+02	97.94		4.961	8.533	1.614	0.068	9.692	4.709	1.737	0.069
365	7.29E+03	6.77E+03	1.15E+03	2.18E+01	1.80E+02	1.43E+01	5.20E+00	1.04E+03	102.65		3.901	8.186	1.568	0.068	9.357	4.552	1.698	0.069
366	7.29E+03	8.02E+03	1.23E+03	2.87E+01	1.56E+02	9.29E+01	5.10E+00	1.01E+03	100.52		4.372	8.340	1.589	0.068	9.507	4.622	1.715	0.069
367	7.29E+03	7.27E+03	1.24E+03	1.59E+01	2.70E+02	2.43E+02	5.03E+00	1.00E+03	99.26		4.656	8.433	1.601	0.068	9.596	4.664	1.726	0.069
368	7.29E+03	7.97E+03	1.22E+03	2.74E+01	1.65E+02	3.44E+02	5.13E+00	1.02E+03	101.14		4.234	8.295	1.583	0.068	9.463	4.601	1.710	0.069
369	7.29E+03	7.25E+03	1.24E+03	1.59E+01	2.70E+02	2.00E+02	5.03E+00	1.00E+03	99.26		4.656	8.433	1.601	0.068	9.596	4.664	1.726	0.069
370	7.29E+03	7.60E+03	1.22E+03	3.53E+01	3.15E+02	5.83E+01	4.18E+00	8.31E+02	82.37		9.042	9.829	1.768	0.070	10.926	5.319	1.882	0.071
371	7.29E+03	7.22E+03	1.24E+03	1.59E+01	2.70E+02	1.56E+02	5.03E+00	1.00E+03	99.26		4.656	8.433	1.601	0.068	9.596	4.664	1.726	0.069
372	7.29E+03	6.81E+03	1.17E+03	6.46E+01	1.98E+02	1.64E+02	3.77E+00	7.51E+02	74.42		11.470	10.578	1.846	0.070	11.633	5.686	1.967	0.071
373	7.29E+03	6.93E+03	1.19E+03	3.53E+01	2.25E+02	4.00E+01	4.91E+00	9.78E+02	96.96		5.191	8.608	1.624	0.068	9.764	4.743	1.745	0.069
374	7.29E+03	7.55E+03	1.23E+03	3.20E+01	3.23E+02	6.11E+01	4.24E+00	8.43E+02	83.57		8.696	9.721	1.756	0.069	10.824	5.267	1.870	0.070
375	7.29E+03	7.29E+03	1.24E+03	5.67E+01	2.80E+02	6.43E+01	3.78E+00	7.51E+02	74.49		11.449	10.572	1.846	0.070	11.627	5.683	1.966	0.071
376	7.29E+03	7.10E+03	1.22E+03	4.54E+01	1.89E+02	1.00E+02	4.65E+00	9.26E+02	91.77		6.471	9.019	1.675	0.069	10.157	4.934	1.791	0.070
377	7.29E+03	6.79E+03	1.16E+03	6.41E+01	1.94E+02	1.43E+01	3.80E+00	7.56E+02	74.91		11.315	10.531	1.842	0.070	11.589	5.663	1.962	0.071
378	7.30E+03	6.57E+03	1.16E+03	6.36E+01	2.77E+02	1.67E+01	3.50E+00	6.97E+02	69.13		13.214	11.110	1.898	0.071	12.133	5.951	2.028	0.072
379	7.30E+03	7.18E+03	1.24E+03	7.60E+01	2.66E+02	2.67E+02	2.99E+00	5.95E+02	58.97		16.848	12.203	1.998	0.071	13.155	6.504	2.154	0.073
380	7.30E+03	7.31E+03	1.24E+03	4.56E+01	2.81E+02	2.25E+02	4.21E+00	8.37E+02	82.97		8.869	9.775	1.762	0.069	10.875	5.293	1.876	0.070
381	7.30E+03	7.32E+03	1.24E+03	6.35E+01	2.76E+02	1.00E+02	3.52E+00	7.01E+02	69.50		13.087	11.071	1.895	0.071	12.097	5.931	2.023	0.072
382	7.30E+03	7.20E+03	1.24E+03	1.40E+01	2.70E+02	5.00E+01	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
383	7.30E+03	7.20E+03	1.24E+03	6.36E+01	2.63E+02	4.00E+02	3.65E+00	7.26E+02	71.97		12.264	10.821	1.870	0.070	11.862	5.806	1.995	0.072
384	7.30E+03	7.34E+03	1.24E+03	1.13E+01	2.70E+02	6.43E+01	5.08E+00	1.01E+03	100.24		4.434	8.361	1.592	0.068	9.526	4.631	1.718	0.069
385	7.30E+03	7.17E+03	1.24E+03	4.32E+01	2.51E+02	4.22E+02	4.56E+00	9.08E+02	90.06		6.916	9.161	1.692	0.069	10.292	5.000	1.807	0.070
386	7.30E+03	7.82E+03	1.20E+03	8.94E+00	4.14E+01	1.88E+02	4.99E+00	9.92E+02	98.37		4.861	8.500	1.610	0.068	9.660	4.694	1.733	0.069
387	7.30E+03	8.02E+03	1.23E+03	3.34E+01	1.62E+02	1.00E+01	5.01E+00	9.96E+02	98.75		4.773	8.472	1.606	0.068	9.633	4.681	1.730	0.069
388	7.30E+03	8.28E+03	1.27E+03	1.49E+01	1.44E+02	2.38E+02	5.21E+00	1.04E+03	102.79		3.872	8.176	1.566	0.068	9.348	4.548	1.697	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
389	7.30E+03	6.65E+03	1.15E+03	5.47E+01	3.15E+02	3.33E+01	3.37E+00	6.71E+02	66.50		14.118	11.383	1.924	0.071	12.389	6.088	2.059	0.072
390	7.30E+03	8.05E+03	1.24E+03	1.84E+01	1.80E+02	2.50E+01	5.23E+00	1.04E+03	103.15		3.795	8.150	1.563	0.068	9.323	4.537	1.694	0.069
391	7.30E+03	6.57E+03	1.16E+03	2.33E+01	3.09E+02	5.56E+00	4.64E+00	9.24E+02	91.61		6.513	9.032	1.677	0.069	10.170	4.940	1.792	0.070
392	7.30E+03	7.35E+03	1.24E+03	4.56E+01	2.81E+02	1.50E+02	4.21E+00	8.37E+02	82.97		8.869	9.775	1.762	0.069	10.875	5.293	1.876	0.070
393	7.30E+03	6.97E+03	1.20E+03	3.45E+01	2.41E+02	2.19E+02	4.87E+00	9.69E+02	96.09		5.399	8.675	1.633	0.068	9.828	4.774	1.752	0.069
394	7.30E+03	7.62E+03	1.22E+03	4.65E+01	2.88E+02	1.43E+01	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
395	7.30E+03	8.44E+03	1.28E+03	1.80E+01	1.18E+02	1.92E+02	5.13E+00	1.02E+03	101.20		4.220	8.291	1.582	0.068	9.459	4.599	1.710	0.069
396	7.30E+03	7.16E+03	1.24E+03	3.35E+01	2.21E+02	1.75E+02	4.97E+00	9.88E+02	97.98		4.952	8.530	1.614	0.068	9.689	4.708	1.736	0.069
397	7.30E+03	6.81E+03	1.17E+03	6.41E+01	1.94E+02	5.00E+01	3.80E+00	7.56E+02	74.91		11.315	10.531	1.842	0.070	11.589	5.663	1.962	0.071
398	7.30E+03	7.39E+03	1.24E+03	5.65E+01	2.62E+02	2.81E+02	3.97E+00	7.90E+02	78.36		10.237	10.199	1.808	0.070	11.276	5.500	1.924	0.071
399	7.30E+03	8.07E+03	1.25E+03	4.82E+01	1.53E+02	3.33E+01	4.54E+00	9.03E+02	89.55		7.051	9.203	1.697	0.069	10.333	5.021	1.811	0.070
400	7.30E+03	8.02E+03	1.23E+03	2.26E+01	1.43E+02	0.00E+00	5.16E+00	1.03E+03	101.78		4.092	8.249	1.576	0.068	9.418	4.581	1.705	0.069
401	7.30E+03	7.37E+03	1.24E+03	1.13E+01	2.70E+02	1.17E+02	5.08E+00	1.01E+03	100.24		4.434	8.361	1.592	0.068	9.526	4.631	1.718	0.069
402	7.30E+03	6.75E+03	1.14E+03	2.02E+01	1.20E+02	8.13E+01	5.12E+00	1.02E+03	100.95		4.276	8.309	1.585	0.068	9.476	4.608	1.712	0.069
403	7.30E+03	6.79E+03	1.16E+03	2.18E+01	1.80E+02	7.14E+00	5.20E+00	1.04E+03	102.65		3.901	8.186	1.568	0.068	9.357	4.552	1.698	0.069
404	7.31E+03	6.85E+03	1.18E+03	2.08E+01	2.21E+02	8.57E+01	5.17E+00	1.03E+03	101.95		4.055	8.236	1.575	0.068	9.406	4.575	1.704	0.069
405	7.31E+03	7.04E+03	1.21E+03	2.12E+01	2.11E+02	1.25E+02	5.18E+00	1.03E+03	102.26		3.986	8.214	1.572	0.068	9.384	4.565	1.701	0.069
406	7.31E+03	7.69E+03	1.21E+03	2.21E+01	3.18E+02	8.75E+01	4.63E+00	9.22E+02	91.42		6.563	9.048	1.679	0.069	10.185	4.948	1.794	0.070
407	7.31E+03	7.41E+03	1.24E+03	4.54E+01	2.80E+02	1.36E+02	4.23E+00	8.41E+02	83.35		8.759	9.740	1.758	0.069	10.843	5.277	1.872	0.070
408	7.31E+03	7.35E+03	1.24E+03	2.25E+01	1.67E+02	1.67E+01	5.19E+00	1.03E+03	102.42		3.951	8.202	1.570	0.068	9.373	4.560	1.700	0.069
409	7.31E+03	6.92E+03	1.19E+03	2.49E+01	2.34E+02	4.38E+01	5.08E+00	1.01E+03	100.28		4.425	8.358	1.591	0.068	9.524	4.630	1.717	0.069
410	7.31E+03	7.75E+03	1.20E+03	1.36E+01	1.59E+02	2.42E+02	5.23E+00	1.04E+03	103.20		3.783	8.147	1.562	0.068	9.320	4.535	1.694	0.069
411	7.31E+03	7.63E+03	1.22E+03	2.99E+01	3.00E+02	1.43E+01	4.52E+00	8.99E+02	89.10		7.169	9.241	1.702	0.069	10.368	5.038	1.816	0.070
412	7.31E+03	7.36E+03	1.24E+03	3.25E+01	1.97E+02	3.33E+01	5.03E+00	1.00E+03	99.19		4.673	8.439	1.602	0.068	9.602	4.666	1.726	0.069
413	7.31E+03	6.67E+03	1.14E+03	3.45E+01	2.84E+02	1.43E+01	4.54E+00	9.03E+02	89.50		7.063	9.207	1.698	0.069	10.336	5.022	1.812	0.070
414	7.31E+03	7.57E+03	1.23E+03	2.95E+01	3.15E+02	4.38E+01	4.39E+00	8.74E+02	86.67		7.827	9.448	1.726	0.069	10.566	5.137	1.839	0.070
415	7.31E+03	6.76E+03	1.15E+03	5.47E+01	2.25E+02	6.25E+00	4.25E+00	8.45E+02	83.82		8.626	9.699	1.754	0.069	10.803	5.257	1.867	0.070
416	7.31E+03	8.05E+03	1.24E+03	4.65E+01	1.62E+02	8.13E+01	4.61E+00	9.17E+02	90.90		6.697	9.091	1.684	0.069	10.226	4.968	1.799	0.070
417	7.31E+03	8.49E+03	1.28E+03	2.69E+01	1.00E+02	9.67E+02	4.92E+00	9.79E+02	97.02		5.177	8.603	1.623	0.068	9.759	4.741	1.744	0.069
418	7.31E+03	8.29E+03	1.27E+03	1.59E+01	1.26E+02	1.25E+01	5.17E+00	1.03E+03	101.94		4.056	8.237	1.575	0.068	9.407	4.575	1.704	0.069
419	7.31E+03	8.46E+03	1.28E+03	1.96E+01	1.11E+02	4.86E+02	5.08E+00	1.01E+03	100.29		4.422	8.357	1.591	0.068	9.523	4.629	1.717	0.069
420	7.31E+03	8.07E+03	1.25E+03	4.33E+01	1.35E+02	1.58E+02	4.68E+00	9.32E+02	92.42		6.307	8.967	1.669	0.069	10.107	4.909	1.785	0.070
421	7.31E+03	7.35E+03	1.24E+03	5.15E+01	2.39E+02	1.67E+02	4.33E+00	8.63E+02	85.52		8.146	9.549	1.737	0.069	10.661	5.185	1.850	0.070
422	7.31E+03	7.15E+03	1.24E+03	4.18E+01	2.07E+02	6.43E+01	4.77E+00	9.48E+02	94.00		5.909	8.839	1.653	0.069	9.985	4.850	1.771	0.070
423	7.31E+03	7.09E+03	1.22E+03	4.56E+01	1.91E+02	1.83E+02	4.65E+00	9.24E+02	91.64		6.505	9.030	1.677	0.069	10.167	4.939	1.792	0.070
424	7.31E+03	6.50E+03	1.17E+03	2.66E+01	2.70E+02	1.67E+02	4.86E+00	9.66E+02	95.81		5.468	8.697	1.635	0.068	9.849	4.784	1.755	0.069
425	7.31E+03	7.42E+03	1.24E+03	2.41E+01	2.97E+02	4.29E+01	4.71E+00	9.38E+02	92.95		6.172	8.923	1.664	0.069	10.066	4.889	1.780	0.070
426	7.31E+03	6.60E+03	1.16E+03	3.60E+01	2.93E+02	1.00E+02	4.39E+00	8.75E+02	86.70		7.818	9.446	1.725	0.069	10.563	5.136	1.839	0.070
427	7.31E+03	6.85E+03	1.18E+03	3.55E+01	2.01E+02	1.25E+02	4.95E+00	9.86E+02	97.73		5.011	8.549	1.616	0.068	9.707	4.716	1.738	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
428	7.31E+03	7.64E+03	1.22E+03	3.10E+01	3.04E+02	1.33E+02	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
429	7.31E+03	6.67E+03	1.15E+03	7.67E+01	3.15E+02	0.00E+00	2.34E+00	4.66E+02	46.18		21.967	13.719	2.124	0.072	14.564	7.287	2.329	0.074
430	7.31E+03	8.19E+03	1.26E+03	1.24E+01	1.39E+02	1.43E+01	5.21E+00	1.04E+03	102.71		3.889	8.182	1.567	0.068	9.354	4.551	1.698	0.069
431	7.31E+03	6.79E+03	1.16E+03	1.84E+01	1.80E+02	2.50E+01	5.23E+00	1.04E+03	103.15		3.795	8.150	1.563	0.068	9.323	4.537	1.694	0.069
432	7.31E+03	6.74E+03	1.14E+03	2.79E+01	1.47E+02	0.00E+00	5.09E+00	1.01E+03	100.50		4.374	8.341	1.589	0.068	9.508	4.622	1.715	0.069
433	7.32E+03	8.19E+03	1.26E+03	1.46E+01	1.37E+02	1.00E+02	5.20E+00	1.03E+03	102.54		3.925	8.193	1.569	0.068	9.365	4.556	1.699	0.069
434	7.32E+03	7.45E+03	1.24E+03	4.54E+01	2.79E+02	1.07E+02	4.23E+00	8.42E+02	83.51		8.715	9.727	1.757	0.069	10.830	5.270	1.870	0.070
435	7.32E+03	7.76E+03	1.20E+03	1.54E+01	2.09E+02	1.38E+02	5.22E+00	1.04E+03	102.99		3.829	8.162	1.564	0.068	9.334	4.542	1.696	0.069
436	7.32E+03	7.82E+03	1.20E+03	9.20E+00	5.06E+01	4.80E+02	5.00E+00	9.95E+02	98.63		4.802	8.481	1.608	0.068	9.642	4.686	1.731	0.069
437	7.32E+03	8.31E+03	1.27E+03	1.46E+01	1.30E+02	1.42E+02	5.18E+00	1.03E+03	102.25		3.988	8.214	1.572	0.068	9.385	4.565	1.702	0.069
438	7.32E+03	7.65E+03	1.22E+03	2.99E+01	3.00E+02	5.83E+01	4.52E+00	8.99E+02	89.10		7.169	9.241	1.702	0.069	10.368	5.038	1.816	0.070
439	7.32E+03	6.52E+03	1.17E+03	4.65E+01	2.88E+02	1.67E+01	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
440	7.32E+03	6.76E+03	1.15E+03	4.33E+01	2.25E+02	2.86E+01	4.68E+00	9.32E+02	92.42		6.307	8.967	1.669	0.069	10.107	4.909	1.785	0.070
441	7.32E+03	6.96E+03	1.20E+03	2.66E+01	2.22E+02	1.44E+02	5.10E+00	1.01E+03	100.53		4.369	8.340	1.589	0.068	9.506	4.621	1.715	0.069
442	7.32E+03	7.66E+03	1.22E+03	3.26E+01	3.21E+02	8.33E+01	4.22E+00	8.40E+02	83.31		8.770	9.744	1.759	0.069	10.846	5.279	1.872	0.070
443	7.32E+03	7.04E+03	1.21E+03	1.78E+01	2.19E+02	9.29E+01	5.19E+00	1.03E+03	102.49		3.937	8.197	1.569	0.068	9.369	4.558	1.700	0.069
444	7.32E+03	6.63E+03	1.16E+03	5.69E+01	2.83E+02	1.67E+01	3.74E+00	7.44E+02	73.77		11.677	10.642	1.853	0.070	11.693	5.717	1.974	0.071
445	7.32E+03	7.78E+03	1.20E+03	9.45E+00	1.17E+02	7.50E+01	5.16E+00	1.03E+03	101.83		4.081	8.245	1.576	0.068	9.415	4.579	1.705	0.069
446	7.32E+03	7.59E+03	1.23E+03	3.26E+01	3.09E+02	5.63E+01	4.34E+00	8.64E+02	85.60		8.122	9.541	1.736	0.069	10.654	5.181	1.849	0.070
447	7.32E+03	6.81E+03	1.17E+03	4.82E+01	2.07E+02	5.00E+01	4.54E+00	9.03E+02	89.55		7.051	9.203	1.697	0.069	10.333	5.021	1.811	0.070
448	7.32E+03	6.79E+03	1.16E+03	3.89E+01	2.01E+02	2.00E+01	4.86E+00	9.67E+02	95.87		5.453	8.692	1.635	0.068	9.845	4.782	1.754	0.069
449	7.32E+03	6.69E+03	1.14E+03	3.12E+01	1.81E+02	3.75E+01	5.06E+00	1.01E+03	99.85		4.522	8.390	1.595	0.068	9.554	4.644	1.721	0.069
450	7.32E+03	7.47E+03	1.24E+03	4.55E+01	2.80E+02	7.50E+01	4.22E+00	8.40E+02	83.27		8.784	9.748	1.759	0.069	10.850	5.281	1.873	0.070
451	7.32E+03	6.90E+03	1.19E+03	2.52E+01	2.25E+02	6.25E+01	5.11E+00	1.02E+03	100.75		4.319	8.323	1.586	0.068	9.490	4.614	1.713	0.069
452	7.32E+03	6.78E+03	1.16E+03	4.82E+01	2.07E+02	2.50E+01	4.54E+00	9.03E+02	89.55		7.051	9.203	1.697	0.069	10.333	5.021	1.811	0.070
453	7.32E+03	7.61E+03	1.23E+03	4.33E+01	3.15E+02	4.17E+01	3.85E+00	7.67E+02	76.03		10.959	10.422	1.831	0.070	11.486	5.609	1.949	0.071
454	7.32E+03	6.73E+03	1.14E+03	2.12E+01	1.15E+02	1.43E+02	5.09E+00	1.01E+03	100.33		4.414	8.354	1.591	0.068	9.520	4.628	1.717	0.069
455	7.32E+03	7.70E+03	1.21E+03	2.87E+01	3.36E+02	2.14E+01	4.32E+00	8.59E+02	85.14		8.250	9.581	1.741	0.069	10.692	5.200	1.854	0.070
456	7.33E+03	7.78E+03	1.20E+03	8.01E+00	8.90E+01	1.43E+02	5.10E+00	1.02E+03	100.70		4.331	8.327	1.587	0.068	9.494	4.616	1.714	0.069
457	7.33E+03	6.84E+03	1.18E+03	3.10E+01	2.14E+02	0.00E+00	5.04E+00	1.00E+03	99.36		4.634	8.426	1.600	0.068	9.589	4.661	1.725	0.069
458	7.33E+03	6.78E+03	1.16E+03	3.98E+01	2.17E+02	2.50E+01	4.81E+00	9.58E+02	94.93		5.681	8.766	1.644	0.069	9.915	4.816	1.763	0.069
459	7.33E+03	7.48E+03	1.24E+03	4.54E+01	2.79E+02	1.25E+02	4.23E+00	8.42E+02	83.51		8.715	9.727	1.757	0.069	10.830	5.270	1.870	0.070
460	7.33E+03	7.09E+03	1.22E+03	3.48E+01	1.97E+02	3.57E+01	4.97E+00	9.90E+02	98.10		4.925	8.521	1.613	0.068	9.681	4.704	1.735	0.069
461	7.33E+03	7.49E+03	1.24E+03	3.45E+01	2.84E+02	2.14E+01	4.54E+00	9.03E+02	89.50		7.063	9.207	1.698	0.069	10.336	5.022	1.812	0.070
462	7.33E+03	6.55E+03	1.17E+03	3.89E+01	2.92E+02	1.88E+01	4.31E+00	8.58E+02	85.08		8.268	9.587	1.741	0.069	10.697	5.203	1.855	0.070
463	7.33E+03	7.82E+03	1.20E+03	1.53E+01	1.08E+02	7.25E+02	5.11E+00	1.02E+03	100.85		4.296	8.316	1.586	0.068	9.483	4.611	1.713	0.069
464	7.33E+03	7.67E+03	1.22E+03	3.79E+01	3.29E+02	5.71E+01	3.95E+00	7.85E+02	77.83		10.399	10.249	1.813	0.070	11.323	5.524	1.930	0.071
465	7.33E+03	7.98E+03	1.22E+03	2.43E+01	1.21E+02	1.06E+02	5.07E+00	1.01E+03	100.07		4.471	8.373	1.593	0.068	9.538	4.637	1.719	0.069
466	7.33E+03	8.20E+03	1.26E+03	1.38E+01	1.44E+02	3.13E+01	5.21E+00	1.04E+03	102.85		3.858	8.171	1.566	0.068	9.344	4.546	1.697	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
467	7.33E+03	6.68E+03	1.15E+03	6.59E+01	3.33E+02	5.83E+01	2.60E+00	5.17E+02	51.23		19.874	13.102	2.074	0.072	13.991	6.966	2.258	0.074
468	7.33E+03	7.03E+03	1.21E+03	1.78E+01	2.19E+02	6.25E+00	5.19E+00	1.03E+03	102.49		3.937	8.197	1.569	0.068	9.369	4.558	1.700	0.069
469	7.33E+03	7.50E+03	1.24E+03	2.78E+01	2.88E+02	1.00E+01	4.68E+00	9.31E+02	92.34		6.327	8.973	1.670	0.069	10.113	4.912	1.786	0.070
470	7.33E+03	7.15E+03	1.24E+03	4.67E+01	1.99E+02	2.31E+02	4.60E+00	9.16E+02	90.76		6.732	9.102	1.685	0.069	10.236	4.973	1.800	0.070
471	7.33E+03	6.69E+03	1.14E+03	3.15E+01	1.57E+02	5.00E+01	5.04E+00	1.00E+03	99.49		4.603	8.416	1.599	0.068	9.580	4.656	1.724	0.069
472	7.33E+03	6.65E+03	1.16E+03	4.71E+01	2.92E+02	1.43E+01	4.02E+00	8.00E+02	79.28		9.958	10.113	1.798	0.070	11.195	5.457	1.914	0.071
473	7.33E+03	7.51E+03	1.24E+03	4.54E+01	2.79E+02	6.00E+01	4.23E+00	8.42E+02	83.51		8.715	9.727	1.757	0.069	10.830	5.270	1.870	0.070
474	7.33E+03	7.51E+03	1.24E+03	2.80E+01	2.90E+02	1.92E+02	4.66E+00	9.28E+02	91.96		6.424	9.004	1.673	0.069	10.143	4.927	1.789	0.070
475	7.33E+03	6.57E+03	1.17E+03	1.84E+01	2.70E+02	2.00E+01	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
476	7.33E+03	7.62E+03	1.23E+03	3.98E+01	3.07E+02	2.86E+01	4.10E+00	8.15E+02	80.84		9.491	9.968	1.783	0.070	11.058	5.387	1.898	0.071
477	7.33E+03	6.77E+03	1.16E+03	2.66E+01	1.80E+02	8.33E+00	5.14E+00	1.02E+03	101.49		4.154	8.269	1.579	0.068	9.438	4.590	1.708	0.069
478	7.33E+03	8.33E+03	1.27E+03	1.43E+01	1.28E+02	1.94E+02	5.18E+00	1.03E+03	102.20		4.000	8.218	1.572	0.068	9.389	4.567	1.702	0.069
479	7.33E+03	6.72E+03	1.14E+03	2.40E+01	1.23E+02	6.43E+01	5.08E+00	1.01E+03	100.31		4.417	8.355	1.591	0.068	9.521	4.629	1.717	0.069
480	7.34E+03	8.09E+03	1.25E+03	4.71E+01	1.58E+02	5.63E+01	4.58E+00	9.12E+02	90.41		6.824	9.131	1.689	0.069	10.264	4.987	1.803	0.070
481	7.34E+03	7.52E+03	1.24E+03	2.37E+01	2.94E+02	7.86E+01	4.74E+00	9.43E+02	93.46		6.046	8.883	1.659	0.069	10.027	4.870	1.776	0.070
482	7.34E+03	6.74E+03	1.15E+03	4.82E+01	2.43E+02	4.38E+01	4.44E+00	8.84E+02	87.61		7.569	9.367	1.716	0.069	10.489	5.098	1.830	0.070
483	7.34E+03	8.02E+03	1.23E+03	6.36E+01	1.87E+02	5.00E+01	3.82E+00	7.61E+02	75.40		11.158	10.482	1.837	0.070	11.543	5.639	1.956	0.071
484	7.34E+03	6.70E+03	1.14E+03	3.53E+01	1.84E+02	2.50E+01	4.97E+00	9.89E+02	98.00		4.946	8.528	1.614	0.068	9.687	4.707	1.736	0.069
485	7.34E+03	7.79E+03	1.20E+03	1.09E+01	1.41E+02	9.29E+01	5.21E+00	1.04E+03	102.75		3.881	8.179	1.567	0.068	9.351	4.549	1.698	0.069
486	7.34E+03	6.58E+03	1.17E+03	6.37E+01	2.78E+02	8.75E+01	3.49E+00	6.94E+02	68.85		13.309	11.139	1.901	0.071	12.160	5.965	2.031	0.072
487	7.34E+03	7.53E+03	1.24E+03	2.83E+01	2.92E+02	1.75E+02	4.64E+00	9.23E+02	91.49		6.545	9.043	1.678	0.069	10.179	4.945	1.793	0.070
488	7.34E+03	6.89E+03	1.19E+03	2.60E+01	2.08E+02	1.25E+01	5.13E+00	1.02E+03	101.26		4.207	8.286	1.582	0.068	9.455	4.597	1.709	0.069
489	7.34E+03	6.69E+03	1.15E+03	7.05E+01	3.15E+02	7.14E+00	2.64E+00	5.26E+02	52.17		19.496	12.990	2.065	0.072	13.888	6.908	2.245	0.074
490	7.34E+03	6.71E+03	1.14E+03	3.66E+01	2.38E+02	5.00E+01	4.83E+00	9.62E+02	95.37		5.573	8.731	1.640	0.068	9.882	4.800	1.759	0.069
491	7.34E+03	7.54E+03	1.24E+03	2.92E+01	2.97E+02	1.33E+02	4.57E+00	9.09E+02	90.13		6.898	9.155	1.692	0.069	10.287	4.998	1.806	0.070
492	7.34E+03	6.95E+03	1.20E+03	2.53E+01	2.12E+02	2.14E+01	5.14E+00	1.02E+03	101.33		4.191	8.281	1.581	0.068	9.450	4.595	1.709	0.069
493	7.34E+03	8.06E+03	1.24E+03	4.59E+01	1.66E+02	2.86E+01	4.63E+00	9.22E+02	91.40		6.567	9.049	1.679	0.069	10.186	4.948	1.794	0.070
494	7.34E+03	7.01E+03	1.21E+03	2.18E+01	2.14E+02	2.50E+01	5.17E+00	1.03E+03	102.06		4.030	8.228	1.574	0.068	9.399	4.571	1.703	0.069
495	7.34E+03	7.55E+03	1.24E+03	3.10E+01	3.04E+02	1.00E+01	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
496	7.34E+03	7.72E+03	1.21E+03	2.62E+01	3.24E+02	1.21E+02	4.46E+00	8.87E+02	87.93		7.484	9.340	1.713	0.069	10.463	5.086	1.827	0.070
497	7.34E+03	7.98E+03	1.22E+03	3.34E+01	1.25E+02	0.00E+00	4.92E+00	9.80E+02	97.14		5.149	8.594	1.622	0.068	9.750	4.737	1.743	0.069
498	7.34E+03	7.08E+03	1.22E+03	2.92E+01	2.07E+02	1.17E+02	5.08E+00	1.01E+03	100.26		4.428	8.359	1.591	0.068	9.525	4.630	1.717	0.069
499	7.34E+03	6.67E+03	1.16E+03	5.13E+01	3.07E+02	3.75E+01	3.64E+00	7.24E+02	71.80		12.320	10.838	1.872	0.070	11.878	5.815	1.997	0.072
500	7.35E+03	7.68E+03	1.22E+03	3.10E+01	3.26E+02	5.00E+01	4.26E+00	8.47E+02	84.02		8.569	9.681	1.752	0.069	10.787	5.248	1.865	0.070
501	7.35E+03	8.35E+03	1.27E+03	1.99E+01	1.13E+02	1.38E+02	5.09E+00	1.01E+03	100.45		4.388	8.346	1.590	0.068	9.512	4.624	1.716	0.069
502	7.35E+03	6.84E+03	1.18E+03	3.60E+01	2.03E+02	3.57E+01	4.94E+00	9.83E+02	97.42		5.082	8.572	1.619	0.068	9.730	4.727	1.741	0.069
503	7.35E+03	7.82E+03	1.20E+03	2.21E+01	1.28E+02	1.83E+02	5.12E+00	1.02E+03	101.10		4.242	8.298	1.583	0.068	9.466	4.603	1.711	0.069
504	7.35E+03	7.64E+03	1.23E+03	3.67E+01	2.97E+02	3.50E+01	4.33E+00	8.62E+02	85.47		8.159	9.553	1.737	0.069	10.665	5.187	1.851	0.070
505	7.35E+03	6.80E+03	1.17E+03	4.08E+01	2.10E+02	2.73E+01	4.79E+00	9.54E+02	94.55		5.775	8.796	1.648	0.069	9.944	4.830	1.766	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
506	7.35E+03	6.61E+03	1.17E+03	6.37E+01	2.78E+02	6.43E+01	3.49E+00	6.94E+02	68.85		13.309	11.139	1.901	0.071	12.160	5.965	2.031	0.072
507	7.35E+03	7.56E+03	1.24E+03	2.99E+01	3.00E+02	1.67E+02	4.52E+00	8.99E+02	89.10		7.169	9.241	1.702	0.069	10.368	5.038	1.816	0.070
508	7.35E+03	7.98E+03	1.22E+03	2.62E+01	1.27E+02	1.08E+02	5.07E+00	1.01E+03	99.98		4.491	8.380	1.594	0.068	9.545	4.640	1.720	0.069
509	7.35E+03	7.72E+03	1.21E+03	2.26E+01	3.23E+02	8.33E+01	4.59E+00	9.13E+02	90.56		6.785	9.119	1.687	0.069	10.252	4.981	1.802	0.070
510	7.35E+03	8.37E+03	1.27E+03	2.72E+01	1.03E+02	1.79E+02	4.93E+00	9.82E+02	97.33		5.105	8.580	1.620	0.068	9.737	4.731	1.742	0.069
511	7.35E+03	8.22E+03	1.26E+03	1.41E+01	1.38E+02	4.43E+02	5.20E+00	1.04E+03	102.64		3.904	8.187	1.568	0.068	9.358	4.553	1.698	0.069
512	7.35E+03	8.39E+03	1.27E+03	2.14E+01	1.10E+02	5.00E+01	5.06E+00	1.01E+03	99.86		4.519	8.389	1.595	0.068	9.553	4.644	1.721	0.069
513	7.35E+03	6.77E+03	1.16E+03	7.16E+01	1.75E+02	1.36E+02	3.37E+00	6.70E+02	66.39		14.157	11.395	1.925	0.071	12.400	6.094	2.061	0.072
514	7.35E+03	6.69E+03	1.15E+03	5.02E+01	3.26E+02	0.00E+00	3.40E+00	6.77E+02	67.11		13.905	11.319	1.918	0.071	12.329	6.055	2.052	0.072
515	7.35E+03	7.72E+03	1.21E+03	2.26E+01	3.23E+02	2.00E+01	4.59E+00	9.13E+02	90.56		6.785	9.119	1.687	0.069	10.252	4.981	1.802	0.070
516	7.35E+03	6.62E+03	1.17E+03	4.65E+01	2.88E+02	4.29E+01	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
517	7.35E+03	8.11E+03	1.25E+03	2.62E+01	1.44E+02	2.00E+02	5.12E+00	1.02E+03	100.94		4.277	8.309	1.585	0.068	9.477	4.608	1.712	0.069
518	7.35E+03	6.88E+03	1.19E+03	4.59E+01	1.94E+02	7.50E+01	4.63E+00	9.22E+02	91.40		6.567	9.049	1.679	0.069	10.186	4.948	1.794	0.070
519	7.35E+03	6.73E+03	1.15E+03	4.33E+01	2.25E+02	6.25E+01	4.68E+00	9.32E+02	92.42		6.307	8.967	1.669	0.069	10.107	4.909	1.785	0.070
520	7.35E+03	7.25E+03	1.26E+03	8.06E+01	2.67E+02	4.93E+02	2.73E+00	5.44E+02	53.95		18.788	12.780	2.047	0.072	13.692	6.800	2.220	0.073
521	7.35E+03	7.08E+03	1.22E+03	2.46E+01	2.09E+02	1.83E+02	5.15E+00	1.02E+03	101.60		4.131	8.261	1.578	0.068	9.430	4.586	1.707	0.069
522	7.35E+03	7.27E+03	1.26E+03	6.37E+01	2.79E+02	1.43E+02	3.47E+00	6.91E+02	68.46		13.440	11.178	1.905	0.071	12.197	5.985	2.036	0.072
523	7.35E+03	7.14E+03	1.24E+03	5.41E+01	1.95E+02	2.86E+01	4.29E+00	8.55E+02	84.72		8.371	9.619	1.745	0.069	10.728	5.219	1.858	0.070
524	7.35E+03	7.82E+03	1.20E+03	1.65E+01	6.26E+01	2.17E+02	4.89E+00	9.73E+02	96.48		5.307	8.645	1.629	0.068	9.799	4.760	1.749	0.069
525	7.35E+03	7.97E+03	1.22E+03	1.99E+01	1.03E+02	4.17E+01	5.05E+00	1.00E+03	99.57		4.586	8.411	1.598	0.068	9.574	4.654	1.723	0.069
526	7.36E+03	6.68E+03	1.16E+03	5.02E+01	3.04E+02	2.50E+01	3.73E+00	7.43E+02	73.62		11.727	10.657	1.854	0.070	11.707	5.725	1.976	0.071
527	7.36E+03	7.30E+03	1.26E+03	1.71E+01	2.70E+02	1.43E+02	5.02E+00	9.98E+02	98.97		4.723	8.455	1.604	0.068	9.617	4.674	1.728	0.069
528	7.36E+03	7.23E+03	1.26E+03	4.63E+01	2.53E+02	3.00E+02	4.45E+00	8.85E+02	87.76		7.529	9.354	1.715	0.069	10.476	5.092	1.828	0.070
529	7.36E+03	6.63E+03	1.17E+03	4.61E+01	2.86E+02	7.50E+01	4.13E+00	8.22E+02	81.48		9.303	9.910	1.777	0.070	11.003	5.359	1.891	0.071
530	7.36E+03	7.58E+03	1.24E+03	4.59E+01	2.84E+02	1.58E+02	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
531	7.36E+03	7.80E+03	1.20E+03	1.21E+01	1.24E+02	5.56E+01	5.18E+00	1.03E+03	102.10		4.022	8.225	1.573	0.068	9.396	4.570	1.703	0.069
532	7.36E+03	7.32E+03	1.26E+03	5.58E+01	2.84E+02	8.00E+01	3.77E+00	7.50E+02	74.35		11.492	10.585	1.847	0.070	11.640	5.689	1.968	0.071
533	7.36E+03	8.40E+03	1.27E+03	1.56E+01	1.17E+02	5.71E+01	5.14E+00	1.02E+03	101.41		4.173	8.275	1.580	0.068	9.444	4.592	1.708	0.069
534	7.36E+03	8.02E+03	1.23E+03	4.57E+01	1.93E+02	1.00E+02	4.64E+00	9.23E+02	91.54		6.531	9.038	1.678	0.069	10.175	4.943	1.793	0.070
535	7.36E+03	6.49E+03	1.18E+03	4.56E+01	2.81E+02	0.00E+00	4.21E+00	8.37E+02	82.97		8.869	9.775	1.762	0.069	10.875	5.293	1.876	0.070
536	7.36E+03	6.49E+03	1.18E+03	2.87E+01	2.94E+02	1.00E+02	4.61E+00	9.17E+02	90.89		6.698	9.091	1.684	0.069	10.226	4.968	1.799	0.070
537	7.36E+03	7.82E+03	1.20E+03	9.53E+00	6.22E+01	5.00E+01	5.02E+00	9.99E+02	99.05		4.705	8.450	1.603	0.068	9.612	4.671	1.727	0.069
538	7.36E+03	7.69E+03	1.22E+03	3.67E+01	3.33E+02	2.14E+01	3.98E+00	7.91E+02	78.45		10.211	10.191	1.807	0.070	11.269	5.496	1.923	0.071
539	7.36E+03	7.34E+03	1.26E+03	6.39E+01	2.81E+02	1.42E+02	3.44E+00	6.85E+02	67.90		13.633	11.237	1.911	0.071	12.252	6.014	2.042	0.072
540	7.36E+03	6.70E+03	1.15E+03	4.82E+01	2.97E+02	1.00E+01	3.91E+00	7.79E+02	77.22		10.589	10.308	1.819	0.070	11.379	5.553	1.936	0.071
541	7.36E+03	7.73E+03	1.21E+03	2.04E+01	3.26E+02	2.22E+01	4.65E+00	9.26E+02	91.81		6.462	9.016	1.675	0.069	10.154	4.933	1.790	0.070
542	7.36E+03	6.52E+03	1.18E+03	1.40E+01	2.70E+02	1.42E+02	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
543	7.36E+03	7.22E+03	1.26E+03	3.02E+01	2.30E+02	2.70E+02	5.01E+00	9.97E+02	98.84		4.752	8.465	1.605	0.068	9.626	4.678	1.729	0.069
544	7.36E+03	8.07E+03	1.24E+03	4.56E+01	1.69E+02	2.64E+02	4.65E+00	9.24E+02	91.64		6.505	9.030	1.677	0.069	10.167	4.939	1.792	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
545	7.36E+03	7.65E+03	1.23E+03	3.26E+01	3.21E+02	1.43E+01	4.22E+00	8.40E+02	83.31		8.770	9.744	1.759	0.069	10.846	5.279	1.872	0.070
546	7.36E+03	7.00E+03	1.21E+03	2.18E+01	2.14E+02	4.38E+01	5.17E+00	1.03E+03	102.06		4.030	8.228	1.574	0.068	9.399	4.571	1.703	0.069
547	7.36E+03	7.97E+03	1.22E+03	1.67E+01	8.21E+01	7.14E+00	4.98E+00	9.92E+02	98.30		4.878	8.506	1.611	0.068	9.666	4.697	1.734	0.069
548	7.36E+03	6.65E+03	1.17E+03	4.71E+01	2.92E+02	1.43E+01	4.02E+00	8.00E+02	79.28		9.958	10.113	1.798	0.070	11.195	5.457	1.914	0.071
549	7.36E+03	6.53E+03	1.18E+03	6.37E+01	2.78E+02	5.71E+01	3.49E+00	6.94E+02	68.85		13.309	11.139	1.901	0.071	12.160	5.965	2.031	0.072
550	7.36E+03	6.83E+03	1.18E+03	6.37E+01	1.72E+02	2.43E+02	3.82E+00	7.60E+02	75.35		11.174	10.487	1.837	0.070	11.548	5.641	1.957	0.071
551	7.36E+03	7.59E+03	1.24E+03	3.34E+01	2.94E+02	1.50E+02	4.46E+00	8.88E+02	88.04		7.453	9.331	1.712	0.069	10.454	5.081	1.826	0.070
552	7.36E+03	8.23E+03	1.26E+03	1.72E+01	1.26E+02	7.86E+01	5.16E+00	1.03E+03	101.81		4.085	8.246	1.576	0.068	9.416	4.580	1.705	0.069
553	7.36E+03	7.37E+03	1.26E+03	8.29E+01	2.67E+02	2.56E+02	2.60E+00	5.17E+02	51.28		19.853	13.096	2.074	0.072	13.986	6.963	2.257	0.074
554	7.36E+03	6.93E+03	1.20E+03	2.37E+01	2.21E+02	7.86E+01	5.14E+00	1.02E+03	101.37		4.182	8.278	1.580	0.068	9.447	4.594	1.709	0.069
555	7.37E+03	6.55E+03	1.18E+03	3.34E+01	2.94E+02	1.19E+02	4.46E+00	8.88E+02	88.04		7.453	9.331	1.712	0.069	10.454	5.081	1.826	0.070
556	7.37E+03	7.82E+03	1.20E+03	1.61E+01	9.62E+01	4.69E+02	5.06E+00	1.01E+03	99.79		4.536	8.394	1.596	0.068	9.559	4.646	1.721	0.069
557	7.37E+03	6.57E+03	1.18E+03	4.65E+01	2.88E+02	0.00E+00	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
558	7.37E+03	6.71E+03	1.15E+03	1.84E+01	2.70E+02	7.14E+00	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
559	7.37E+03	6.73E+03	1.15E+03	2.75E+01	1.10E+02	1.06E+02	4.96E+00	9.88E+02	97.94		4.960	8.533	1.614	0.068	9.692	4.709	1.737	0.069
560	7.37E+03	6.77E+03	1.16E+03	1.40E+01	1.80E+02	1.58E+02	5.24E+00	1.04E+03	103.39		3.742	8.133	1.560	0.068	9.307	4.529	1.693	0.069
561	7.37E+03	6.57E+03	1.18E+03	2.95E+01	3.15E+02	1.07E+02	4.39E+00	8.74E+02	86.67		7.827	9.448	1.726	0.069	10.566	5.137	1.839	0.070
562	7.37E+03	6.69E+03	1.16E+03	5.47E+01	3.15E+02	1.67E+01	3.37E+00	6.71E+02	66.50		14.118	11.383	1.924	0.071	12.389	6.088	2.059	0.072
563	7.37E+03	7.66E+03	1.23E+03	3.79E+01	3.29E+02	2.86E+01	3.95E+00	7.85E+02	77.83		10.399	10.249	1.813	0.070	11.323	5.524	1.930	0.071
564	7.37E+03	7.07E+03	1.22E+03	1.95E+01	2.25E+02	1.17E+02	5.17E+00	1.03E+03	101.98		4.047	8.234	1.574	0.068	9.404	4.574	1.704	0.069
565	7.37E+03	7.97E+03	1.22E+03	3.19E+01	1.14E+02	5.00E+01	4.90E+00	9.76E+02	96.72		5.248	8.626	1.626	0.068	9.781	4.752	1.747	0.069
566	7.37E+03	7.81E+03	1.20E+03	7.50E+00	8.40E+01	8.00E+01	5.10E+00	1.01E+03	100.55		4.364	8.338	1.589	0.068	9.504	4.621	1.715	0.069
567	7.37E+03	7.40E+03	1.26E+03	7.17E+01	2.76E+02	5.63E+01	3.12E+00	6.21E+02	61.58		15.878	11.913	1.973	0.071	12.884	6.356	2.120	0.073
568	7.37E+03	8.12E+03	1.25E+03	2.52E+01	1.35E+02	1.38E+02	5.11E+00	1.02E+03	100.75		4.319	8.323	1.586	0.068	9.490	4.614	1.713	0.069
569	7.37E+03	7.81E+03	1.20E+03	1.23E+01	1.28E+02	8.33E+00	5.18E+00	1.03E+03	102.25		3.988	8.214	1.572	0.068	9.385	4.565	1.701	0.069
570	7.37E+03	7.21E+03	1.26E+03	3.63E+01	2.05E+02	1.00E+02	4.93E+00	9.81E+02	97.22		5.131	8.588	1.621	0.068	9.745	4.734	1.743	0.069
571	7.37E+03	6.67E+03	1.17E+03	5.13E+01	3.07E+02	2.50E+01	3.64E+00	7.24E+02	71.80		12.320	10.838	1.872	0.070	11.878	5.815	1.997	0.072
572	7.37E+03	7.81E+03	1.20E+03	1.60E+01	2.36E+02	5.44E+02	5.16E+00	1.03E+03	101.83		4.081	8.245	1.576	0.068	9.415	4.579	1.705	0.069
573	7.37E+03	7.60E+03	1.24E+03	2.52E+01	3.15E+02	3.57E+01	4.54E+00	9.04E+02	89.64		7.028	9.196	1.696	0.069	10.326	5.017	1.811	0.070
574	7.37E+03	8.41E+03	1.27E+03	1.61E+01	1.20E+02	1.14E+02	5.15E+00	1.02E+03	101.56		4.139	8.264	1.579	0.068	9.433	4.588	1.707	0.069
575	7.37E+03	7.41E+03	1.26E+03	4.13E+01	2.94E+02	3.00E+02	4.20E+00	8.36E+02	82.84		8.907	9.787	1.763	0.069	10.886	5.299	1.877	0.070
576	7.37E+03	6.72E+03	1.15E+03	3.00E+01	1.86E+02	8.33E+00	5.08E+00	1.01E+03	100.29		4.422	8.357	1.591	0.068	9.523	4.629	1.717	0.069
577	7.37E+03	7.97E+03	1.22E+03	2.27E+01	8.09E+01	3.75E+01	4.87E+00	9.69E+02	96.07		5.403	8.676	1.633	0.068	9.829	4.775	1.753	0.069
578	7.37E+03	7.96E+03	1.22E+03	2.43E+01	1.31E+02	2.50E+01	5.11E+00	1.02E+03	100.79		4.310	8.320	1.586	0.068	9.487	4.613	1.713	0.069
579	7.37E+03	8.25E+03	1.26E+03	1.77E+01	1.21E+02	3.50E+02	5.14E+00	1.02E+03	101.45		4.164	8.272	1.580	0.068	9.441	4.591	1.708	0.069
580	7.37E+03	7.13E+03	1.24E+03	5.15E+01	1.97E+02	1.19E+02	4.41E+00	8.77E+02	86.97		7.745	9.423	1.723	0.069	10.541	5.125	1.836	0.070
581	7.37E+03	7.70E+03	1.22E+03	3.64E+01	3.24E+02	0.00E+00	4.04E+00	8.04E+02	79.73		9.824	10.071	1.794	0.070	11.156	5.437	1.909	0.071
582	7.38E+03	6.73E+03	1.15E+03	3.50E+01	1.69E+02	6.43E+01	4.97E+00	9.89E+02	98.08		4.929	8.522	1.613	0.068	9.682	4.704	1.736	0.069
583	7.38E+03	6.73E+03	1.15E+03	3.60E+01	2.12E+02	4.17E+01	4.92E+00	9.80E+02	97.15		5.147	8.593	1.622	0.068	9.750	4.737	1.743	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
584	7.38E+03	7.95E+03	1.22E+03	2.76E+01	1.97E+02	4.17E+02	5.12E+00	1.02E+03	101.02		4.259	8.304	1.584	0.068	9.471	4.605	1.711	0.069
585	7.38E+03	6.79E+03	1.17E+03	6.41E+01	1.94E+02	3.75E+01	3.80E+00	7.56E+02	74.91		11.315	10.531	1.842	0.070	11.589	5.663	1.962	0.071
586	7.38E+03	6.61E+03	1.18E+03	6.37E+01	2.79E+02	1.36E+02	3.47E+00	6.91E+02	68.46		13.440	11.178	1.905	0.071	12.197	5.985	2.036	0.072
587	7.38E+03	8.02E+03	1.23E+03	3.48E+01	1.97E+02	1.43E+01	4.97E+00	9.90E+02	98.10		4.925	8.521	1.613	0.068	9.681	4.704	1.735	0.069
588	7.38E+03	6.92E+03	1.20E+03	2.92E+01	2.07E+02	1.94E+02	5.08E+00	1.01E+03	100.26		4.428	8.359	1.591	0.068	9.525	4.630	1.717	0.069
589	7.38E+03	6.61E+03	1.18E+03	4.65E+01	2.88E+02	0.00E+00	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
590	7.38E+03	7.75E+03	1.21E+03	2.18E+01	3.26E+02	9.29E+01	4.60E+00	9.16E+02	90.84		6.712	9.096	1.684	0.069	10.230	4.970	1.799	0.070
591	7.38E+03	7.06E+03	1.22E+03	1.85E+01	2.28E+02	1.29E+02	5.17E+00	1.03E+03	101.95		4.054	8.236	1.575	0.068	9.406	4.575	1.704	0.069
592	7.38E+03	6.77E+03	1.16E+03	6.36E+01	1.87E+02	0.00E+00	3.82E+00	7.61E+02	75.40		11.158	10.482	1.837	0.070	11.543	5.639	1.956	0.071
593	7.38E+03	7.67E+03	1.23E+03	3.79E+01	3.29E+02	1.08E+02	3.95E+00	7.85E+02	77.83		10.399	10.249	1.813	0.070	11.323	5.524	1.930	0.071
594	7.38E+03	7.44E+03	1.26E+03	3.97E+01	2.95E+02	3.13E+01	4.25E+00	8.45E+02	83.80		8.631	9.700	1.754	0.069	10.805	5.258	1.867	0.070
595	7.38E+03	6.82E+03	1.18E+03	1.84E+01	1.80E+02	1.50E+02	5.23E+00	1.04E+03	103.15		3.795	8.150	1.563	0.068	9.323	4.537	1.694	0.069
596	7.38E+03	8.26E+03	1.26E+03	2.34E+01	1.13E+02	1.75E+02	5.05E+00	1.00E+03	99.55		4.591	8.412	1.598	0.068	9.576	4.654	1.723	0.069
597	7.38E+03	6.68E+03	1.17E+03	5.47E+01	3.15E+02	5.83E+01	3.37E+00	6.71E+02	66.50		14.118	11.383	1.924	0.071	12.389	6.088	2.059	0.072
598	7.38E+03	7.61E+03	1.24E+03	2.52E+01	3.15E+02	3.07E+02	4.54E+00	9.04E+02	89.64		7.028	9.196	1.696	0.069	10.326	5.017	1.811	0.070
599	7.38E+03	6.98E+03	1.21E+03	2.26E+01	2.17E+02	2.14E+02	5.16E+00	1.03E+03	101.78		4.092	8.249	1.576	0.068	9.418	4.581	1.705	0.069
600	7.38E+03	6.62E+03	1.18E+03	4.08E+01	3.00E+02	3.13E+01	4.15E+00	8.26E+02	81.88		9.186	9.874	1.773	0.070	10.969	5.341	1.887	0.071
601	7.38E+03	6.71E+03	1.16E+03	6.10E+01	3.26E+02	4.38E+01	2.92E+00	5.81E+02	57.58		17.378	12.361	2.012	0.071	13.302	6.585	2.172	0.073
602	7.38E+03	7.95E+03	1.22E+03	3.44E+01	1.93E+02	1.07E+02	4.99E+00	9.92E+02	98.37		4.862	8.501	1.610	0.068	9.661	4.694	1.733	0.069
603	7.39E+03	6.87E+03	1.19E+03	2.20E+01	2.25E+02	2.14E+01	5.15E+00	1.02E+03	101.53		4.147	8.267	1.579	0.068	9.436	4.589	1.707	0.069
604	7.39E+03	7.63E+03	1.24E+03	3.60E+01	2.93E+02	4.17E+01	4.39E+00	8.75E+02	86.70		7.818	9.446	1.725	0.069	10.563	5.136	1.839	0.070
605	7.39E+03	8.08E+03	1.24E+03	2.50E+01	1.53E+02	2.20E+02	5.15E+00	1.02E+03	101.57		4.137	8.263	1.578	0.068	9.432	4.587	1.707	0.069
606	7.39E+03	6.86E+03	1.19E+03	2.99E+01	2.10E+02	5.71E+01	5.06E+00	1.01E+03	99.90		4.510	8.386	1.595	0.068	9.550	4.642	1.720	0.069
607	7.39E+03	7.05E+03	1.22E+03	1.78E+01	2.31E+02	1.17E+02	5.16E+00	1.03E+03	101.89		4.068	8.241	1.575	0.068	9.411	4.577	1.704	0.069
608	7.39E+03	8.43E+03	1.27E+03	1.72E+01	1.26E+02	1.42E+02	5.16E+00	1.03E+03	101.81		4.085	8.246	1.576	0.068	9.416	4.580	1.705	0.069
609	7.39E+03	6.50E+03	1.19E+03	6.37E+01	2.79E+02	2.33E+02	3.47E+00	6.91E+02	68.46		13.440	11.178	1.905	0.071	12.197	5.985	2.036	0.072
610	7.39E+03	6.77E+03	1.16E+03	4.59E+01	1.94E+02	8.33E+01	4.63E+00	9.22E+02	91.40		6.567	9.049	1.679	0.069	10.186	4.948	1.794	0.070
611	7.39E+03	7.94E+03	1.22E+03	2.78E+01	1.98E+02	1.25E+02	5.12E+00	1.02E+03	100.94		4.278	8.310	1.585	0.068	9.477	4.608	1.712	0.069
612	7.39E+03	7.19E+03	1.26E+03	3.72E+01	2.09E+02	2.25E+02	4.90E+00	9.75E+02	96.64		5.269	8.633	1.627	0.068	9.788	4.755	1.748	0.069
613	7.39E+03	7.64E+03	1.24E+03	3.79E+01	3.01E+02	1.00E+02	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070
614	7.39E+03	8.14E+03	1.25E+03	2.57E+01	1.29E+02	1.88E+02	5.08E+00	1.01E+03	100.24		4.433	8.360	1.592	0.068	9.526	4.631	1.718	0.069
615	7.39E+03	7.46E+03	1.26E+03	4.09E+01	2.93E+02	7.86E+01	4.24E+00	8.43E+02	83.55		8.702	9.723	1.756	0.069	10.826	5.268	1.870	0.070
616	7.39E+03	8.28E+03	1.26E+03	2.41E+01	1.17E+02	2.92E+02	5.06E+00	1.01E+03	99.73		4.550	8.399	1.597	0.068	9.563	4.648	1.722	0.069
617	7.39E+03	7.72E+03	1.22E+03	3.53E+01	3.15E+02	4.38E+01	4.18E+00	8.31E+02	82.37		9.042	9.829	1.768	0.070	10.926	5.319	1.882	0.071
618	7.39E+03	7.76E+03	1.21E+03	2.56E+01	3.33E+02	8.13E+01	4.44E+00	8.84E+02	87.68		7.552	9.362	1.716	0.069	10.483	5.096	1.829	0.070
619	7.39E+03	7.94E+03	1.22E+03	6.04E+01	1.85E+02	1.14E+02	3.99E+00	7.95E+02	78.77		10.114	10.161	1.804	0.070	11.240	5.481	1.920	0.071
620	7.39E+03	6.63E+03	1.18E+03	2.75E+01	3.20E+02	2.86E+01	4.43E+00	8.82E+02	87.40		7.626	9.385	1.718	0.069	10.506	5.107	1.832	0.070
621	7.40E+03	7.04E+03	1.22E+03	1.92E+01	2.35E+02	1.00E+02	5.14E+00	1.02E+03	101.45		4.164	8.272	1.580	0.068	9.441	4.591	1.708	0.069
622	7.40E+03	6.69E+03	1.17E+03	4.71E+01	2.92E+02	5.00E+01	4.02E+00	8.00E+02	79.28		9.958	10.113	1.798	0.070	11.195	5.457	1.914	0.071

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
623	7.40E+03	7.68E+03	1.23E+03	3.10E+01	3.26E+02	7.50E+01	4.26E+00	8.47E+02	84.02		8.569	9.681	1.752	0.069	10.787	5.248	1.865	0.070
624	7.40E+03	6.73E+03	1.16E+03	2.66E+01	2.70E+02	3.75E+01	4.86E+00	9.66E+02	95.81		5.468	8.697	1.635	0.068	9.849	4.784	1.755	0.069
625	7.40E+03	6.79E+03	1.17E+03	4.74E+01	2.03E+02	5.00E+01	4.57E+00	9.10E+02	90.18		6.885	9.151	1.691	0.069	10.283	4.996	1.806	0.070
626	7.40E+03	6.52E+03	1.19E+03	6.36E+01	2.77E+02	1.43E+01	3.50E+00	6.97E+02	69.13		13.214	11.110	1.898	0.071	12.133	5.951	2.028	0.072
627	7.40E+03	6.58E+03	1.19E+03	4.65E+01	2.52E+02	1.67E+01	4.45E+00	8.86E+02	87.80		7.518	9.351	1.714	0.069	10.473	5.091	1.828	0.070
628	7.40E+03	6.58E+03	1.19E+03	4.71E+01	2.92E+02	1.00E+02	4.02E+00	8.00E+02	79.28		9.958	10.113	1.798	0.070	11.195	5.457	1.914	0.071
629	7.40E+03	6.56E+03	1.19E+03	1.84E+01	2.70E+02	8.57E+01	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
630	7.40E+03	7.48E+03	1.26E+03	3.95E+01	2.91E+02	4.09E+01	4.30E+00	8.57E+02	84.92		8.312	9.601	1.743	0.069	10.710	5.210	1.856	0.070
631	7.40E+03	6.76E+03	1.16E+03	3.72E+01	1.76E+02	7.14E+00	4.92E+00	9.79E+02	97.01		5.181	8.604	1.624	0.068	9.760	4.742	1.745	0.069
632	7.40E+03	7.12E+03	1.24E+03	4.13E+01	2.04E+02	3.57E+01	4.78E+00	9.52E+02	94.36		5.821	8.811	1.650	0.069	9.958	4.837	1.768	0.069
633	7.40E+03	6.54E+03	1.19E+03	1.59E+01	2.70E+02	3.57E+01	5.03E+00	1.00E+03	99.26		4.656	8.433	1.601	0.068	9.596	4.664	1.726	0.069
634	7.40E+03	7.65E+03	1.24E+03	3.80E+01	3.20E+02	1.21E+02	4.01E+00	7.98E+02	79.11		10.009	10.129	1.800	0.070	11.210	5.465	1.916	0.071
635	7.40E+03	7.94E+03	1.22E+03	1.33E+01	1.48E+02	2.83E+02	5.22E+00	1.04E+03	102.96		3.834	8.163	1.565	0.068	9.336	4.543	1.696	0.069
636	7.40E+03	6.81E+03	1.18E+03	7.18E+01	1.89E+02	3.75E+01	3.36E+00	6.68E+02	66.23		14.211	11.411	1.927	0.071	12.415	6.102	2.062	0.072
637	7.40E+03	8.02E+03	1.23E+03	7.60E+01	1.77E+02	2.56E+02	3.10E+00	6.17E+02	61.13		16.043	11.962	1.977	0.071	12.930	6.381	2.126	0.073
638	7.40E+03	7.03E+03	1.22E+03	2.26E+01	2.33E+02	7.00E+01	5.11E+00	1.02E+03	100.90		4.285	8.312	1.585	0.068	9.479	4.609	1.712	0.069
639	7.40E+03	6.64E+03	1.18E+03	2.62E+01	3.24E+02	4.29E+01	4.46E+00	8.87E+02	87.93		7.484	9.340	1.713	0.069	10.463	5.086	1.827	0.070
640	7.41E+03	6.76E+03	1.16E+03	3.06E+01	1.70E+02	8.33E+00	5.07E+00	1.01E+03	100.05		4.476	8.375	1.593	0.068	9.540	4.637	1.719	0.069
641	7.41E+03	6.74E+03	1.16E+03	4.65E+01	2.52E+02	4.44E+01	4.45E+00	8.86E+02	87.80		7.518	9.351	1.714	0.069	10.473	5.091	1.828	0.070
642	7.41E+03	8.16E+03	1.25E+03	2.99E+01	1.20E+02	3.42E+02	4.97E+00	9.89E+02	98.09		4.926	8.521	1.613	0.068	9.681	4.704	1.735	0.069
643	7.41E+03	6.96E+03	1.21E+03	2.08E+01	2.29E+02	7.14E+00	5.15E+00	1.02E+03	101.55		4.141	8.265	1.579	0.068	9.434	4.588	1.707	0.069
644	7.41E+03	8.45E+03	1.27E+03	1.78E+01	1.29E+02	3.93E+02	5.16E+00	1.03E+03	101.89		4.068	8.241	1.575	0.068	9.411	4.577	1.704	0.069
645	7.41E+03	7.50E+03	1.26E+03	4.03E+01	2.90E+02	1.43E+02	4.29E+00	8.54E+02	84.63		8.394	9.626	1.746	0.069	10.734	5.222	1.859	0.070
646	7.41E+03	8.10E+03	1.24E+03	1.88E+01	1.37E+02	1.25E+01	5.18E+00	1.03E+03	102.19		4.002	8.219	1.572	0.068	9.390	4.567	1.702	0.069
647	7.41E+03	6.91E+03	1.20E+03	2.87E+01	2.04E+02	1.07E+02	5.10E+00	1.01E+03	100.52		4.372	8.340	1.589	0.068	9.507	4.622	1.715	0.069
648	7.41E+03	6.61E+03	1.19E+03	7.17E+01	2.76E+02	5.63E+01	3.12E+00	6.20E+02	61.50		15.908	11.922	1.973	0.071	12.893	6.360	2.121	0.073
649	7.41E+03	7.73E+03	1.22E+03	2.95E+01	3.15E+02	6.43E+01	4.39E+00	8.74E+02	86.67		7.827	9.448	1.726	0.069	10.566	5.137	1.839	0.070
650	7.41E+03	7.19E+03	1.26E+03	4.06E+01	2.01E+02	1.00E+02	4.81E+00	9.57E+02	94.86		5.699	8.772	1.645	0.069	9.921	4.819	1.763	0.069
651	7.41E+03	6.75E+03	1.16E+03	3.85E+01	2.39E+02	3.33E+01	4.78E+00	9.51E+02	94.26		5.846	8.819	1.651	0.069	9.966	4.841	1.768	0.069
652	7.41E+03	6.57E+03	1.20E+03	7.25E+01	2.88E+02	1.50E+02	2.93E+00	5.84E+02	57.87		17.267	12.328	2.009	0.071	13.271	6.568	2.168	0.073
653	7.41E+03	6.58E+03	1.20E+03	6.46E+01	3.42E+02	1.29E+02	2.57E+00	5.11E+02	50.67		20.102	13.169	2.080	0.072	14.054	7.001	2.265	0.074
654	7.41E+03	8.30E+03	1.26E+03	2.75E+01	1.30E+02	9.29E+01	5.06E+00	1.01E+03	99.76		4.543	8.397	1.596	0.068	9.561	4.647	1.722	0.069
655	7.41E+03	6.70E+03	1.17E+03	3.53E+01	3.15E+02	1.43E+01	4.18E+00	8.31E+02	82.37		9.042	9.829	1.768	0.070	10.926	5.319	1.882	0.071
656	7.41E+03	6.55E+03	1.20E+03	4.50E+01	2.70E+02	1.00E+02	4.35E+00	8.65E+02	85.76		8.079	9.528	1.735	0.069	10.641	5.175	1.848	0.070
657	7.41E+03	8.18E+03	1.25E+03	2.41E+01	1.17E+02	9.29E+01	5.06E+00	1.01E+03	99.73		4.550	8.399	1.597	0.068	9.563	4.648	1.722	0.069
658	7.41E+03	6.85E+03	1.19E+03	2.99E+01	2.10E+02	7.14E+00	5.06E+00	1.01E+03	99.90		4.510	8.386	1.595	0.068	9.550	4.642	1.720	0.069
659	7.41E+03	7.02E+03	1.22E+03	2.26E+01	2.33E+02	7.14E+01	5.11E+00	1.02E+03	100.90		4.285	8.312	1.585	0.068	9.479	4.609	1.712	0.069
660	7.41E+03	6.62E+03	1.19E+03	6.39E+01	2.81E+02	1.43E+01	3.44E+00	6.85E+02	67.90		13.633	11.237	1.911	0.071	12.252	6.014	2.042	0.072
661	7.41E+03	6.79E+03	1.17E+03	4.65E+01	1.98E+02	0.00E+00	4.61E+00	9.17E+02	90.90		6.697	9.091	1.684	0.069	10.226	4.968	1.799	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
662	7.41E+03	6.96E+03	1.21E+03	3.51E+01	1.98E+02	4.38E+01	4.96E+00	9.88E+02	97.94		4.961	8.533	1.614	0.068	9.692	4.709	1.737	0.069
663	7.41E+03	6.53E+03	1.20E+03	4.50E+01	2.70E+02	7.14E+01	4.35E+00	8.65E+02	85.76		8.079	9.528	1.735	0.069	10.641	5.175	1.848	0.070
664	7.41E+03	7.66E+03	1.24E+03	4.82E+01	3.33E+02	8.33E+00	3.42E+00	6.81E+02	67.47		13.782	11.282	1.915	0.071	12.294	6.037	2.048	0.072
665	7.41E+03	7.52E+03	1.26E+03	3.49E+01	2.97E+02	1.80E+02	4.39E+00	8.74E+02	86.61		7.842	9.453	1.726	0.069	10.570	5.139	1.840	0.070
666	7.41E+03	7.95E+03	1.22E+03	2.39E+01	1.35E+02	7.14E+01	5.12E+00	1.02E+03	101.08		4.246	8.299	1.583	0.068	9.467	4.603	1.711	0.069
667	7.42E+03	7.69E+03	1.23E+03	2.52E+01	3.15E+02	1.50E+02	4.54E+00	9.04E+02	89.64		7.028	9.196	1.696	0.069	10.326	5.017	1.811	0.070
668	7.42E+03	7.77E+03	1.21E+03	1.78E+01	3.09E+02	2.57E+02	4.81E+00	9.56E+02	94.81		5.710	8.775	1.645	0.069	9.924	4.821	1.764	0.069
669	7.42E+03	6.51E+03	1.20E+03	2.18E+01	2.70E+02	3.75E+01	4.95E+00	9.84E+02	97.57		5.049	8.562	1.618	0.068	9.719	4.722	1.740	0.069
670	7.42E+03	6.71E+03	1.17E+03	3.53E+01	3.15E+02	7.50E+01	4.18E+00	8.31E+02	82.37		9.042	9.829	1.768	0.070	10.926	5.319	1.882	0.071
671	7.42E+03	8.03E+03	1.23E+03	2.47E+01	1.59E+02	7.14E+01	5.16E+00	1.03E+03	101.78		4.091	8.248	1.576	0.068	9.418	4.580	1.705	0.069
672	7.42E+03	6.66E+03	1.18E+03	2.75E+01	3.10E+02	1.00E+02	4.51E+00	8.97E+02	88.88		7.229	9.260	1.704	0.069	10.386	5.047	1.818	0.070
673	7.42E+03	6.63E+03	1.19E+03	6.39E+01	2.81E+02	1.43E+01	3.44E+00	6.85E+02	67.90		13.633	11.237	1.911	0.071	12.252	6.014	2.042	0.072
674	7.42E+03	7.01E+03	1.22E+03	2.53E+01	2.12E+02	2.25E+02	5.14E+00	1.02E+03	101.33		4.191	8.281	1.581	0.068	9.450	4.595	1.709	0.069
675	7.42E+03	6.90E+03	1.20E+03	2.87E+01	2.04E+02	2.86E+01	5.10E+00	1.01E+03	100.52		4.372	8.340	1.589	0.068	9.507	4.622	1.715	0.069
676	7.42E+03	7.74E+03	1.22E+03	3.79E+01	3.29E+02	3.57E+01	3.95E+00	7.85E+02	77.83		10.399	10.249	1.813	0.070	11.323	5.524	1.930	0.071
677	7.42E+03	8.47E+03	1.27E+03	2.09E+01	1.19E+02	2.14E+02	5.11E+00	1.02E+03	100.73		4.324	8.325	1.587	0.068	9.492	4.615	1.714	0.069
678	7.42E+03	6.61E+03	1.20E+03	6.59E+01	2.97E+02	7.86E+01	3.14E+00	6.25E+02	62.00		15.724	11.867	1.968	0.071	12.841	6.332	2.115	0.073
679	7.42E+03	6.49E+03	1.20E+03	4.65E+01	2.88E+02	9.00E+01	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
680	7.42E+03	7.31E+03	1.28E+03	1.84E+01	2.70E+02	6.67E+01	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
681	7.42E+03	6.79E+03	1.17E+03	3.67E+01	2.07E+02	1.43E+01	4.91E+00	9.78E+02	96.96		5.192	8.608	1.624	0.068	9.764	4.743	1.745	0.069
682	7.42E+03	8.20E+03	1.25E+03	1.92E+01	1.25E+02	2.14E+01	5.14E+00	1.02E+03	101.45		4.164	8.272	1.580	0.068	9.441	4.591	1.708	0.069
683	7.42E+03	7.33E+03	1.28E+03	1.84E+01	2.70E+02	5.00E+01	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
684	7.42E+03	7.29E+03	1.28E+03	7.60E+01	2.66E+02	2.14E+02	2.99E+00	5.96E+02	59.06		16.815	12.193	1.997	0.071	13.146	6.499	2.152	0.073
685	7.42E+03	8.11E+03	1.24E+03	1.78E+01	1.41E+02	1.20E+02	5.19E+00	1.03E+03	102.49		3.937	8.197	1.569	0.068	9.369	4.558	1.700	0.069
686	7.42E+03	7.12E+03	1.24E+03	3.30E+01	2.08E+02	2.19E+02	5.00E+00	9.96E+02	98.71		4.783	8.475	1.607	0.068	9.636	4.683	1.730	0.069
687	7.42E+03	8.32E+03	1.26E+03	2.85E+01	1.28E+02	1.93E+02	5.03E+00	1.00E+03	99.29		4.650	8.432	1.601	0.068	9.594	4.663	1.725	0.069
688	7.42E+03	6.72E+03	1.17E+03	4.33E+01	3.15E+02	0.00E+00	3.85E+00	7.67E+02	76.03		10.959	10.422	1.831	0.070	11.486	5.609	1.949	0.071
689	7.42E+03	7.54E+03	1.26E+03	2.81E+01	3.11E+02	3.13E+01	4.47E+00	8.90E+02	88.24		7.400	9.314	1.710	0.069	10.438	5.073	1.824	0.070
690	7.42E+03	6.61E+03	1.20E+03	6.46E+01	3.42E+02	7.50E+01	2.57E+00	5.11E+02	50.67		20.102	13.169	2.080	0.072	14.054	7.001	2.265	0.074
691	7.43E+03	7.68E+03	1.24E+03	6.41E+01	2.84E+02	1.07E+02	3.40E+00	6.76E+02	67.01		13.941	11.330	1.919	0.071	12.339	6.061	2.053	0.072
692	7.43E+03	6.81E+03	1.18E+03	3.98E+01	2.17E+02	3.33E+01	4.81E+00	9.58E+02	94.93		5.681	8.766	1.644	0.069	9.915	4.816	1.763	0.069
693	7.43E+03	7.35E+03	1.28E+03	7.60E+01	2.74E+02	1.75E+02	2.92E+00	5.80E+02	57.52		17.399	12.367	2.012	0.071	13.308	6.588	2.173	0.073
694	7.43E+03	7.96E+03	1.22E+03	2.80E+01	9.66E+01	1.50E+02	4.87E+00	9.70E+02	96.17		5.380	8.669	1.632	0.068	9.822	4.771	1.752	0.069
695	7.43E+03	7.70E+03	1.23E+03	2.75E+01	3.10E+02	7.14E+00	4.51E+00	8.97E+02	88.88		7.229	9.260	1.704	0.069	10.386	5.047	1.818	0.070
696	7.43E+03	6.64E+03	1.19E+03	4.82E+01	2.97E+02	7.14E+00	3.91E+00	7.79E+02	77.22		10.589	10.308	1.819	0.070	11.379	5.553	1.936	0.071
697	7.43E+03	7.28E+03	1.28E+03	2.80E+01	2.39E+02	2.50E+02	5.01E+00	9.98E+02	98.93		4.732	8.458	1.605	0.068	9.620	4.675	1.728	0.069
698	7.43E+03	7.18E+03	1.26E+03	4.65E+01	1.98E+02	5.71E+01	4.61E+00	9.17E+02	90.90		6.697	9.091	1.684	0.069	10.226	4.968	1.799	0.070
699	7.43E+03	7.76E+03	1.22E+03	5.47E+01	3.15E+02	1.67E+01	3.37E+00	6.71E+02	66.50		14.118	11.383	1.924	0.071	12.389	6.088	2.059	0.072
700	7.43E+03	7.79E+03	1.21E+03	2.78E+01	2.88E+02	1.33E+02	4.68E+00	9.31E+02	92.34		6.327	8.973	1.670	0.069	10.113	4.912	1.786	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
701	7.43E+03	8.04E+03	1.23E+03	2.75E+01	1.64E+02	2.07E+02	5.12E+00	1.02E+03	101.08		4.245	8.299	1.583	0.068	9.467	4.603	1.711	0.069
702	7.43E+03	6.67E+03	1.18E+03	2.95E+01	3.15E+02	4.17E+01	4.39E+00	8.74E+02	86.67		7.827	9.448	1.726	0.069	10.566	5.137	1.839	0.070
703	7.43E+03	8.34E+03	1.26E+03	2.92E+01	1.17E+02	3.75E+01	4.97E+00	9.89E+02	98.06		4.932	8.524	1.613	0.068	9.683	4.705	1.736	0.069
704	7.43E+03	8.21E+03	1.25E+03	1.99E+01	1.28E+02	5.83E+01	5.15E+00	1.02E+03	101.52		4.149	8.267	1.579	0.068	9.436	4.589	1.707	0.069
705	7.43E+03	7.37E+03	1.28E+03	5.38E+01	2.83E+02	3.13E+01	3.86E+00	7.69E+02	76.25		10.892	10.401	1.828	0.070	11.466	5.599	1.947	0.071
706	7.43E+03	6.83E+03	1.19E+03	5.73E+01	1.96E+02	1.06E+02	4.14E+00	8.25E+02	81.75		9.224	9.885	1.774	0.070	10.980	5.347	1.888	0.071
707	7.43E+03	7.00E+03	1.22E+03	2.92E+01	2.07E+02	8.57E+01	5.08E+00	1.01E+03	100.26		4.428	8.359	1.591	0.068	9.525	4.630	1.717	0.069
708	7.43E+03	7.71E+03	1.23E+03	3.79E+01	3.29E+02	3.57E+01	3.95E+00	7.85E+02	77.83		10.399	10.249	1.813	0.070	11.323	5.524	1.930	0.071
709	7.43E+03	6.74E+03	1.17E+03	6.41E+01	2.84E+02	0.00E+00	3.40E+00	6.76E+02	67.01		13.941	11.330	1.919	0.071	12.339	6.061	2.053	0.072
710	7.43E+03	6.78E+03	1.17E+03	3.26E+01	2.19E+02	6.43E+01	4.99E+00	9.93E+02	98.48		4.835	8.492	1.609	0.068	9.652	4.690	1.732	0.069
711	7.44E+03	8.36E+03	1.26E+03	2.83E+01	1.12E+02	1.06E+02	4.96E+00	9.88E+02	97.90		4.970	8.536	1.615	0.068	9.694	4.710	1.737	0.069
712	7.44E+03	6.63E+03	1.20E+03	6.46E+01	2.88E+02	0.00E+00	3.32E+00	6.60E+02	65.42		14.497	11.498	1.935	0.071	12.496	6.146	2.072	0.072
713	7.44E+03	8.13E+03	1.24E+03	2.75E+01	1.64E+02	1.50E+02	5.12E+00	1.02E+03	101.08		4.245	8.299	1.583	0.068	9.467	4.603	1.711	0.069
714	7.44E+03	7.97E+03	1.22E+03	1.84E+01	6.18E+01	3.75E+01	4.84E+00	9.64E+02	95.56		5.528	8.717	1.638	0.068	9.868	4.793	1.757	0.069
715	7.44E+03	7.39E+03	1.28E+03	3.89E+01	2.92E+02	1.88E+02	4.31E+00	8.58E+02	85.08		8.268	9.587	1.741	0.069	10.697	5.203	1.855	0.070
716	7.44E+03	7.69E+03	1.24E+03	6.46E+01	2.88E+02	5.00E+01	3.32E+00	6.60E+02	65.42		14.497	11.498	1.935	0.071	12.496	6.146	2.072	0.072
717	7.44E+03	7.56E+03	1.26E+03	2.84E+01	3.05E+02	1.07E+02	4.52E+00	8.99E+02	89.16		7.153	9.236	1.701	0.069	10.363	5.036	1.815	0.070
718	7.44E+03	8.23E+03	1.25E+03	1.66E+01	1.38E+02	4.29E+01	5.19E+00	1.03E+03	102.46		3.942	8.199	1.570	0.068	9.371	4.558	1.700	0.069
719	7.44E+03	6.93E+03	1.21E+03	2.95E+01	2.25E+02	8.75E+01	5.04E+00	1.00E+03	99.40		4.624	8.423	1.600	0.068	9.586	4.659	1.725	0.069
720	7.44E+03	8.38E+03	1.26E+03	2.04E+01	1.17E+02	1.92E+02	5.10E+00	1.01E+03	100.61		4.350	8.333	1.588	0.068	9.500	4.619	1.715	0.069
721	7.44E+03	6.69E+03	1.18E+03	3.79E+01	3.01E+02	5.00E+01	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070
722	7.44E+03	6.88E+03	1.20E+03	2.92E+01	2.07E+02	1.43E+02	5.08E+00	1.01E+03	100.26		4.428	8.359	1.591	0.068	9.525	4.630	1.717	0.069
723	7.44E+03	8.05E+03	1.23E+03	1.19E+01	7.58E+01	1.07E+02	5.03E+00	1.00E+03	99.17		4.677	8.440	1.602	0.068	9.603	4.667	1.726	0.069
724	7.44E+03	8.49E+03	1.27E+03	4.56E+01	1.01E+02	6.25E+02	4.43E+00	8.82E+02	87.39		7.630	9.386	1.719	0.069	10.507	5.107	1.832	0.070
725	7.44E+03	8.24E+03	1.25E+03	1.44E+01	1.35E+02	9.29E+01	5.20E+00	1.03E+03	102.49		3.936	8.197	1.569	0.068	9.368	4.557	1.700	0.069
726	7.44E+03	7.97E+03	1.22E+03	8.61E+00	4.41E+01	7.50E+01	5.00E+00	9.95E+02	98.60		4.808	8.483	1.608	0.068	9.644	4.686	1.731	0.069
727	7.44E+03	7.26E+03	1.28E+03	2.70E+01	2.18E+02	2.13E+02	5.10E+00	1.01E+03	100.58		4.358	8.336	1.588	0.068	9.503	4.620	1.715	0.069
728	7.44E+03	7.77E+03	1.22E+03	5.02E+01	3.04E+02	7.14E+01	3.73E+00	7.43E+02	73.62		11.727	10.657	1.854	0.070	11.707	5.725	1.976	0.071
729	7.44E+03	8.28E+03	1.25E+03	1.98E+01	1.39E+02	3.00E+01	5.18E+00	1.03E+03	102.11		4.019	8.224	1.573	0.068	9.395	4.570	1.703	0.069
730	7.44E+03	8.27E+03	1.25E+03	1.18E+01	1.43E+02	2.14E+02	5.21E+00	1.04E+03	102.82		3.866	8.174	1.566	0.068	9.346	4.547	1.697	0.069
731	7.44E+03	6.80E+03	1.18E+03	7.60E+01	1.86E+02	7.22E+01	3.10E+00	6.16E+02	61.08		16.064	11.969	1.978	0.071	12.936	6.384	2.127	0.073
732	7.44E+03	6.75E+03	1.17E+03	1.84E+01	2.70E+02	1.88E+01	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
733	7.44E+03	7.10E+03	1.24E+03	2.99E+01	2.19E+02	5.00E+01	5.05E+00	1.00E+03	99.56		4.588	8.411	1.598	0.068	9.575	4.654	1.723	0.069
734	7.44E+03	6.77E+03	1.17E+03	2.54E+01	1.35E+02	4.17E+01	5.10E+00	1.02E+03	100.70		4.330	8.327	1.587	0.068	9.494	4.616	1.714	0.069
735	7.44E+03	6.92E+03	1.21E+03	4.65E+01	1.98E+02	7.14E+01	4.61E+00	9.17E+02	90.90		6.697	9.091	1.684	0.069	10.226	4.968	1.799	0.070
736	7.44E+03	6.99E+03	1.22E+03	2.52E+01	2.25E+02	1.00E+01	5.11E+00	1.02E+03	100.75		4.319	8.323	1.586	0.068	9.490	4.614	1.713	0.069
737	7.45E+03	6.99E+03	1.22E+03	2.46E+01	2.09E+02	1.21E+02	5.15E+00	1.02E+03	101.60		4.131	8.261	1.578	0.068	9.430	4.586	1.707	0.069
738	7.45E+03	6.66E+03	1.19E+03	4.20E+01	3.04E+02	1.88E+01	4.06E+00	8.07E+02	80.00		9.743	10.046	1.791	0.070	11.132	5.425	1.907	0.071
739	7.45E+03	6.70E+03	1.18E+03	3.67E+01	2.97E+02	4.29E+01	4.33E+00	8.62E+02	85.47		8.159	9.553	1.737	0.069	10.665	5.187	1.851	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
740	7.45E+03	7.42E+03	1.28E+03	3.63E+01	2.95E+02	5.00E+01	4.37E+00	8.69E+02	86.14		7.973	9.494	1.731	0.069	10.609	5.159	1.844	0.070
741	7.45E+03	7.17E+03	1.26E+03	3.79E+01	2.11E+02	2.08E+02	4.88E+00	9.71E+02	96.22		5.368	8.665	1.631	0.068	9.819	4.770	1.751	0.069
742	7.45E+03	7.81E+03	1.21E+03	7.13E+00	2.70E+02	0.00E+00	5.11E+00	1.02E+03	100.85		4.298	8.316	1.586	0.068	9.484	4.611	1.713	0.069
743	7.45E+03	7.70E+03	1.24E+03	6.41E+01	2.84E+02	8.33E+01	3.40E+00	6.76E+02	67.01		13.941	11.330	1.919	0.071	12.339	6.061	2.053	0.072
744	7.45E+03	8.06E+03	1.23E+03	6.13E+00	4.26E+01	6.67E+01	5.04E+00	1.00E+03	99.49		4.604	8.417	1.599	0.068	9.580	4.656	1.724	0.069
745	7.45E+03	7.73E+03	1.23E+03	3.26E+01	3.09E+02	2.50E+01	4.34E+00	8.64E+02	85.60		8.122	9.541	1.736	0.069	10.654	5.181	1.849	0.070
746	7.45E+03	6.53E+03	1.21E+03	4.61E+01	2.54E+02	8.33E+01	4.45E+00	8.85E+02	87.71		7.542	9.358	1.715	0.069	10.480	5.094	1.829	0.070
747	7.45E+03	7.97E+03	1.22E+03	1.86E+01	1.31E+02	1.50E+02	5.16E+00	1.03E+03	101.89		4.066	8.240	1.575	0.068	9.410	4.577	1.704	0.069
748	7.45E+03	6.51E+03	1.21E+03	1.84E+01	2.70E+02	3.33E+01	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
749	7.45E+03	7.58E+03	1.26E+03	3.60E+01	2.93E+02	2.14E+02	4.39E+00	8.75E+02	86.70		7.818	9.446	1.725	0.069	10.563	5.136	1.839	0.070
750	7.45E+03	6.75E+03	1.17E+03	2.18E+01	1.49E+02	7.50E+01	5.18E+00	1.03E+03	102.15		4.011	8.222	1.573	0.068	9.392	4.569	1.702	0.069
751	7.45E+03	6.64E+03	1.20E+03	5.47E+01	3.15E+02	5.71E+01	3.37E+00	6.71E+02	66.50		14.118	11.383	1.924	0.071	12.389	6.088	2.059	0.072
752	7.45E+03	6.55E+03	1.21E+03	1.40E+01	2.70E+02	1.75E+02	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
753	7.45E+03	6.51E+03	1.21E+03	4.65E+01	2.52E+02	6.67E+01	4.45E+00	8.86E+02	87.80		7.518	9.351	1.714	0.069	10.473	5.091	1.828	0.070
754	7.45E+03	8.40E+03	1.26E+03	1.87E+01	1.22E+02	2.14E+01	5.14E+00	1.02E+03	101.37		4.182	8.278	1.580	0.068	9.447	4.594	1.709	0.069
755	7.45E+03	7.97E+03	1.22E+03	1.35E+01	1.23E+02	2.50E+01	5.17E+00	1.03E+03	102.00		4.042	8.232	1.574	0.068	9.402	4.573	1.703	0.069
756	7.45E+03	6.50E+03	1.21E+03	4.65E+01	2.52E+02	9.00E+01	4.45E+00	8.86E+02	87.80		7.518	9.351	1.714	0.069	10.473	5.091	1.828	0.070
757	7.45E+03	7.86E+03	1.21E+03	1.39E+01	2.40E+02	3.42E+02	5.16E+00	1.03E+03	101.80		4.086	8.247	1.576	0.068	9.416	4.580	1.705	0.069
758	7.45E+03	8.30E+03	1.25E+03	1.14E+01	1.54E+02	7.14E+00	5.22E+00	1.04E+03	103.08		3.810	8.155	1.564	0.068	9.328	4.539	1.695	0.069
759	7.45E+03	8.15E+03	1.24E+03	1.16E+01	5.72E+01	8.75E+01	4.97E+00	9.89E+02	98.03		4.941	8.526	1.613	0.068	9.686	4.706	1.736	0.069
760	7.45E+03	6.72E+03	1.18E+03	3.80E+01	3.10E+02	5.00E+01	4.13E+00	8.22E+02	81.48		9.303	9.910	1.777	0.070	11.003	5.359	1.891	0.071
761	7.46E+03	8.06E+03	1.23E+03	1.17E+01	8.09E+01	1.43E+02	5.05E+00	1.00E+03	99.56		4.587	8.411	1.598	0.068	9.575	4.654	1.723	0.069
762	7.46E+03	7.78E+03	1.22E+03	3.53E+01	3.15E+02	2.14E+01	4.18E+00	8.31E+02	82.37		9.042	9.829	1.768	0.070	10.926	5.319	1.882	0.071
763	7.46E+03	7.24E+03	1.28E+03	3.17E+01	2.16E+02	5.71E+01	5.02E+00	9.98E+02	98.98		4.721	8.455	1.604	0.068	9.617	4.674	1.728	0.069
764	7.46E+03	7.96E+03	1.22E+03	1.24E+01	1.12E+02	5.71E+01	5.14E+00	1.02E+03	101.47		4.160	8.271	1.579	0.068	9.440	4.591	1.708	0.069
765	7.46E+03	6.77E+03	1.17E+03	2.67E+01	9.42E+01	1.69E+02	4.88E+00	9.72E+02	96.33		5.341	8.656	1.630	0.068	9.810	4.766	1.750	0.069
766	7.46E+03	7.44E+03	1.28E+03	3.63E+01	2.95E+02	1.43E+01	4.37E+00	8.69E+02	86.14		7.973	9.494	1.731	0.069	10.609	5.159	1.844	0.070
767	7.46E+03	6.82E+03	1.19E+03	6.41E+01	1.94E+02	1.07E+02	3.80E+00	7.56E+02	74.91		11.315	10.531	1.842	0.070	11.589	5.663	1.962	0.071
768	7.46E+03	7.94E+03	1.22E+03	4.52E+01	1.87E+02	7.86E+01	4.66E+00	9.27E+02	91.91		6.437	9.008	1.674	0.069	10.147	4.929	1.790	0.070
769	7.46E+03	7.95E+03	1.22E+03	2.30E+01	1.28E+02	2.71E+02	5.11E+00	1.02E+03	100.90		4.285	8.312	1.585	0.068	9.479	4.609	1.712	0.069
770	7.46E+03	7.95E+03	1.22E+03	3.20E+01	1.32E+02	1.67E+01	4.98E+00	9.91E+02	98.27		4.884	8.508	1.611	0.068	9.668	4.698	1.734	0.069
771	7.46E+03	6.57E+03	1.21E+03	6.35E+01	2.76E+02	1.00E+02	3.52E+00	7.01E+02	69.50		13.087	11.071	1.895	0.071	12.097	5.931	2.023	0.072
772	7.46E+03	7.60E+03	1.26E+03	3.13E+01	3.00E+02	1.45E+02	4.47E+00	8.90E+02	88.24		7.399	9.313	1.710	0.069	10.437	5.073	1.824	0.070
773	7.46E+03	6.75E+03	1.17E+03	2.84E+01	1.45E+02	0.00E+00	5.08E+00	1.01E+03	100.27		4.426	8.358	1.591	0.068	9.524	4.630	1.717	0.069
774	7.46E+03	6.57E+03	1.21E+03	2.46E+01	2.99E+02	1.08E+02	4.68E+00	9.31E+02	92.32		6.333	8.975	1.670	0.069	10.115	4.913	1.786	0.070
775	7.46E+03	7.73E+03	1.23E+03	2.62E+01	3.24E+02	1.43E+01	4.46E+00	8.87E+02	87.93		7.484	9.340	1.713	0.069	10.463	5.086	1.827	0.070
776	7.46E+03	7.71E+03	1.24E+03	4.67E+01	3.15E+02	7.22E+01	3.71E+00	7.39E+02	73.28		11.836	10.690	1.858	0.070	11.739	5.741	1.980	0.071
777	7.46E+03	8.06E+03	1.23E+03	1.40E+01	1.41E+02	3.92E+02	5.21E+00	1.04E+03	102.75		3.880	8.178	1.567	0.068	9.351	4.549	1.698	0.069
778	7.46E+03	6.67E+03	1.19E+03	3.79E+01	3.29E+02	2.14E+01	3.95E+00	7.85E+02	77.83		10.399	10.249	1.813	0.070	11.323	5.524	1.930	0.071

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
779	7.46E+03	8.31E+03	1.25E+03	1.21E+01	1.59E+02	1.19E+03	5.23E+00	1.04E+03	103.18		3.787	8.148	1.562	0.068	9.321	4.536	1.694	0.069
780	7.46E+03	7.82E+03	1.21E+03	1.66E+01	2.29E+02	7.50E+01	5.18E+00	1.03E+03	102.13		4.015	8.223	1.573	0.068	9.394	4.569	1.702	0.069
781	7.46E+03	6.91E+03	1.21E+03	4.61E+01	1.96E+02	1.07E+02	4.62E+00	9.20E+02	91.20		6.618	9.066	1.681	0.069	10.202	4.956	1.796	0.070
782	7.46E+03	7.46E+03	1.28E+03	4.65E+01	2.88E+02	3.00E+02	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
783	7.46E+03	6.74E+03	1.18E+03	6.51E+01	3.38E+02	5.56E+00	2.58E+00	5.13E+02	50.89		20.011	13.142	2.077	0.072	14.029	6.987	2.262	0.074
784	7.46E+03	6.87E+03	1.20E+03	3.51E+01	1.98E+02	9.29E+01	4.96E+00	9.88E+02	97.94		4.961	8.533	1.614	0.068	9.692	4.709	1.737	0.069
785	7.46E+03	8.05E+03	1.23E+03	9.94E+00	1.22E+02	7.14E+01	5.17E+00	1.03E+03	102.04		4.034	8.229	1.574	0.068	9.400	4.572	1.703	0.069
786	7.46E+03	6.60E+03	1.21E+03	3.39E+01	2.97E+02	3.75E+01	4.43E+00	8.81E+02	87.31		7.652	9.393	1.719	0.069	10.513	5.111	1.833	0.070
787	7.47E+03	7.48E+03	1.28E+03	6.37E+01	2.79E+02	0.00E+00	3.48E+00	6.93E+02	68.67		13.369	11.157	1.903	0.071	12.177	5.974	2.033	0.072
788	7.47E+03	8.42E+03	1.26E+03	1.99E+01	1.28E+02	7.14E+00	5.15E+00	1.02E+03	101.52		4.149	8.267	1.579	0.068	9.436	4.589	1.707	0.069
789	7.47E+03	8.16E+03	1.24E+03	9.16E+00	4.98E+01	1.07E+02	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
790	7.47E+03	7.50E+03	1.28E+03	6.37E+01	2.79E+02	5.83E+01	3.47E+00	6.91E+02	68.46		13.440	11.178	1.905	0.071	12.197	5.985	2.036	0.072
791	7.47E+03	6.76E+03	1.17E+03	2.92E+01	1.49E+02	1.43E+01	5.08E+00	1.01E+03	100.14		4.457	8.368	1.593	0.068	9.534	4.634	1.718	0.069
792	7.47E+03	6.66E+03	1.20E+03	6.46E+01	2.88E+02	0.00E+00	3.32E+00	6.60E+02	65.42		14.497	11.498	1.935	0.071	12.496	6.146	2.072	0.072
793	7.47E+03	8.04E+03	1.23E+03	8.20E+00	9.37E+01	2.17E+02	5.11E+00	1.02E+03	100.88		4.289	8.313	1.585	0.068	9.481	4.610	1.712	0.069
794	7.47E+03	6.77E+03	1.17E+03	3.65E+01	1.52E+02	7.14E+00	4.92E+00	9.79E+02	97.03		5.174	8.602	1.623	0.068	9.758	4.741	1.744	0.069
795	7.47E+03	7.08E+03	1.24E+03	2.66E+01	2.33E+02	3.13E+01	5.06E+00	1.01E+03	99.85		4.523	8.390	1.595	0.068	9.554	4.644	1.721	0.069
796	7.47E+03	7.74E+03	1.23E+03	2.99E+01	3.30E+02	7.14E+01	4.28E+00	8.53E+02	84.52		8.425	9.636	1.747	0.069	10.744	5.227	1.860	0.070
797	7.47E+03	7.51E+03	1.28E+03	4.68E+01	2.90E+02	1.42E+02	4.06E+00	8.07E+02	80.00		9.741	10.046	1.791	0.070	11.131	5.425	1.906	0.071
798	7.47E+03	6.51E+03	1.22E+03	7.18E+01	2.61E+02	5.63E+01	3.26E+00	6.48E+02	64.27		14.905	11.621	1.946	0.071	12.611	6.208	2.086	0.072
799	7.47E+03	6.53E+03	1.22E+03	2.66E+01	2.70E+02	1.25E+01	4.86E+00	9.66E+02	95.81		5.468	8.697	1.635	0.068	9.849	4.784	1.755	0.069
800	7.47E+03	6.80E+03	1.18E+03	6.37E+01	1.89E+02	1.43E+02	3.82E+00	7.59E+02	75.27		11.199	10.495	1.838	0.070	11.555	5.645	1.958	0.071
801	7.47E+03	7.94E+03	1.22E+03	4.52E+01	1.87E+02	5.00E+01	4.66E+00	9.27E+02	91.91		6.437	9.008	1.674	0.069	10.147	4.929	1.790	0.070
802	7.47E+03	8.03E+03	1.23E+03	1.77E+01	1.65E+02	4.14E+02	5.23E+00	1.04E+03	103.11		3.803	8.153	1.563	0.068	9.326	4.538	1.695	0.069
803	7.47E+03	6.62E+03	1.21E+03	3.79E+01	3.01E+02	3.57E+01	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070
804	7.47E+03	6.70E+03	1.19E+03	4.82E+01	2.97E+02	4.29E+01	3.91E+00	7.79E+02	77.22		10.589	10.308	1.819	0.070	11.379	5.553	1.936	0.071
805	7.47E+03	6.49E+03	1.22E+03	4.82E+01	2.97E+02	5.00E+01	3.91E+00	7.79E+02	77.22		10.589	10.308	1.819	0.070	11.379	5.553	1.936	0.071
806	7.47E+03	6.76E+03	1.17E+03	4.61E+01	2.18E+02	2.00E+01	4.60E+00	9.16E+02	90.81		6.720	9.098	1.685	0.069	10.233	4.971	1.800	0.070
807	7.47E+03	8.32E+03	1.25E+03	1.23E+01	1.23E+02	9.00E+01	5.17E+00	1.03E+03	102.05		4.033	8.229	1.574	0.068	9.399	4.572	1.703	0.069
808	7.47E+03	6.96E+03	1.22E+03	2.52E+01	2.25E+02	1.71E+02	5.11E+00	1.02E+03	100.75		4.319	8.323	1.586	0.068	9.490	4.614	1.713	0.069
809	7.47E+03	6.55E+03	1.22E+03	5.02E+01	3.04E+02	5.71E+01	3.73E+00	7.43E+02	73.62		11.727	10.657	1.854	0.070	11.707	5.725	1.976	0.071
810	7.47E+03	7.86E+03	1.21E+03	2.00E+01	1.26E+02	2.61E+02	5.14E+00	1.02E+03	101.40		4.175	8.276	1.580	0.068	9.445	4.593	1.708	0.069
811	7.47E+03	8.17E+03	1.24E+03	9.66E+00	6.05E+01	8.33E+00	5.01E+00	9.98E+02	98.92		4.734	8.459	1.605	0.068	9.621	4.675	1.728	0.069
812	7.47E+03	7.61E+03	1.26E+03	2.75E+01	3.20E+02	7.14E+01	4.43E+00	8.82E+02	87.40		7.626	9.385	1.718	0.069	10.506	5.107	1.832	0.070
813	7.47E+03	8.44E+03	1.26E+03	1.55E+01	1.27E+02	1.08E+02	5.17E+00	1.03E+03	102.03		4.036	8.230	1.574	0.068	9.400	4.572	1.703	0.069
814	7.47E+03	6.58E+03	1.22E+03	4.50E+01	2.70E+02	5.56E+00	4.35E+00	8.65E+02	85.76		8.079	9.528	1.735	0.069	10.641	5.175	1.848	0.070
815	7.47E+03	8.02E+03	1.23E+03	2.83E+01	2.02E+02	2.08E+02	5.10E+00	1.02E+03	100.70		4.331	8.327	1.587	0.068	9.494	4.616	1.714	0.069
816	7.48E+03	7.72E+03	1.24E+03	4.33E+01	3.15E+02	2.86E+01	3.85E+00	7.67E+02	76.03		10.959	10.422	1.831	0.070	11.486	5.609	1.949	0.071
817	7.48E+03	7.52E+03	1.28E+03	3.79E+01	3.01E+02	3.57E+01	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
818	7.48E+03	7.22E+03	1.28E+03	3.38E+01	2.22E+02	5.71E+01	4.96E+00	9.87E+02	97.84		4.986	8.541	1.615	0.068	9.699	4.713	1.738	0.069
819	7.48E+03	7.79E+03	1.22E+03	2.95E+01	3.15E+02	2.86E+01	4.39E+00	8.74E+02	86.67		7.827	9.448	1.726	0.069	10.566	5.137	1.839	0.070
820	7.48E+03	6.96E+03	1.22E+03	2.08E+01	2.29E+02	1.58E+02	5.15E+00	1.02E+03	101.55		4.141	8.265	1.579	0.068	9.434	4.588	1.707	0.069
821	7.48E+03	6.75E+03	1.18E+03	5.47E+01	3.15E+02	4.29E+01	3.37E+00	6.71E+02	66.50		14.118	11.383	1.924	0.071	12.389	6.088	2.059	0.072
822	7.48E+03	8.46E+03	1.26E+03	1.33E+01	1.35E+02	1.75E+02	5.20E+00	1.03E+03	102.54		3.926	8.194	1.569	0.068	9.365	4.556	1.699	0.069
823	7.48E+03	7.93E+03	1.22E+03	4.53E+01	1.88E+02	2.64E+02	4.66E+00	9.27E+02	91.85		6.451	9.013	1.674	0.069	10.151	4.931	1.790	0.070
824	7.48E+03	7.15E+03	1.26E+03	3.26E+01	2.31E+02	1.07E+02	4.95E+00	9.86E+02	97.74		5.007	8.548	1.616	0.068	9.706	4.716	1.738	0.069
825	7.48E+03	6.63E+03	1.21E+03	3.53E+01	3.15E+02	3.57E+01	4.18E+00	8.31E+02	82.37		9.042	9.829	1.768	0.070	10.926	5.319	1.882	0.071
826	7.48E+03	7.83E+03	1.21E+03	1.93E+01	2.06E+02	3.57E+01	5.21E+00	1.04E+03	102.70		3.890	8.182	1.567	0.068	9.354	4.551	1.698	0.069
827	7.48E+03	6.71E+03	1.19E+03	3.26E+01	3.09E+02	3.57E+01	4.34E+00	8.64E+02	85.60		8.122	9.541	1.736	0.069	10.654	5.181	1.849	0.070
828	7.48E+03	8.18E+03	1.24E+03	9.24E+00	6.53E+01	4.17E+01	5.03E+00	1.00E+03	99.29		4.649	8.431	1.601	0.068	9.594	4.663	1.725	0.069
829	7.48E+03	6.89E+03	1.21E+03	4.82E+01	2.07E+02	2.07E+02	4.54E+00	9.03E+02	89.55		7.051	9.203	1.697	0.069	10.333	5.021	1.811	0.070
830	7.48E+03	8.33E+03	1.25E+03	1.11E+01	8.12E+01	3.38E+02	5.05E+00	1.01E+03	99.72		4.552	8.399	1.597	0.068	9.564	4.648	1.722	0.069
831	7.48E+03	6.68E+03	1.20E+03	6.46E+01	2.88E+02	1.43E+01	3.32E+00	6.60E+02	65.42		14.497	11.498	1.935	0.071	12.496	6.146	2.072	0.072
832	7.48E+03	8.01E+03	1.23E+03	2.26E+01	2.17E+02	9.00E+01	5.16E+00	1.03E+03	101.78		4.092	8.249	1.576	0.068	9.418	4.581	1.705	0.069
833	7.48E+03	6.87E+03	1.20E+03	6.35E+01	1.85E+02	5.00E+01	3.83E+00	7.61E+02	75.48		11.132	10.475	1.836	0.070	11.536	5.635	1.955	0.071
834	7.48E+03	6.61E+03	1.22E+03	3.37E+01	2.70E+02	6.43E+01	4.69E+00	9.33E+02	92.53		6.278	8.957	1.668	0.069	10.098	4.905	1.784	0.070
835	7.49E+03	7.54E+03	1.28E+03	3.87E+01	3.04E+02	1.25E+02	4.18E+00	8.31E+02	82.43		9.027	9.824	1.768	0.070	10.922	5.317	1.881	0.071
836	7.49E+03	6.79E+03	1.18E+03	3.53E+01	2.25E+02	6.67E+01	4.91E+00	9.78E+02	96.96		5.191	8.608	1.624	0.068	9.764	4.743	1.745	0.069
837	7.49E+03	6.95E+03	1.22E+03	2.08E+01	2.29E+02	3.00E+02	5.15E+00	1.02E+03	101.55		4.141	8.265	1.579	0.068	9.434	4.588	1.707	0.069
838	7.49E+03	6.81E+03	1.19E+03	7.19E+01	1.91E+02	6.11E+01	3.35E+00	6.67E+02	66.14		14.244	11.421	1.928	0.071	12.425	6.107	2.064	0.072
839	7.49E+03	8.48E+03	1.26E+03	1.33E+01	1.48E+02	7.75E+02	5.22E+00	1.04E+03	102.96		3.834	8.163	1.565	0.068	9.336	4.543	1.696	0.069
840	7.49E+03	7.93E+03	1.22E+03	2.75E+01	1.96E+02	5.00E+01	5.12E+00	1.02E+03	101.08		4.245	8.299	1.583	0.068	9.467	4.603	1.711	0.069
841	7.49E+03	7.07E+03	1.24E+03	2.37E+01	2.29E+02	5.00E+01	5.11E+00	1.02E+03	100.89		4.288	8.313	1.585	0.068	9.480	4.609	1.712	0.069
842	7.49E+03	7.73E+03	1.24E+03	5.47E+01	3.15E+02	6.43E+01	3.37E+00	6.71E+02	66.50		14.118	11.383	1.924	0.071	12.389	6.088	2.059	0.072
843	7.49E+03	8.18E+03	1.24E+03	6.72E+00	5.64E+01	3.57E+01	5.05E+00	1.01E+03	99.68		4.561	8.402	1.597	0.068	9.566	4.650	1.722	0.069
844	7.49E+03	7.74E+03	1.23E+03	2.87E+01	3.36E+02	1.00E+02	4.32E+00	8.59E+02	85.14		8.250	9.581	1.741	0.069	10.692	5.200	1.854	0.070
845	7.49E+03	7.86E+03	1.21E+03	1.65E+01	1.04E+02	0.00E+00	5.09E+00	1.01E+03	100.34		4.411	8.353	1.591	0.068	9.519	4.628	1.717	0.069
846	7.49E+03	6.62E+03	1.22E+03	6.46E+01	2.88E+02	4.29E+01	3.32E+00	6.60E+02	65.42		14.497	11.498	1.935	0.071	12.496	6.146	2.072	0.072
847	7.49E+03	7.64E+03	1.26E+03	2.99E+01	3.09E+02	1.50E+02	4.43E+00	8.81E+02	87.39		7.630	9.387	1.719	0.069	10.507	5.107	1.832	0.070
848	7.49E+03	6.69E+03	1.20E+03	4.33E+01	3.15E+02	1.43E+01	3.85E+00	7.67E+02	76.03		10.959	10.422	1.831	0.070	11.486	5.609	1.949	0.071
849	7.49E+03	6.77E+03	1.18E+03	6.41E+01	2.56E+02	2.22E+01	3.68E+00	7.32E+02	72.58		12.065	10.760	1.864	0.070	11.805	5.776	1.988	0.071
850	7.49E+03	7.80E+03	1.22E+03	3.26E+01	3.21E+02	1.43E+01	4.22E+00	8.40E+02	83.31		8.770	9.744	1.759	0.069	10.846	5.279	1.872	0.070
851	7.49E+03	6.50E+03	1.23E+03	2.66E+01	2.70E+02	0.00E+00	4.86E+00	9.66E+02	95.81		5.468	8.697	1.635	0.068	9.849	4.784	1.755	0.069
852	7.50E+03	7.21E+03	1.28E+03	3.49E+01	2.15E+02	2.29E+02	4.95E+00	9.85E+02	97.61		5.040	8.558	1.618	0.068	9.716	4.721	1.740	0.069
853	7.50E+03	6.52E+03	1.23E+03	1.84E+01	2.70E+02	7.50E+01	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
854	7.50E+03	6.65E+03	1.21E+03	3.26E+01	3.09E+02	0.00E+00	4.34E+00	8.64E+02	85.60		8.122	9.541	1.736	0.069	10.654	5.181	1.849	0.070
855	7.50E+03	6.73E+03	1.19E+03	3.67E+01	2.97E+02	5.00E+01	4.33E+00	8.62E+02	85.47		8.159	9.553	1.737	0.069	10.665	5.187	1.851	0.070
856	7.50E+03	7.92E+03	1.22E+03	2.78E+01	1.98E+02	1.50E+02	5.12E+00	1.02E+03	100.94		4.278	8.310	1.585	0.068	9.477	4.608	1.712	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
857	7.50E+03	6.54E+03	1.23E+03	1.84E+01	2.70E+02	0.00E+00	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
858	7.50E+03	7.74E+03	1.24E+03	4.50E+01	2.70E+02	1.25E+01	4.35E+00	8.65E+02	85.76		8.079	9.528	1.735	0.069	10.641	5.175	1.848	0.070
859	7.50E+03	8.01E+03	1.23E+03	1.74E+01	2.25E+02	4.44E+01	5.18E+00	1.03E+03	102.25		3.989	8.215	1.572	0.068	9.385	4.565	1.702	0.069
860	7.50E+03	7.56E+03	1.28E+03	4.71E+01	2.92E+02	1.33E+02	4.02E+00	8.00E+02	79.28		9.958	10.113	1.798	0.070	11.195	5.457	1.914	0.071
861	7.50E+03	8.35E+03	1.25E+03	1.12E+01	6.17E+01	2.88E+02	4.99E+00	9.93E+02	98.45		4.841	8.494	1.609	0.068	9.654	4.691	1.732	0.069
862	7.50E+03	7.13E+03	1.26E+03	3.38E+01	2.28E+02	6.43E+01	4.94E+00	9.83E+02	97.45		5.077	8.571	1.619	0.068	9.728	4.726	1.741	0.069
863	7.50E+03	8.50E+03	1.26E+03	2.42E+01	1.52E+02	3.75E+02	5.16E+00	1.03E+03	101.71		4.106	8.253	1.577	0.068	9.423	4.583	1.706	0.069
864	7.50E+03	8.19E+03	1.24E+03	7.38E+00	8.15E+01	1.93E+02	5.09E+00	1.01E+03	100.46		4.383	8.344	1.589	0.068	9.510	4.624	1.716	0.069
865	7.50E+03	6.94E+03	1.22E+03	2.26E+01	2.17E+02	3.25E+02	5.16E+00	1.03E+03	101.78		4.092	8.249	1.576	0.068	9.418	4.581	1.705	0.069
866	7.50E+03	7.32E+03	1.30E+03	6.36E+01	2.63E+02	1.14E+02	3.65E+00	7.26E+02	71.97		12.264	10.821	1.870	0.070	11.862	5.806	1.995	0.072
867	7.50E+03	7.05E+03	1.24E+03	2.59E+01	2.27E+02	2.78E+01	5.09E+00	1.01E+03	100.48		4.381	8.343	1.589	0.068	9.510	4.623	1.716	0.069
868	7.50E+03	6.88E+03	1.21E+03	5.02E+01	2.14E+02	1.93E+02	4.45E+00	8.86E+02	87.83		7.509	9.348	1.714	0.069	10.471	5.089	1.828	0.070
869	7.50E+03	7.33E+03	1.30E+03	4.60E+01	2.85E+02	2.38E+02	4.14E+00	8.24E+02	81.72		9.234	9.888	1.775	0.070	10.983	5.348	1.889	0.071
870	7.50E+03	7.64E+03	1.26E+03	2.75E+01	3.20E+02	1.64E+02	4.43E+00	8.82E+02	87.40		7.626	9.385	1.718	0.069	10.506	5.107	1.832	0.070
871	7.50E+03	7.84E+03	1.21E+03	1.72E+01	1.54E+02	1.88E+01	5.22E+00	1.04E+03	102.95		3.837	8.164	1.565	0.068	9.337	4.543	1.696	0.069
872	7.50E+03	6.79E+03	1.18E+03	3.30E+01	1.42E+02	5.71E+01	4.99E+00	9.92E+02	98.37		4.862	8.501	1.610	0.068	9.661	4.694	1.733	0.069
873	7.50E+03	6.64E+03	1.22E+03	4.50E+01	2.70E+02	7.14E+00	4.35E+00	8.65E+02	85.76		8.079	9.528	1.735	0.069	10.641	5.175	1.848	0.070
874	7.50E+03	6.55E+03	1.23E+03	3.67E+01	2.97E+02	9.17E+01	4.33E+00	8.62E+02	85.47		8.159	9.553	1.737	0.069	10.665	5.187	1.851	0.070
875	7.50E+03	7.74E+03	1.24E+03	7.05E+01	4.50E+01	4.38E+01	2.64E+00	5.26E+02	52.17		19.496	12.990	2.065	0.072	13.888	6.908	2.245	0.074
876	7.50E+03	7.31E+03	1.30E+03	3.36E+01	2.45E+02	2.36E+02	4.87E+00	9.70E+02	96.12		5.392	8.673	1.632	0.068	9.826	4.773	1.752	0.069
877	7.50E+03	7.57E+03	1.28E+03	4.76E+01	2.94E+02	0.00E+00	3.97E+00	7.91E+02	78.38		10.232	10.198	1.807	0.070	11.275	5.499	1.924	0.071
878	7.50E+03	6.71E+03	1.20E+03	5.47E+01	3.15E+02	3.89E+01	3.37E+00	6.71E+02	66.50		14.118	11.383	1.924	0.071	12.389	6.088	2.059	0.072
879	7.50E+03	7.35E+03	1.30E+03	4.61E+01	2.86E+02	8.00E+01	4.13E+00	8.22E+02	81.48		9.303	9.910	1.777	0.070	11.003	5.359	1.891	0.071
880	7.50E+03	7.86E+03	1.21E+03	1.62E+01	9.17E+01	1.88E+01	5.04E+00	1.00E+03	99.34		4.637	8.427	1.600	0.068	9.590	4.661	1.725	0.069
881	7.50E+03	6.86E+03	1.20E+03	4.56E+01	1.91E+02	1.17E+02	4.65E+00	9.24E+02	91.64		6.505	9.030	1.677	0.069	10.167	4.939	1.792	0.070
882	7.51E+03	7.92E+03	1.22E+03	3.45E+01	1.94E+02	6.00E+01	4.98E+00	9.92E+02	98.30		4.878	8.506	1.611	0.068	9.666	4.697	1.734	0.069
883	7.51E+03	6.75E+03	1.19E+03	4.71E+01	2.92E+02	1.43E+01	4.02E+00	8.00E+02	79.28		9.958	10.113	1.798	0.070	11.195	5.457	1.914	0.071
884	7.51E+03	7.65E+03	1.26E+03	2.75E+01	3.20E+02	1.10E+02	4.43E+00	8.82E+02	87.40		7.626	9.385	1.718	0.069	10.506	5.107	1.832	0.070
885	7.51E+03	8.18E+03	1.24E+03	7.46E+00	1.35E+02	4.33E+02	5.19E+00	1.03E+03	102.37		3.963	8.206	1.571	0.068	9.377	4.562	1.701	0.069
886	7.51E+03	6.79E+03	1.18E+03	1.49E+01	8.05E+01	1.00E+01	5.00E+00	9.96E+02	98.70		4.785	8.476	1.607	0.068	9.637	4.683	1.730	0.069
887	7.51E+03	7.37E+03	1.30E+03	6.36E+01	2.78E+02	1.43E+01	3.50E+00	6.96E+02	69.00		13.258	11.123	1.900	0.071	12.145	5.957	2.029	0.072
888	7.51E+03	6.78E+03	1.18E+03	2.60E+01	1.33E+02	2.14E+01	5.09E+00	1.01E+03	100.45		4.386	8.345	1.589	0.068	9.511	4.624	1.716	0.069
889	7.51E+03	6.67E+03	1.21E+03	3.79E+01	3.01E+02	2.86E+01	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070
890	7.51E+03	8.00E+03	1.23E+03	1.66E+01	2.19E+02	3.29E+02	5.20E+00	1.03E+03	102.58		3.916	8.190	1.568	0.068	9.362	4.555	1.699	0.069
891	7.51E+03	6.56E+03	1.23E+03	2.92E+01	2.97E+02	1.25E+02	4.57E+00	9.09E+02	90.13		6.898	9.155	1.692	0.069	10.287	4.998	1.806	0.070
892	7.51E+03	7.81E+03	1.22E+03	3.26E+01	3.21E+02	7.86E+01	4.22E+00	8.40E+02	83.31		8.770	9.744	1.759	0.069	10.846	5.279	1.872	0.070
893	7.51E+03	7.85E+03	1.21E+03	1.64E+01	1.42E+02	6.00E+01	5.20E+00	1.04E+03	102.65		3.901	8.186	1.568	0.068	9.357	4.552	1.698	0.069
894	7.51E+03	7.30E+03	1.30E+03	2.75E+01	2.30E+02	7.86E+01	5.06E+00	1.01E+03	99.76		4.543	8.397	1.596	0.068	9.561	4.647	1.722	0.069
895	7.51E+03	7.58E+03	1.28E+03	4.25E+01	2.99E+02	8.33E+01	4.10E+00	8.16E+02	80.87		9.484	9.966	1.783	0.070	11.056	5.386	1.897	0.071

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
896	7.51E+03	6.57E+03	1.23E+03	2.62E+01	3.06E+02	7.86E+01	4.58E+00	9.12E+02	90.40		6.827	9.132	1.689	0.069	10.265	4.987	1.804	0.070
897	7.51E+03	8.18E+03	1.24E+03	7.73E+00	1.47E+02	0.00E+00	5.20E+00	1.04E+03	102.66		3.899	8.185	1.568	0.068	9.357	4.552	1.698	0.069
898	7.51E+03	6.81E+03	1.19E+03	2.66E+01	1.80E+02	3.75E+01	5.14E+00	1.02E+03	101.49		4.154	8.269	1.579	0.068	9.438	4.590	1.708	0.069
899	7.51E+03	7.65E+03	1.26E+03	3.04E+01	3.28E+02	5.71E+01	4.27E+00	8.50E+02	84.29		8.491	9.657	1.749	0.069	10.763	5.237	1.862	0.070
900	7.51E+03	6.79E+03	1.18E+03	1.35E+01	7.88E+01	2.50E+01	5.02E+00	9.98E+02	98.95		4.728	8.457	1.604	0.068	9.619	4.675	1.728	0.069
901	7.51E+03	6.73E+03	1.20E+03	6.59E+01	3.33E+02	5.83E+01	2.60E+00	5.17E+02	51.23		19.874	13.102	2.074	0.072	13.991	6.966	2.258	0.074
902	7.51E+03	6.65E+03	1.22E+03	6.59E+01	3.33E+02	7.14E+00	2.60E+00	5.17E+02	51.23		19.874	13.102	2.074	0.072	13.991	6.966	2.258	0.074
903	7.51E+03	8.17E+03	1.24E+03	6.73E+00	1.05E+02	2.00E+02	5.14E+00	1.02E+03	101.43		4.169	8.274	1.580	0.068	9.443	4.592	1.708	0.069
904	7.51E+03	7.12E+03	1.26E+03	3.87E+01	2.14E+02	0.00E+00	4.85E+00	9.65E+02	95.67		5.501	8.708	1.637	0.068	9.859	4.789	1.756	0.069
905	7.51E+03	7.38E+03	1.30E+03	4.06E+01	2.91E+02	2.33E+02	4.27E+00	8.49E+02	84.14		8.534	9.670	1.751	0.069	10.776	5.243	1.864	0.070
906	7.51E+03	8.38E+03	1.25E+03	5.54E+00	3.47E+01	1.30E+02	5.05E+00	1.00E+03	99.54		4.592	8.413	1.598	0.068	9.576	4.654	1.723	0.069
907	7.51E+03	6.93E+03	1.22E+03	2.87E+01	2.04E+02	4.29E+01	5.10E+00	1.01E+03	100.52		4.372	8.340	1.589	0.068	9.507	4.622	1.715	0.069
908	7.51E+03	8.12E+03	1.24E+03	1.10E+01	8.92E+01	7.50E+01	5.08E+00	1.01E+03	100.25		4.431	8.360	1.591	0.068	9.526	4.631	1.718	0.069
909	7.51E+03	8.16E+03	1.24E+03	7.51E+00	7.81E+01	2.38E+02	5.08E+00	1.01E+03	100.30		4.420	8.356	1.591	0.068	9.522	4.629	1.717	0.069
910	7.51E+03	8.11E+03	1.24E+03	1.58E+01	2.25E+02	3.17E+02	5.19E+00	1.03E+03	102.40		3.955	8.203	1.570	0.068	9.375	4.560	1.700	0.069
911	7.52E+03	7.86E+03	1.21E+03	2.58E+01	1.23E+02	5.00E+01	5.06E+00	1.01E+03	99.80		4.533	8.393	1.596	0.068	9.558	4.646	1.721	0.069
912	7.52E+03	8.12E+03	1.24E+03	5.66E+00	3.66E+01	1.00E+01	5.05E+00	1.00E+03	99.53		4.594	8.413	1.599	0.068	9.577	4.655	1.723	0.069
913	7.52E+03	7.75E+03	1.23E+03	1.99E+01	3.22E+02	2.19E+02	4.68E+00	9.32E+02	92.42		6.307	8.967	1.669	0.069	10.107	4.909	1.785	0.070
914	7.52E+03	7.92E+03	1.22E+03	4.54E+01	1.89E+02	2.79E+02	4.65E+00	9.26E+02	91.77		6.471	9.019	1.675	0.069	10.157	4.934	1.791	0.070
915	7.52E+03	8.14E+03	1.24E+03	9.50E+00	1.28E+02	8.77E+02	5.18E+00	1.03E+03	102.29		3.980	8.212	1.571	0.068	9.383	4.564	1.701	0.069
916	7.52E+03	6.79E+03	1.18E+03	1.90E+01	9.68E+01	5.00E+01	5.03E+00	1.00E+03	99.15		4.681	8.442	1.602	0.068	9.604	4.668	1.727	0.069
917	7.52E+03	7.85E+03	1.21E+03	2.13E+01	1.88E+02	4.38E+01	5.21E+00	1.04E+03	102.71		3.888	8.181	1.567	0.068	9.353	4.550	1.698	0.069
918	7.52E+03	6.76E+03	1.19E+03	4.38E+01	3.21E+02	5.63E+01	3.75E+00	7.46E+02	73.94		11.625	10.626	1.851	0.070	11.678	5.710	1.972	0.071
919	7.52E+03	6.78E+03	1.18E+03	2.37E+01	1.56E+02	2.86E+01	5.17E+00	1.03E+03	101.97		4.050	8.235	1.574	0.068	9.405	4.574	1.704	0.069
920	7.52E+03	7.29E+03	1.30E+03	2.75E+01	2.20E+02	2.08E+02	5.09E+00	1.01E+03	100.35		4.409	8.353	1.590	0.068	9.519	4.627	1.717	0.069
921	7.52E+03	7.59E+03	1.28E+03	3.72E+01	3.11E+02	1.75E+02	4.14E+00	8.25E+02	81.74		9.226	9.886	1.774	0.070	10.980	5.347	1.888	0.071
922	7.52E+03	8.00E+03	1.23E+03	1.77E+01	2.07E+02	7.14E+00	5.21E+00	1.04E+03	102.88		3.852	8.169	1.565	0.068	9.342	4.545	1.697	0.069
923	7.52E+03	7.74E+03	1.24E+03	4.50E+01	0.00E+00	3.33E+01	3.50E+00	6.97E+02	69.09		13.228	11.114	1.899	0.071	12.137	5.953	2.028	0.072
924	7.52E+03	7.86E+03	1.21E+03	2.42E+01	2.23E+02	1.50E+02	5.13E+00	1.02E+03	101.15		4.231	8.294	1.583	0.068	9.462	4.601	1.710	0.069
925	7.52E+03	7.40E+03	1.30E+03	3.63E+01	2.95E+02	2.88E+02	4.37E+00	8.69E+02	86.14		7.973	9.494	1.731	0.069	10.609	5.159	1.844	0.070
926	7.52E+03	6.79E+03	1.18E+03	3.67E+01	2.15E+02	8.33E+00	4.90E+00	9.75E+02	96.70		5.254	8.628	1.627	0.068	9.783	4.753	1.747	0.069
927	7.52E+03	6.74E+03	1.20E+03	6.46E+01	3.42E+02	7.14E+00	2.57E+00	5.11E+02	50.67		20.102	13.169	2.080	0.072	14.054	7.001	2.265	0.074
928	7.52E+03	6.68E+03	1.21E+03	3.26E+01	3.09E+02	0.00E+00	4.34E+00	8.64E+02	85.60		8.122	9.541	1.736	0.069	10.654	5.181	1.849	0.070
929	7.52E+03	6.60E+03	1.23E+03	3.60E+01	2.93E+02	1.29E+02	4.39E+00	8.75E+02	86.70		7.818	9.446	1.725	0.069	10.563	5.136	1.839	0.070
930	7.52E+03	8.11E+03	1.24E+03	1.13E+01	1.43E+02	2.50E+01	5.21E+00	1.04E+03	102.81		3.867	8.174	1.566	0.068	9.346	4.547	1.697	0.069
931	7.52E+03	6.61E+03	1.23E+03	3.26E+01	3.09E+02	6.67E+01	4.34E+00	8.64E+02	85.60		8.122	9.541	1.736	0.069	10.654	5.181	1.849	0.070
932	7.52E+03	6.66E+03	1.22E+03	6.46E+01	3.42E+02	4.29E+01	2.57E+00	5.11E+02	50.67		20.102	13.169	2.080	0.072	14.054	7.001	2.265	0.074
933	7.52E+03	7.42E+03	1.30E+03	3.67E+01	2.97E+02	1.00E+02	4.33E+00	8.62E+02	85.47		8.159	9.553	1.737	0.069	10.665	5.187	1.851	0.070
934	7.52E+03	7.19E+03	1.28E+03	3.79E+01	2.11E+02	2.50E+01	4.88E+00	9.71E+02	96.22		5.368	8.665	1.631	0.068	9.819	4.770	1.751	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
935	7.52E+03	8.39E+03	1.25E+03	8.19E+00	5.79E+01	5.83E+01	5.03E+00	1.00E+03	99.28		4.652	8.432	1.601	0.068	9.595	4.663	1.726	0.069
936	7.52E+03	7.66E+03	1.26E+03	3.60E+01	3.37E+02	9.38E+01	4.00E+00	7.95E+02	78.86		10.087	10.153	1.803	0.070	11.232	5.477	1.919	0.071
937	7.52E+03	6.84E+03	1.20E+03	4.62E+01	1.97E+02	6.88E+01	4.62E+00	9.19E+02	91.12		6.641	9.073	1.682	0.069	10.209	4.959	1.797	0.070
938	7.53E+03	7.03E+03	1.24E+03	2.48E+01	2.32E+02	1.58E+02	5.09E+00	1.01E+03	100.44		4.388	8.346	1.590	0.068	9.512	4.624	1.716	0.069
939	7.53E+03	6.86E+03	1.21E+03	4.82E+01	2.43E+02	6.88E+01	4.44E+00	8.84E+02	87.61		7.569	9.367	1.716	0.069	10.489	5.098	1.830	0.070
940	7.53E+03	7.03E+03	1.24E+03	2.37E+01	2.21E+02	0.00E+00	5.14E+00	1.02E+03	101.37		4.182	8.278	1.580	0.068	9.447	4.594	1.709	0.069
941	7.53E+03	7.82E+03	1.22E+03	3.20E+01	3.23E+02	7.86E+01	4.24E+00	8.43E+02	83.57		8.696	9.721	1.756	0.069	10.824	5.267	1.870	0.070
942	7.53E+03	6.62E+03	1.23E+03	2.95E+01	3.15E+02	3.57E+01	4.39E+00	8.74E+02	86.67		7.827	9.448	1.726	0.069	10.566	5.137	1.839	0.070
943	7.53E+03	8.10E+03	1.24E+03	1.48E+01	2.37E+02	1.00E+02	5.16E+00	1.03E+03	101.87		4.072	8.242	1.575	0.068	9.412	4.578	1.705	0.069
944	7.53E+03	7.44E+03	1.30E+03	4.61E+01	2.86E+02	0.00E+00	4.13E+00	8.22E+02	81.48		9.303	9.910	1.777	0.070	11.003	5.359	1.891	0.071
945	7.53E+03	7.92E+03	1.22E+03	4.54E+01	1.89E+02	1.58E+02	4.65E+00	9.26E+02	91.77		6.471	9.019	1.675	0.069	10.157	4.934	1.791	0.070
946	7.53E+03	7.60E+03	1.28E+03	4.04E+01	3.29E+02	5.00E+01	3.83E+00	7.62E+02	75.54		11.113	10.469	1.835	0.070	11.530	5.632	1.955	0.071
947	7.53E+03	6.69E+03	1.21E+03	3.10E+01	3.04E+02	5.83E+01	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
948	7.53E+03	7.10E+03	1.26E+03	3.72E+01	2.21E+02	2.14E+01	4.88E+00	9.70E+02	96.18		5.377	8.668	1.632	0.068	9.821	4.771	1.752	0.069
949	7.53E+03	7.91E+03	1.22E+03	4.56E+01	1.91E+02	1.75E+02	4.65E+00	9.24E+02	91.64		6.505	9.030	1.677	0.069	10.167	4.939	1.792	0.070
950	7.53E+03	6.75E+03	1.20E+03	3.37E+01	0.00E+00	2.86E+01	4.06E+00	8.08E+02	80.13		9.703	10.034	1.790	0.070	11.120	5.419	1.905	0.071
951	7.53E+03	7.99E+03	1.23E+03	2.75E+01	1.97E+02	4.38E+02	5.12E+00	1.02E+03	101.05		4.252	8.301	1.584	0.068	9.469	4.604	1.711	0.069
952	7.53E+03	7.46E+03	1.30E+03	6.37E+01	2.79E+02	5.57E+02	3.48E+00	6.93E+02	68.67		13.369	11.157	1.903	0.071	12.177	5.974	2.033	0.072
953	7.53E+03	7.10E+03	1.26E+03	3.79E+01	2.11E+02	0.00E+00	4.88E+00	9.71E+02	96.22		5.368	8.665	1.631	0.068	9.819	4.770	1.751	0.069
954	7.53E+03	6.67E+03	1.22E+03	6.46E+01	3.42E+02	7.14E+00	2.57E+00	5.11E+02	50.67		20.102	13.169	2.080	0.072	14.054	7.001	2.265	0.074
955	7.53E+03	6.93E+03	1.22E+03	3.45E+01	1.94E+02	2.00E+02	4.98E+00	9.92E+02	98.30		4.878	8.506	1.611	0.068	9.666	4.697	1.734	0.069
956	7.53E+03	6.49E+03	1.24E+03	4.59E+01	2.84E+02	0.00E+00	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
957	7.53E+03	6.80E+03	1.19E+03	5.47E+01	2.25E+02	1.25E+01	4.25E+00	8.45E+02	83.82		8.626	9.699	1.754	0.069	10.803	5.257	1.867	0.070
958	7.54E+03	7.27E+03	1.30E+03	2.84E+01	2.22E+02	3.57E+01	5.07E+00	1.01E+03	99.94		4.502	8.383	1.595	0.068	9.548	4.641	1.720	0.069
959	7.54E+03	8.40E+03	1.25E+03	1.07E+01	1.12E+02	6.07E+02	5.15E+00	1.02E+03	101.58		4.134	8.262	1.578	0.068	9.432	4.587	1.707	0.069
960	7.54E+03	6.77E+03	1.19E+03	3.98E+01	3.07E+02	7.14E+00	4.10E+00	8.15E+02	80.84		9.491	9.968	1.783	0.070	11.058	5.387	1.898	0.071
961	7.54E+03	8.09E+03	1.24E+03	1.31E+01	2.29E+02	1.13E+02	5.19E+00	1.03E+03	102.40		3.956	8.204	1.570	0.068	9.375	4.560	1.700	0.069
962	7.54E+03	6.52E+03	1.24E+03	1.30E+01	2.70E+02	6.25E+00	5.06E+00	1.01E+03	99.92		4.505	8.384	1.595	0.068	9.549	4.642	1.720	0.069
963	7.54E+03	6.50E+03	1.24E+03	1.13E+01	2.70E+02	3.00E+01	5.08E+00	1.01E+03	100.24		4.434	8.361	1.592	0.068	9.526	4.631	1.718	0.069
964	7.54E+03	6.64E+03	1.23E+03	3.79E+01	3.01E+02	8.57E+01	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070
965	7.54E+03	7.75E+03	1.24E+03	5.47E+01	3.15E+02	1.92E+02	3.37E+00	6.71E+02	66.50		14.118	11.383	1.924	0.071	12.389	6.088	2.059	0.072
966	7.54E+03	6.70E+03	1.21E+03	4.59E+01	2.84E+02	8.33E+01	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
967	7.54E+03	6.53E+03	1.24E+03	2.97E+01	2.99E+02	1.14E+02	4.54E+00	9.03E+02	89.48		7.069	9.209	1.698	0.069	10.338	5.023	1.812	0.070
968	7.54E+03	7.77E+03	1.23E+03	2.08E+01	3.11E+02	5.00E+01	4.71E+00	9.37E+02	92.88		6.190	8.929	1.664	0.069	10.071	4.892	1.781	0.070
969	7.54E+03	7.82E+03	1.22E+03	3.10E+01	3.26E+02	5.83E+01	4.26E+00	8.47E+02	84.02		8.569	9.681	1.752	0.069	10.787	5.248	1.865	0.070
970	7.54E+03	6.71E+03	1.21E+03	3.45E+01	2.99E+02	1.14E+02	4.38E+00	8.71E+02	86.38		7.905	9.473	1.728	0.069	10.589	5.149	1.842	0.070
971	7.54E+03	7.48E+03	1.30E+03	4.31E+01	2.88E+02	1.13E+02	4.21E+00	8.37E+02	83.01		8.857	9.771	1.762	0.069	10.871	5.292	1.875	0.070
972	7.54E+03	7.91E+03	1.22E+03	2.83E+01	2.02E+02	3.33E+01	5.10E+00	1.02E+03	100.70		4.331	8.327	1.587	0.068	9.494	4.616	1.714	0.069
973	7.54E+03	7.17E+03	1.28E+03	3.59E+01	2.18E+02	3.57E+01	4.92E+00	9.78E+02	97.00		5.182	8.605	1.624	0.068	9.761	4.742	1.745	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
974	7.54E+03	6.64E+03	1.23E+03	3.79E+01	3.29E+02	6.67E+01	3.95E+00	7.85E+02	77.83		10.399	10.249	1.813	0.070	11.323	5.524	1.930	0.071
975	7.54E+03	7.02E+03	1.24E+03	2.60E+01	2.15E+02	1.80E+02	5.12E+00	1.02E+03	101.03		4.257	8.303	1.584	0.068	9.471	4.605	1.711	0.069
976	7.55E+03	8.39E+03	1.25E+03	8.70E+00	1.03E+02	1.43E+02	5.13E+00	1.02E+03	101.25		4.208	8.287	1.582	0.068	9.455	4.598	1.709	0.069
977	7.55E+03	6.72E+03	1.21E+03	2.95E+01	3.15E+02	6.67E+01	4.39E+00	8.74E+02	86.67		7.827	9.448	1.726	0.069	10.566	5.137	1.839	0.070
978	7.55E+03	7.61E+03	1.28E+03	3.59E+01	3.22E+02	1.43E+01	4.08E+00	8.12E+02	80.52		9.588	9.998	1.786	0.070	11.087	5.402	1.901	0.071
979	7.55E+03	6.55E+03	1.24E+03	3.55E+01	2.91E+02	5.71E+01	4.44E+00	8.84E+02	87.59		7.576	9.369	1.717	0.069	10.491	5.099	1.830	0.070
980	7.55E+03	6.78E+03	1.19E+03	4.65E+01	2.88E+02	7.14E+00	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
981	7.55E+03	6.83E+03	1.20E+03	4.65E+01	1.98E+02	7.50E+01	4.61E+00	9.17E+02	90.90		6.697	9.091	1.684	0.069	10.226	4.968	1.799	0.070
982	7.55E+03	7.98E+03	1.23E+03	5.65E+01	1.86E+02	2.14E+02	4.19E+00	8.33E+02	82.57		8.985	9.811	1.766	0.069	10.909	5.311	1.880	0.071
983	7.55E+03	6.68E+03	1.22E+03	4.33E+01	3.15E+02	1.21E+02	3.85E+00	7.67E+02	76.03		10.959	10.422	1.831	0.070	11.486	5.609	1.949	0.071
984	7.55E+03	7.67E+03	1.26E+03	2.99E+01	3.30E+02	2.07E+02	4.28E+00	8.53E+02	84.52		8.425	9.636	1.747	0.069	10.744	5.227	1.860	0.070
985	7.55E+03	7.51E+03	1.30E+03	3.67E+01	2.97E+02	1.00E+02	4.33E+00	8.62E+02	85.47		8.159	9.553	1.737	0.069	10.665	5.187	1.851	0.070
986	7.55E+03	7.78E+03	1.23E+03	2.69E+01	3.28E+02	7.50E+01	4.41E+00	8.78E+02	87.09		7.712	9.412	1.722	0.069	10.531	5.120	1.835	0.070
987	7.55E+03	7.34E+03	1.32E+03	6.39E+01	2.82E+02	8.57E+01	3.43E+00	6.82E+02	67.65		13.719	11.263	1.913	0.071	12.276	6.027	2.045	0.072
988	7.55E+03	8.08E+03	1.24E+03	1.57E+01	2.08E+02	1.88E+01	5.22E+00	1.04E+03	103.00		3.825	8.160	1.564	0.068	9.333	4.541	1.696	0.069
989	7.55E+03	6.76E+03	1.20E+03	3.10E+01	0.00E+00	7.50E+01	4.18E+00	8.32E+02	82.51		9.001	9.816	1.767	0.070	10.914	5.313	1.880	0.071
990	7.55E+03	7.91E+03	1.22E+03	2.12E+01	2.11E+02	1.14E+02	5.18E+00	1.03E+03	102.26		3.986	8.214	1.572	0.068	9.384	4.565	1.701	0.069
991	7.55E+03	7.83E+03	1.22E+03	2.75E+01	3.10E+02	1.67E+02	4.51E+00	8.97E+02	88.88		7.229	9.260	1.704	0.069	10.386	5.047	1.818	0.070
992	7.55E+03	7.33E+03	1.32E+03	5.44E+01	2.52E+02	1.22E+02	4.14E+00	8.24E+02	81.68		9.244	9.892	1.775	0.070	10.986	5.350	1.889	0.071
993	7.55E+03	6.86E+03	1.21E+03	5.71E+01	1.94E+02	9.38E+01	4.15E+00	8.27E+02	81.96		9.161	9.866	1.772	0.070	10.961	5.337	1.886	0.071
994	7.55E+03	6.57E+03	1.24E+03	3.60E+01	2.93E+02	6.88E+01	4.39E+00	8.75E+02	86.70		7.818	9.446	1.725	0.069	10.563	5.136	1.839	0.070
995	7.55E+03	6.80E+03	1.19E+03	2.34E+01	1.27E+02	6.25E+00	5.11E+00	1.02E+03	100.76		4.317	8.323	1.586	0.068	9.489	4.614	1.713	0.069
996	7.55E+03	7.26E+03	1.30E+03	3.10E+01	2.14E+02	7.14E+00	5.04E+00	1.00E+03	99.36		4.634	8.426	1.600	0.068	9.589	4.661	1.725	0.069
997	7.56E+03	7.35E+03	1.32E+03	3.64E+01	3.06E+02	7.50E+01	4.24E+00	8.44E+02	83.63		8.680	9.716	1.756	0.069	10.819	5.265	1.869	0.070
998	7.56E+03	6.65E+03	1.23E+03	3.26E+01	3.21E+02	2.86E+01	4.22E+00	8.40E+02	83.31		8.770	9.744	1.759	0.069	10.846	5.279	1.872	0.070
999	7.56E+03	6.92E+03	1.22E+03	2.04E+01	2.07E+02	1.83E+02	5.20E+00	1.03E+03	102.53		3.928	8.194	1.569	0.068	9.366	4.556	1.699	0.069
1000	7.56E+03	8.39E+03	1.25E+03	8.08E+00	1.11E+02	2.08E+02	5.15E+00	1.03E+03	101.64		4.123	8.259	1.578	0.068	9.428	4.585	1.706	0.069
1001	7.56E+03	7.32E+03	1.32E+03	3.90E+01	2.28E+02	1.72E+02	4.81E+00	9.57E+02	94.83		5.705	8.774	1.645	0.069	9.922	4.820	1.763	0.069
1002	7.56E+03	7.92E+03	1.22E+03	3.54E+00	3.52E+01	2.57E+02	5.08E+00	1.01E+03	100.24		4.434	8.361	1.592	0.068	9.526	4.631	1.718	0.069
1003	7.56E+03	7.52E+03	1.30E+03	2.91E+01	3.07E+02	1.67E+01	4.48E+00	8.91E+02	88.36		7.368	9.304	1.709	0.069	10.428	5.068	1.823	0.070
1004	7.56E+03	7.76E+03	1.24E+03	4.33E+01	3.15E+02	7.14E+00	3.85E+00	7.67E+02	76.03		10.959	10.422	1.831	0.070	11.486	5.609	1.949	0.071
1005	7.56E+03	6.78E+03	1.19E+03	3.49E+01	1.50E+02	5.00E+01	4.96E+00	9.86E+02	97.79		4.996	8.544	1.616	0.068	9.703	4.714	1.738	0.069
1006	7.56E+03	7.98E+03	1.23E+03	3.77E+01	1.66E+02	1.43E+01	4.90E+00	9.75E+02	96.64		5.268	8.633	1.627	0.068	9.787	4.755	1.748	0.069
1007	7.56E+03	7.07E+03	1.26E+03	3.80E+01	2.30E+02	6.88E+01	4.83E+00	9.61E+02	95.24		5.605	8.741	1.641	0.069	9.892	4.805	1.760	0.069
1008	7.56E+03	7.35E+03	1.32E+03	3.26E+01	3.21E+02	3.64E+02	4.22E+00	8.40E+02	83.31		8.770	9.744	1.759	0.069	10.846	5.279	1.872	0.070
1009	7.56E+03	6.83E+03	1.20E+03	1.59E+01	1.80E+02	1.14E+02	5.24E+00	1.04E+03	103.34		3.753	8.137	1.561	0.068	9.310	4.531	1.693	0.069
1010	7.56E+03	8.07E+03	1.24E+03	4.01E+01	1.88E+02	1.81E+02	4.83E+00	9.61E+02	95.31		5.589	8.736	1.640	0.069	9.887	4.802	1.759	0.069
1011	7.56E+03	7.79E+03	1.23E+03	1.49E+01	0.00E+00	1.88E+01	4.78E+00	9.51E+02	94.26		5.845	8.819	1.651	0.069	9.966	4.841	1.768	0.069
1012	7.56E+03	7.63E+03	1.28E+03	4.45E+01	3.24E+02	2.86E+01	3.68E+00	7.32E+02	72.61		12.056	10.757	1.864	0.070	11.802	5.775	1.987	0.071

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1013	7.56E+03	6.60E+03	1.24E+03	4.60E+01	2.85E+02	1.25E+02	4.14E+00	8.24E+02	81.72		9.234	9.888	1.775	0.070	10.983	5.348	1.889	0.071
1014	7.57E+03	7.83E+03	1.22E+03	2.12E+01	3.01E+02	5.00E+01	4.76E+00	9.47E+02	93.83		5.952	8.853	1.655	0.069	9.998	4.856	1.772	0.070
1015	7.57E+03	8.38E+03	1.25E+03	8.37E+00	1.48E+02	5.63E+01	5.21E+00	1.04E+03	102.74		3.882	8.179	1.567	0.068	9.351	4.550	1.698	0.069
1016	7.57E+03	6.79E+03	1.19E+03	2.63E+01	1.22E+02	2.50E+01	5.05E+00	1.00E+03	99.55		4.589	8.412	1.598	0.068	9.575	4.654	1.723	0.069
1017	7.57E+03	7.92E+03	1.22E+03	2.41E+01	1.24E+02	1.00E+02	5.09E+00	1.01E+03	100.33		4.414	8.354	1.591	0.068	9.520	4.628	1.717	0.069
1018	7.57E+03	6.73E+03	1.21E+03	2.75E+01	3.10E+02	1.00E+02	4.51E+00	8.97E+02	88.88		7.229	9.260	1.704	0.069	10.386	5.047	1.818	0.070
1019	7.57E+03	7.00E+03	1.24E+03	2.62E+01	2.16E+02	9.29E+01	5.12E+00	1.02E+03	100.94		4.277	8.309	1.585	0.068	9.477	4.608	1.712	0.069
1020	7.57E+03	6.66E+03	1.23E+03	6.39E+01	3.49E+02	2.50E+01	2.55E+00	5.07E+02	50.30		20.253	13.214	2.083	0.072	14.095	7.024	2.271	0.074
1021	7.57E+03	6.60E+03	1.24E+03	2.37E+01	3.11E+02	1.08E+02	4.62E+00	9.20E+02	91.19		6.620	9.067	1.681	0.069	10.202	4.956	1.796	0.070
1022	7.57E+03	6.79E+03	1.19E+03	2.66E+01	1.45E+02	7.14E+01	5.11E+00	1.02E+03	100.81		4.306	8.319	1.586	0.068	9.486	4.612	1.713	0.069
1023	7.57E+03	7.15E+03	1.28E+03	3.26E+01	2.31E+02	2.86E+01	4.95E+00	9.86E+02	97.74		5.007	8.548	1.616	0.068	9.706	4.716	1.738	0.069
1024	7.57E+03	7.15E+03	1.28E+03	3.26E+01	2.19E+02	2.86E+01	4.99E+00	9.93E+02	98.48		4.835	8.492	1.609	0.068	9.652	4.690	1.732	0.069
1025	7.57E+03	6.79E+03	1.19E+03	4.36E+01	2.11E+02	2.00E+01	4.70E+00	9.35E+02	92.72		6.230	8.942	1.666	0.069	10.083	4.898	1.782	0.070
1026	7.57E+03	7.31E+03	1.32E+03	4.25E+01	2.09E+02	1.58E+02	4.74E+00	9.43E+02	93.53		6.026	8.877	1.658	0.069	10.021	4.868	1.775	0.070
1027	7.57E+03	7.68E+03	1.26E+03	3.60E+01	3.37E+02	1.13E+02	4.00E+00	7.95E+02	78.86		10.087	10.153	1.803	0.070	11.232	5.477	1.919	0.071
1028	7.57E+03	8.36E+03	1.25E+03	6.68E+00	1.30E+02	1.75E+02	5.18E+00	1.03E+03	102.17		4.006	8.220	1.572	0.068	9.391	4.568	1.702	0.069
1029	7.57E+03	7.24E+03	1.30E+03	2.95E+01	2.25E+02	2.64E+02	5.04E+00	1.00E+03	99.40		4.624	8.423	1.600	0.068	9.586	4.659	1.725	0.069
1030	7.57E+03	6.78E+03	1.20E+03	7.34E+01	3.33E+02	3.75E+01	2.25E+00	4.47E+02	44.32		22.761	13.952	2.142	0.072	14.780	7.409	2.356	0.075
1031	7.57E+03	6.50E+03	1.25E+03	7.17E+01	2.76E+02	1.75E+02	3.13E+00	6.22E+02	61.66		15.852	11.905	1.972	0.071	12.877	6.352	2.119	0.073
1032	7.57E+03	7.06E+03	1.26E+03	3.89E+01	2.25E+02	1.75E+02	4.82E+00	9.59E+02	95.05		5.652	8.756	1.643	0.069	9.906	4.812	1.762	0.069
1033	7.57E+03	7.93E+03	1.22E+03	8.83E+00	4.14E+01	1.38E+02	4.99E+00	9.93E+02	98.42		4.850	8.497	1.610	0.068	9.657	4.693	1.733	0.069
1034	7.57E+03	7.83E+03	1.22E+03	5.75E+00	6.84E+01	1.67E+02	5.08E+00	1.01E+03	100.31		4.419	8.356	1.591	0.068	9.522	4.629	1.717	0.069
1035	7.57E+03	7.36E+03	1.32E+03	3.06E+01	2.22E+02	5.83E+01	5.03E+00	1.00E+03	99.17		4.676	8.440	1.602	0.068	9.603	4.667	1.726	0.069
1036	7.57E+03	6.90E+03	1.22E+03	2.26E+01	2.17E+02	5.00E+01	5.16E+00	1.03E+03	101.78		4.092	8.249	1.576	0.068	9.418	4.581	1.705	0.069
1037	7.57E+03	7.54E+03	1.30E+03	2.99E+01	3.09E+02	1.75E+02	4.43E+00	8.81E+02	87.39		7.630	9.387	1.719	0.069	10.507	5.107	1.832	0.070
1038	7.57E+03	8.35E+03	1.25E+03	4.67E+00	6.56E+01	4.31E+02	5.09E+00	1.01E+03	100.46		4.383	8.344	1.589	0.068	9.510	4.624	1.716	0.069
1039	7.58E+03	8.07E+03	1.24E+03	6.34E+00	1.80E+02	1.26E+03	5.21E+00	1.04E+03	102.75		3.880	8.179	1.567	0.068	9.351	4.549	1.698	0.069
1040	7.58E+03	6.62E+03	1.24E+03	2.76E+01	3.05E+02	5.00E+01	4.54E+00	9.04E+02	89.60		7.037	9.199	1.697	0.069	10.329	5.019	1.811	0.070
1041	7.58E+03	7.76E+03	1.24E+03	3.45E+01	3.31E+02	9.38E+01	4.09E+00	8.14E+02	80.66		9.545	9.985	1.785	0.070	11.074	5.395	1.900	0.071
1042	7.58E+03	6.67E+03	1.23E+03	2.66E+01	0.00E+00	4.00E+01	4.37E+00	8.69E+02	86.16		7.967	9.493	1.731	0.069	10.608	5.158	1.844	0.070
1043	7.58E+03	6.69E+03	1.22E+03	2.75E+01	3.10E+02	2.00E+01	4.51E+00	8.97E+02	88.88		7.229	9.260	1.704	0.069	10.386	5.047	1.818	0.070
1044	7.58E+03	8.33E+03	1.25E+03	6.75E+00	5.21E+01	3.40E+02	5.05E+00	1.00E+03	99.54		4.593	8.413	1.599	0.068	9.577	4.655	1.723	0.069
1045	7.58E+03	7.36E+03	1.32E+03	2.41E+01	1.89E+02	4.00E+01	5.18E+00	1.03E+03	102.11		4.019	8.224	1.573	0.068	9.395	4.570	1.703	0.069
1046	7.58E+03	7.93E+03	1.22E+03	2.75E+01	9.54E+01	0.00E+00	4.88E+00	9.70E+02	96.18		5.378	8.668	1.632	0.068	9.821	4.771	1.752	0.069
1047	7.58E+03	7.98E+03	1.23E+03	6.35E+01	1.74E+02	5.56E+00	3.83E+00	7.61E+02	75.46		11.138	10.476	1.836	0.070	11.538	5.636	1.955	0.071
1048	7.58E+03	6.85E+03	1.21E+03	4.82E+01	2.07E+02	1.86E+02	4.54E+00	9.03E+02	89.55		7.051	9.203	1.697	0.069	10.333	5.021	1.811	0.070
1049	7.58E+03	7.64E+03	1.28E+03	4.90E+01	3.30E+02	2.08E+02	3.41E+00	6.78E+02	67.25		13.858	11.305	1.917	0.071	12.315	6.048	2.050	0.072
1050	7.58E+03	7.83E+03	1.22E+03	1.76E+01	6.31E+01	1.43E+01	4.87E+00	9.69E+02	96.04		5.412	8.679	1.633	0.068	9.832	4.776	1.753	0.069
1051	7.58E+03	6.83E+03	1.20E+03	4.59E+01	1.94E+02	7.86E+01	4.63E+00	9.22E+02	91.40		6.567	9.049	1.679	0.069	10.186	4.948	1.794	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1052	7.58E+03	7.80E+03	1.23E+03	6.37E+01	9.46E+00	6.25E+00	2.55E+00	5.07E+02	50.23		20.281	13.222	2.084	0.072	14.103	7.029	2.272	0.074
1053	7.58E+03	8.33E+03	1.25E+03	5.07E+00	6.93E+01	1.43E+02	5.09E+00	1.01E+03	100.47		4.381	8.344	1.589	0.068	9.510	4.623	1.716	0.069
1054	7.58E+03	7.29E+03	1.32E+03	4.82E+01	2.07E+02	1.92E+02	4.54E+00	9.03E+02	89.55		7.051	9.203	1.697	0.069	10.333	5.021	1.811	0.070
1055	7.58E+03	7.36E+03	1.32E+03	3.15E+01	1.94E+02	3.75E+01	5.05E+00	1.01E+03	99.64		4.569	8.405	1.598	0.068	9.569	4.651	1.723	0.069
1056	7.58E+03	6.75E+03	1.21E+03	3.53E+01	3.15E+02	2.86E+01	4.18E+00	8.31E+02	82.37		9.042	9.829	1.768	0.070	10.926	5.319	1.882	0.071
1057	7.59E+03	7.83E+03	1.22E+03	3.20E+01	1.04E+02	3.00E+01	4.84E+00	9.62E+02	95.42		5.563	8.728	1.639	0.068	9.879	4.799	1.758	0.069
1058	7.59E+03	6.52E+03	1.25E+03	3.80E+01	2.86E+02	3.33E+01	4.41E+00	8.78E+02	87.02		7.731	9.418	1.722	0.069	10.537	5.122	1.836	0.070
1059	7.59E+03	8.49E+03	1.26E+03	1.38E+01	2.05E+02	7.92E+02	5.23E+00	1.04E+03	103.12		3.801	8.152	1.563	0.068	9.325	4.538	1.695	0.069
1060	7.59E+03	7.93E+03	1.22E+03	2.91E+01	1.00E+02	4.17E+01	4.88E+00	9.71E+02	96.24		5.364	8.664	1.631	0.068	9.817	4.769	1.751	0.069
1061	7.59E+03	6.70E+03	1.22E+03	3.10E+01	3.26E+02	1.57E+02	4.26E+00	8.47E+02	84.02		8.569	9.681	1.752	0.069	10.787	5.248	1.865	0.070
1062	7.59E+03	6.82E+03	1.20E+03	3.45E+01	1.64E+02	5.00E+01	4.98E+00	9.91E+02	98.28		4.882	8.507	1.611	0.068	9.667	4.697	1.734	0.069
1063	7.59E+03	8.07E+03	1.24E+03	4.52E+01	1.86E+02	2.14E+01	4.66E+00	9.27E+02	91.94		6.428	9.005	1.674	0.069	10.144	4.928	1.789	0.070
1064	7.59E+03	6.98E+03	1.24E+03	2.99E+01	2.19E+02	6.43E+01	5.05E+00	1.00E+03	99.56		4.588	8.411	1.598	0.068	9.575	4.654	1.723	0.069
1065	7.59E+03	7.56E+03	1.30E+03	3.09E+01	3.12E+02	2.50E+01	4.37E+00	8.70E+02	86.20		7.956	9.489	1.730	0.069	10.604	5.156	1.844	0.070
1066	7.59E+03	7.22E+03	1.30E+03	3.10E+01	2.36E+02	1.43E+01	4.97E+00	9.89E+02	98.03		4.941	8.527	1.613	0.068	9.686	4.706	1.736	0.069
1067	7.59E+03	6.89E+03	1.22E+03	2.62E+01	2.16E+02	2.50E+02	5.12E+00	1.02E+03	100.94		4.277	8.309	1.585	0.068	9.477	4.608	1.712	0.069
1068	7.59E+03	7.83E+03	1.22E+03	2.04E+01	1.15E+02	0.00E+00	5.10E+00	1.01E+03	100.53		4.369	8.340	1.589	0.068	9.506	4.621	1.715	0.069
1069	7.59E+03	6.71E+03	1.22E+03	3.53E+01	3.15E+02	1.08E+02	4.18E+00	8.31E+02	82.37		9.042	9.829	1.768	0.070	10.926	5.319	1.882	0.071
1070	7.59E+03	6.63E+03	1.24E+03	4.06E+01	3.39E+02	1.31E+02	3.77E+00	7.50E+02	74.32		11.503	10.588	1.847	0.070	11.643	5.691	1.968	0.071
1071	7.59E+03	7.05E+03	1.26E+03	3.72E+01	2.21E+02	5.71E+01	4.88E+00	9.70E+02	96.18		5.377	8.668	1.632	0.068	9.821	4.771	1.752	0.069
1072	7.59E+03	6.80E+03	1.20E+03	4.82E+01	2.43E+02	2.50E+01	4.44E+00	8.84E+02	87.61		7.569	9.367	1.716	0.069	10.489	5.098	1.830	0.070
1073	7.59E+03	7.69E+03	1.26E+03	4.61E+01	3.44E+02	7.86E+01	3.47E+00	6.90E+02	68.40		13.463	11.185	1.906	0.071	12.203	5.988	2.036	0.072
1074	7.59E+03	7.93E+03	1.22E+03	2.59E+01	1.05E+02	5.00E+01	4.97E+00	9.89E+02	98.05		4.935	8.524	1.613	0.068	9.684	4.705	1.736	0.069
1075	7.59E+03	7.77E+03	1.24E+03	4.65E+01	3.42E+02	4.17E+01	3.46E+00	6.88E+02	68.19		13.533	11.207	1.908	0.071	12.223	5.999	2.039	0.072
1076	7.59E+03	8.32E+03	1.25E+03	7.25E+00	1.44E+02	8.57E+01	5.20E+00	1.03E+03	102.54		3.926	8.194	1.569	0.068	9.365	4.556	1.699	0.069
1077	7.59E+03	8.31E+03	1.25E+03	6.51E+00	1.35E+02	6.67E+02	5.18E+00	1.03E+03	102.28		3.981	8.212	1.571	0.068	9.383	4.564	1.701	0.069
1078	7.59E+03	6.82E+03	1.20E+03	2.74E+01	1.44E+02	2.14E+01	5.10E+00	1.01E+03	100.56		4.362	8.337	1.588	0.068	9.504	4.620	1.715	0.069
1079	7.59E+03	7.83E+03	1.22E+03	2.07E+01	1.70E+02	8.33E+00	5.21E+00	1.04E+03	102.79		3.871	8.176	1.566	0.068	9.348	4.548	1.697	0.069
1080	7.60E+03	6.84E+03	1.21E+03	4.38E+01	2.19E+02	5.00E+01	4.68E+00	9.32E+02	92.35		6.324	8.972	1.670	0.069	10.112	4.912	1.786	0.070
1081	7.60E+03	7.98E+03	1.23E+03	4.56E+01	1.91E+02	1.50E+02	4.65E+00	9.24E+02	91.64		6.505	9.030	1.677	0.069	10.167	4.939	1.792	0.070
1082	7.60E+03	6.80E+03	1.20E+03	2.63E+01	2.07E+02	5.00E+01	5.13E+00	1.02E+03	101.21		4.218	8.290	1.582	0.068	9.458	4.599	1.710	0.069
1083	7.60E+03	6.73E+03	1.22E+03	4.71E+01	2.92E+02	2.86E+01	4.02E+00	8.00E+02	79.28		9.958	10.113	1.798	0.070	11.195	5.457	1.914	0.071
1084	7.60E+03	6.54E+03	1.25E+03	2.83E+01	2.92E+02	8.75E+01	4.64E+00	9.23E+02	91.49		6.545	9.043	1.678	0.069	10.179	4.945	1.793	0.070
1085	7.60E+03	8.30E+03	1.25E+03	7.91E+00	2.17E+02	5.28E+02	5.20E+00	1.03E+03	102.59		3.914	8.190	1.568	0.068	9.361	4.554	1.699	0.069
1086	7.60E+03	6.67E+03	1.23E+03	3.79E+01	3.29E+02	6.00E+01	3.95E+00	7.85E+02	77.83		10.399	10.249	1.813	0.070	11.323	5.524	1.930	0.071
1087	7.60E+03	7.12E+03	1.28E+03	3.41E+01	2.38E+02	1.79E+02	4.90E+00	9.74E+02	96.58		5.282	8.637	1.628	0.068	9.792	4.757	1.748	0.069
1088	7.60E+03	6.81E+03	1.20E+03	2.92E+01	2.07E+02	5.00E+01	5.08E+00	1.01E+03	100.26		4.430	8.360	1.591	0.068	9.525	4.631	1.718	0.069
1089	7.60E+03	7.80E+03	1.23E+03	4.65E+01	3.42E+02	0.00E+00	3.46E+00	6.88E+02	68.19		13.533	11.207	1.908	0.071	12.223	5.999	2.039	0.072
1090	7.60E+03	7.65E+03	1.28E+03	4.90E+01	3.30E+02	9.38E+01	3.41E+00	6.78E+02	67.25		13.858	11.305	1.917	0.071	12.315	6.048	2.050	0.072

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1091	7.60E+03	7.57E+03	1.30E+03	3.09E+01	3.18E+02	1.42E+02	4.32E+00	8.59E+02	85.17		8.242	9.579	1.740	0.069	10.689	5.199	1.854	0.070
1092	7.60E+03	8.07E+03	1.24E+03	4.52E+01	1.86E+02	1.80E+02	4.66E+00	9.27E+02	91.94		6.428	9.005	1.674	0.069	10.144	4.928	1.789	0.070
1093	7.60E+03	6.63E+03	1.24E+03	1.40E+01	0.00E+00	1.20E+02	4.81E+00	9.56E+02	94.81		5.711	8.775	1.645	0.069	9.924	4.821	1.764	0.069
1094	7.60E+03	6.76E+03	1.21E+03	3.10E+01	3.26E+02	0.00E+00	4.26E+00	8.47E+02	84.02		8.569	9.681	1.752	0.069	10.787	5.248	1.865	0.070
1095	7.60E+03	8.28E+03	1.25E+03	8.50E+00	2.22E+02	2.30E+02	5.20E+00	1.03E+03	102.52		3.929	8.195	1.569	0.068	9.366	4.556	1.699	0.069
1096	7.60E+03	7.28E+03	1.32E+03	3.98E+01	2.17E+02	1.17E+02	4.81E+00	9.58E+02	94.93		5.681	8.766	1.644	0.069	9.915	4.816	1.763	0.069
1097	7.60E+03	7.21E+03	1.30E+03	3.09E+01	2.22E+02	5.71E+01	5.02E+00	9.99E+02	99.04		4.706	8.450	1.603	0.068	9.612	4.671	1.727	0.069
1098	7.60E+03	6.56E+03	1.25E+03	4.56E+01	2.81E+02	1.00E+02	4.21E+00	8.37E+02	82.97		8.869	9.775	1.762	0.069	10.875	5.293	1.876	0.070
1099	7.60E+03	7.84E+03	1.22E+03	1.44E+01	1.41E+02	3.00E+01	5.21E+00	1.04E+03	102.73		3.884	8.180	1.567	0.068	9.352	4.550	1.698	0.069
1100	7.60E+03	8.48E+03	1.26E+03	1.40E+01	2.07E+02	5.00E+01	5.23E+00	1.04E+03	103.09		3.807	8.154	1.563	0.068	9.327	4.538	1.695	0.069
1101	7.61E+03	6.56E+03	1.25E+03	2.37E+01	2.94E+02	1.57E+02	4.74E+00	9.43E+02	93.46		6.046	8.883	1.659	0.069	10.027	4.870	1.776	0.070
1102	7.61E+03	6.88E+03	1.22E+03	2.99E+01	2.10E+02	4.29E+01	5.06E+00	1.01E+03	99.90		4.510	8.386	1.595	0.068	9.550	4.642	1.720	0.069
1103	7.61E+03	6.75E+03	1.22E+03	6.41E+01	2.84E+02	2.50E+01	3.40E+00	6.76E+02	67.01		13.941	11.330	1.919	0.071	12.339	6.061	2.053	0.072
1104	7.61E+03	7.93E+03	1.22E+03	3.04E+01	1.05E+02	8.33E+01	4.88E+00	9.71E+02	96.26		5.359	8.662	1.631	0.068	9.816	4.768	1.751	0.069
1105	7.61E+03	6.68E+03	1.23E+03	3.53E+01	3.15E+02	1.75E+02	4.18E+00	8.31E+02	82.37		9.042	9.829	1.768	0.070	10.926	5.319	1.882	0.071
1106	7.61E+03	7.70E+03	1.26E+03	4.06E+01	3.39E+02	7.86E+01	3.77E+00	7.50E+02	74.32		11.503	10.588	1.847	0.070	11.643	5.691	1.968	0.071
1107	7.61E+03	7.20E+03	1.30E+03	3.26E+01	2.19E+02	5.83E+01	4.99E+00	9.93E+02	98.48		4.835	8.492	1.609	0.068	9.652	4.690	1.732	0.069
1108	7.61E+03	6.49E+03	1.26E+03	3.10E+01	3.04E+02	2.33E+02	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
1109	7.61E+03	7.11E+03	1.28E+03	3.41E+01	2.16E+02	3.14E+02	4.96E+00	9.88E+02	97.94		4.960	8.533	1.614	0.068	9.692	4.709	1.737	0.069
1110	7.61E+03	6.96E+03	1.24E+03	3.09E+01	2.22E+02	1.17E+02	5.02E+00	9.99E+02	99.04		4.706	8.450	1.603	0.068	9.612	4.671	1.727	0.069
1111	7.61E+03	6.49E+03	1.26E+03	3.10E+01	3.26E+02	1.30E+02	4.26E+00	8.47E+02	84.02		8.569	9.681	1.752	0.069	10.787	5.248	1.865	0.070
1112	7.61E+03	7.78E+03	1.24E+03	4.74E+01	3.37E+02	1.00E+02	3.43E+00	6.83E+02	67.75		13.684	11.252	1.912	0.071	12.266	6.022	2.044	0.072
1113	7.61E+03	7.97E+03	1.23E+03	4.59E+01	1.94E+02	1.29E+02	4.63E+00	9.22E+02	91.40		6.567	9.049	1.679	0.069	10.186	4.948	1.794	0.070
1114	7.61E+03	8.27E+03	1.25E+03	7.03E+00	1.62E+02	4.72E+02	5.21E+00	1.04E+03	102.78		3.875	8.177	1.566	0.068	9.349	4.548	1.697	0.069
1115	7.61E+03	6.63E+03	1.24E+03	4.59E+01	3.46E+02	6.67E+01	3.47E+00	6.91E+02	68.54		13.413	11.170	1.904	0.071	12.189	5.981	2.035	0.072
1116	7.61E+03	7.85E+03	1.22E+03	1.32E+01	1.50E+02	3.14E+02	5.22E+00	1.04E+03	103.02		3.821	8.159	1.564	0.068	9.332	4.541	1.695	0.069
1117	7.61E+03	7.27E+03	1.32E+03	3.98E+01	2.17E+02	3.83E+02	4.81E+00	9.58E+02	94.93		5.681	8.766	1.644	0.069	9.915	4.816	1.763	0.069
1118	7.61E+03	7.03E+03	1.26E+03	3.98E+01	2.17E+02	4.29E+01	4.81E+00	9.58E+02	94.93		5.681	8.766	1.644	0.069	9.915	4.816	1.763	0.069
1119	7.62E+03	8.07E+03	1.24E+03	7.16E+01	1.82E+02	4.31E+02	3.37E+00	6.70E+02	66.45		14.137	11.389	1.925	0.071	12.394	6.091	2.060	0.072
1120	7.62E+03	8.47E+03	1.26E+03	1.22E+01	2.13E+02	8.00E+01	5.22E+00	1.04E+03	102.93		3.841	8.166	1.565	0.068	9.338	4.543	1.696	0.069
1121	7.62E+03	6.83E+03	1.21E+03	3.79E+01	2.39E+02	2.14E+01	4.79E+00	9.54E+02	94.57		5.769	8.794	1.648	0.069	9.942	4.829	1.766	0.069
1122	7.62E+03	7.58E+03	1.30E+03	3.10E+01	3.26E+02	3.88E+02	4.26E+00	8.47E+02	84.02		8.569	9.681	1.752	0.069	10.787	5.248	1.865	0.070
1123	7.62E+03	7.92E+03	1.22E+03	1.73E+01	6.11E+01	4.44E+01	4.86E+00	9.68E+02	95.97		5.429	8.685	1.634	0.068	9.837	4.779	1.754	0.069
1124	7.62E+03	7.66E+03	1.28E+03	4.90E+01	3.30E+02	2.00E+02	3.41E+00	6.78E+02	67.25		13.858	11.305	1.917	0.071	12.315	6.048	2.050	0.072
1125	7.62E+03	6.64E+03	1.24E+03	3.10E+01	3.26E+02	1.79E+02	4.26E+00	8.47E+02	84.02		8.569	9.681	1.752	0.069	10.787	5.248	1.865	0.070
1126	7.62E+03	6.50E+03	1.26E+03	2.75E+01	3.20E+02	2.50E+01	4.43E+00	8.82E+02	87.40		7.626	9.385	1.718	0.069	10.506	5.107	1.832	0.070
1127	7.62E+03	6.70E+03	1.23E+03	6.37E+01	2.79E+02	5.00E+01	3.47E+00	6.91E+02	68.46		13.440	11.178	1.905	0.071	12.197	5.985	2.036	0.072
1128	7.62E+03	6.77E+03	1.21E+03	2.75E+01	3.20E+02	1.29E+02	4.43E+00	8.82E+02	87.40		7.626	9.385	1.718	0.069	10.506	5.107	1.832	0.070
1129	7.62E+03	8.23E+03	1.25E+03	1.24E+01	2.46E+02	5.00E+02	5.15E+00	1.02E+03	101.60		4.132	8.262	1.578	0.068	9.431	4.586	1.707	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1130	7.62E+03	6.59E+03	1.25E+03	2.44E+01	3.09E+02	1.14E+02	4.61E+00	9.18E+02	90.97		6.680	9.085	1.683	0.069	10.220	4.965	1.798	0.070
1131	7.62E+03	6.76E+03	1.22E+03	6.59E+01	2.97E+02	0.00E+00	3.14E+00	6.25E+02	62.00		15.724	11.867	1.968	0.071	12.841	6.332	2.115	0.073
1132	7.62E+03	8.26E+03	1.25E+03	9.13E+00	1.63E+02	9.00E+02	5.22E+00	1.04E+03	103.04		3.817	8.158	1.564	0.068	9.330	4.540	1.695	0.069
1133	7.62E+03	6.86E+03	1.22E+03	4.71E+01	2.02E+02	7.14E+00	4.58E+00	9.12E+02	90.41		6.824	9.131	1.689	0.069	10.264	4.987	1.803	0.070
1134	7.62E+03	8.25E+03	1.25E+03	1.21E+01	2.08E+02	6.17E+02	5.22E+00	1.04E+03	103.05		3.815	8.157	1.564	0.068	9.330	4.540	1.695	0.069
1135	7.62E+03	7.86E+03	1.22E+03	1.01E+01	1.13E+02	1.33E+02	5.15E+00	1.03E+03	101.65		4.119	8.258	1.578	0.068	9.427	4.585	1.706	0.069
1136	7.62E+03	8.22E+03	1.25E+03	1.11E+01	2.10E+02	1.63E+03	5.22E+00	1.04E+03	102.98		3.831	8.162	1.564	0.068	9.335	4.542	1.696	0.069
1137	7.62E+03	7.81E+03	1.23E+03	3.10E+01	3.26E+02	1.88E+01	4.26E+00	8.47E+02	84.02		8.569	9.681	1.752	0.069	10.787	5.248	1.865	0.070
1138	7.63E+03	6.72E+03	1.23E+03	1.59E+01	2.70E+02	2.14E+01	5.03E+00	1.00E+03	99.26		4.656	8.433	1.601	0.068	9.596	4.664	1.726	0.069
1139	7.63E+03	7.91E+03	1.22E+03	6.84E+00	4.35E+01	1.40E+02	5.03E+00	1.00E+03	99.25		4.657	8.434	1.601	0.068	9.597	4.664	1.726	0.069
1140	7.63E+03	8.07E+03	1.24E+03	2.54E+01	1.31E+02	3.14E+02	5.09E+00	1.01E+03	100.48		4.380	8.343	1.589	0.068	9.509	4.623	1.716	0.069
1141	7.63E+03	6.52E+03	1.26E+03	3.10E+01	3.04E+02	5.00E+01	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
1142	7.63E+03	7.10E+03	1.28E+03	3.67E+01	2.07E+02	1.14E+02	4.91E+00	9.78E+02	96.96		5.192	8.608	1.624	0.068	9.764	4.743	1.745	0.069
1143	7.63E+03	8.46E+03	1.26E+03	1.18E+01	2.17E+02	1.60E+02	5.21E+00	1.04E+03	102.82		3.866	8.174	1.566	0.068	9.346	4.547	1.697	0.069
1144	7.63E+03	6.60E+03	1.25E+03	3.60E+01	3.37E+02	2.50E+01	4.00E+00	7.95E+02	78.86		10.087	10.153	1.803	0.070	11.232	5.477	1.919	0.071
1145	7.63E+03	7.25E+03	1.32E+03	3.89E+01	2.25E+02	6.86E+02	4.82E+00	9.59E+02	95.05		5.652	8.756	1.643	0.069	9.906	4.812	1.762	0.069
1146	7.63E+03	6.65E+03	1.24E+03	2.95E+01	3.15E+02	1.56E+02	4.39E+00	8.74E+02	86.67		7.827	9.448	1.726	0.069	10.566	5.137	1.839	0.070
1147	7.63E+03	7.59E+03	1.30E+03	3.67E+01	3.33E+02	2.08E+02	3.98E+00	7.91E+02	78.45		10.211	10.191	1.807	0.070	11.269	5.496	1.923	0.071
1148	7.63E+03	7.97E+03	1.23E+03	7.16E+01	1.84E+02	0.00E+00	3.37E+00	6.70E+02	66.42		14.145	11.391	1.925	0.071	12.397	6.092	2.060	0.072
1149	7.63E+03	7.70E+03	1.26E+03	3.57E+01	3.38E+02	6.43E+01	4.00E+00	7.97E+02	79.01		10.040	10.138	1.801	0.070	11.219	5.470	1.917	0.071
1150	7.63E+03	6.73E+03	1.23E+03	3.80E+01	3.10E+02	1.14E+02	4.13E+00	8.22E+02	81.48		9.303	9.910	1.777	0.070	11.003	5.359	1.891	0.071
1151	7.63E+03	6.77E+03	1.22E+03	6.34E+01	0.00E+00	3.57E+01	2.54E+00	5.05E+02	50.07		20.345	13.241	2.085	0.072	14.121	7.038	2.274	0.074
1152	7.63E+03	6.94E+03	1.24E+03	3.26E+01	2.19E+02	8.89E+01	4.99E+00	9.93E+02	98.48		4.835	8.492	1.609	0.068	9.652	4.690	1.732	0.069
1153	7.63E+03	7.02E+03	1.26E+03	3.79E+01	2.11E+02	2.31E+02	4.88E+00	9.71E+02	96.22		5.368	8.665	1.631	0.068	9.819	4.770	1.751	0.069
1154	7.63E+03	6.54E+03	1.26E+03	4.00E+01	2.97E+02	1.25E+01	4.22E+00	8.40E+02	83.25		8.789	9.750	1.759	0.069	10.851	5.281	1.873	0.070
1155	7.64E+03	7.67E+03	1.28E+03	5.02E+01	3.26E+02	2.14E+02	3.40E+00	6.77E+02	67.11		13.905	11.319	1.918	0.071	12.329	6.055	2.052	0.072
1156	7.64E+03	7.79E+03	1.24E+03	4.82E+01	3.33E+02	1.07E+02	3.42E+00	6.81E+02	67.47		13.782	11.282	1.915	0.071	12.294	6.037	2.048	0.072
1157	7.64E+03	6.83E+03	1.21E+03	2.53E+01	2.38E+02	1.88E+01	5.06E+00	1.01E+03	99.86		4.519	8.389	1.595	0.068	9.553	4.644	1.721	0.069
1158	7.64E+03	7.18E+03	1.30E+03	2.99E+01	2.31E+02	7.14E+00	5.01E+00	9.98E+02	98.90		4.739	8.461	1.605	0.068	9.622	4.676	1.729	0.069
1159	7.64E+03	7.90E+03	1.22E+03	4.23E+00	3.91E+01	0.00E+00	5.07E+00	1.01E+03	100.07		4.472	8.373	1.593	0.068	9.539	4.637	1.719	0.069
1160	7.64E+03	7.97E+03	1.23E+03	4.53E+01	1.72E+02	1.38E+02	4.66E+00	9.27E+02	91.85		6.451	9.013	1.674	0.069	10.151	4.931	1.790	0.070
1161	7.64E+03	6.78E+03	1.21E+03	2.92E+01	2.97E+02	9.44E+01	4.57E+00	9.09E+02	90.13		6.898	9.155	1.692	0.069	10.287	4.998	1.806	0.070
1162	7.64E+03	7.81E+03	1.23E+03	2.46E+01	3.31E+02	1.86E+02	4.49E+00	8.93E+02	88.57		7.310	9.285	1.707	0.069	10.411	5.059	1.821	0.070
1163	7.64E+03	6.85E+03	1.22E+03	4.82E+01	2.07E+02	1.50E+02	4.54E+00	9.03E+02	89.55		7.051	9.203	1.697	0.069	10.333	5.021	1.811	0.070
1164	7.64E+03	8.07E+03	1.24E+03	7.04E+00	8.72E+01	9.81E+02	5.11E+00	1.02E+03	100.75		4.320	8.324	1.587	0.068	9.490	4.614	1.714	0.069
1165	7.64E+03	7.87E+03	1.22E+03	1.03E+01	1.35E+02	1.00E+02	5.20E+00	1.03E+03	102.54		3.925	8.194	1.569	0.068	9.365	4.556	1.699	0.069
1166	7.64E+03	8.46E+03	1.26E+03	1.13E+01	2.23E+02	1.67E+01	5.20E+00	1.04E+03	102.62		3.907	8.188	1.568	0.068	9.359	4.553	1.699	0.069
1167	7.64E+03	6.74E+03	1.23E+03	3.79E+01	3.29E+02	7.50E+01	3.95E+00	7.85E+02	77.83		10.399	10.249	1.813	0.070	11.323	5.524	1.930	0.071
1168	7.64E+03	6.60E+03	1.25E+03	2.92E+01	3.33E+02	1.83E+02	4.30E+00	8.56E+02	84.88		8.324	9.604	1.743	0.069	10.714	5.211	1.857	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1169	7.64E+03	6.55E+03	1.26E+03	2.95E+01	3.15E+02	7.14E+00	4.39E+00	8.74E+02	86.67		7.827	9.448	1.726	0.069	10.566	5.137	1.839	0.070
1170	7.65E+03	7.23E+03	1.32E+03	4.03E+01	2.25E+02	2.21E+02	4.78E+00	9.51E+02	94.26		5.845	8.819	1.651	0.069	9.965	4.841	1.768	0.069
1171	7.65E+03	7.90E+03	1.22E+03	2.03E+01	1.04E+02	1.14E+02	5.04E+00	1.00E+03	99.49		4.604	8.416	1.599	0.068	9.580	4.656	1.724	0.069
1172	7.65E+03	7.60E+03	1.30E+03	3.67E+01	3.33E+02	9.38E+01	3.98E+00	7.91E+02	78.45		10.211	10.191	1.807	0.070	11.269	5.496	1.923	0.071
1173	7.65E+03	7.09E+03	1.28E+03	3.63E+01	2.05E+02	2.08E+02	4.93E+00	9.81E+02	97.22		5.131	8.588	1.621	0.068	9.745	4.734	1.743	0.069
1174	7.65E+03	6.56E+03	1.26E+03	2.97E+01	3.31E+02	6.25E+00	4.29E+00	8.54E+02	84.66		8.388	9.624	1.746	0.069	10.733	5.221	1.859	0.070
1175	7.65E+03	7.98E+03	1.23E+03	2.61E+01	1.59E+02	1.67E+01	5.14E+00	1.02E+03	101.40		4.174	8.276	1.580	0.068	9.444	4.593	1.708	0.069
1176	7.65E+03	8.07E+03	1.24E+03	1.27E+01	1.48E+02	1.10E+02	5.22E+00	1.04E+03	102.97		3.832	8.163	1.565	0.068	9.335	4.542	1.696	0.069
1177	7.65E+03	6.82E+03	1.21E+03	2.82E+01	1.97E+02	8.33E+01	5.11E+00	1.02E+03	100.82		4.303	8.318	1.586	0.068	9.485	4.612	1.713	0.069
1178	7.65E+03	8.45E+03	1.26E+03	1.07E+01	2.29E+02	5.19E+03	5.19E+00	1.03E+03	102.41		3.954	8.203	1.570	0.068	9.374	4.560	1.700	0.069
1179	7.65E+03	7.17E+03	1.30E+03	3.26E+01	2.11E+02	1.19E+02	5.01E+00	9.96E+02	98.78		4.766	8.469	1.606	0.068	9.631	4.680	1.730	0.069
1180	7.65E+03	7.90E+03	1.22E+03	1.23E+01	1.06E+02	3.33E+01	5.13E+00	1.02E+03	101.13		4.236	8.296	1.583	0.068	9.464	4.602	1.710	0.069
1181	7.65E+03	7.71E+03	1.26E+03	4.01E+01	3.42E+02	7.14E+01	3.78E+00	7.52E+02	74.58		11.418	10.562	1.845	0.070	11.618	5.678	1.965	0.071
1182	7.65E+03	6.75E+03	1.23E+03	4.82E+01	3.33E+02	8.33E+01	3.42E+00	6.81E+02	67.47		13.782	11.282	1.915	0.071	12.294	6.037	2.048	0.072
1183	7.65E+03	7.60E+03	1.30E+03	1.49E+01	0.00E+00	4.17E+01	4.78E+00	9.51E+02	94.26		5.845	8.819	1.651	0.069	9.966	4.841	1.768	0.069
1184	7.65E+03	6.77E+03	1.22E+03	3.37E+01	0.00E+00	0.00E+00	4.06E+00	8.08E+02	80.13		9.703	10.034	1.790	0.070	11.120	5.419	1.905	0.071
1185	7.65E+03	7.01E+03	1.26E+03	3.26E+01	2.19E+02	1.83E+02	4.99E+00	9.93E+02	98.48		4.835	8.492	1.609	0.068	9.652	4.690	1.732	0.069
1186	7.65E+03	8.07E+03	1.24E+03	1.84E+01	1.43E+02	0.00E+00	5.20E+00	1.03E+03	102.49		3.936	8.197	1.569	0.068	9.368	4.557	1.700	0.069
1187	7.66E+03	6.79E+03	1.21E+03	1.59E+01	1.03E+02	7.14E+00	5.09E+00	1.01E+03	100.38		4.403	8.351	1.590	0.068	9.517	4.627	1.717	0.069
1188	7.66E+03	7.80E+03	1.24E+03	5.02E+01	3.26E+02	1.43E+01	3.40E+00	6.77E+02	67.11		13.905	11.319	1.918	0.071	12.329	6.055	2.052	0.072
1189	7.66E+03	6.92E+03	1.24E+03	3.09E+01	2.22E+02	3.57E+01	5.02E+00	9.99E+02	99.04		4.706	8.450	1.603	0.068	9.612	4.671	1.727	0.069
1190	7.66E+03	6.61E+03	1.25E+03	2.20E+01	3.15E+02	8.75E+01	4.65E+00	9.25E+02	91.74		6.481	9.022	1.676	0.069	10.160	4.935	1.791	0.070
1191	7.66E+03	7.59E+03	1.30E+03	1.45E+01	1.12E+02	5.71E+01	5.13E+00	1.02E+03	101.25		4.207	8.287	1.582	0.068	9.455	4.598	1.709	0.069
1192	7.66E+03	7.88E+03	1.22E+03	9.79E+00	9.70E+01	1.00E+02	5.11E+00	1.02E+03	100.87		4.293	8.315	1.585	0.068	9.482	4.610	1.713	0.069
1193	7.66E+03	7.68E+03	1.28E+03	5.20E+01	3.21E+02	1.63E+02	3.39E+00	6.75E+02	66.94		13.964	11.337	1.920	0.071	12.345	6.064	2.054	0.072
1194	7.66E+03	6.84E+03	1.22E+03	4.33E+01	2.25E+02	0.00E+00	4.68E+00	9.32E+02	92.42		6.307	8.967	1.669	0.069	10.107	4.909	1.785	0.070
1195	7.66E+03	6.81E+03	1.21E+03	2.61E+01	1.76E+02	3.57E+01	5.15E+00	1.03E+03	101.63		4.125	8.259	1.578	0.068	9.429	4.585	1.706	0.069
1196	7.66E+03	7.82E+03	1.23E+03	2.18E+01	3.26E+02	1.50E+02	4.60E+00	9.16E+02	90.84		6.712	9.096	1.684	0.069	10.230	4.970	1.799	0.070
1197	7.66E+03	7.98E+03	1.23E+03	2.90E+01	1.92E+02	8.75E+01	5.10E+00	1.02E+03	100.63		4.347	8.332	1.588	0.068	9.499	4.618	1.715	0.069
1198	7.66E+03	7.59E+03	1.30E+03	1.76E+01	1.56E+02	2.50E+01	5.22E+00	1.04E+03	102.95		3.837	8.164	1.565	0.068	9.337	4.543	1.696	0.069
1199	7.66E+03	8.06E+03	1.24E+03	2.16E+01	1.44E+02	7.50E+01	5.17E+00	1.03E+03	102.03		4.037	8.230	1.574	0.068	9.401	4.572	1.703	0.069
1200	7.66E+03	6.50E+03	1.27E+03	1.32E+01	2.70E+02	1.71E+02	5.06E+00	1.01E+03	99.87		4.517	8.388	1.595	0.068	9.553	4.643	1.721	0.069
1201	7.66E+03	6.68E+03	1.24E+03	2.92E+01	2.97E+02	3.89E+01	4.57E+00	9.09E+02	90.13		6.898	9.155	1.692	0.069	10.287	4.998	1.806	0.070
1202	7.66E+03	7.90E+03	1.22E+03	1.33E+01	1.31E+02	3.33E+01	5.19E+00	1.03E+03	102.36		3.965	8.206	1.571	0.068	9.378	4.562	1.701	0.069
1203	7.66E+03	6.80E+03	1.21E+03	2.18E+01	1.89E+02	5.83E+01	5.20E+00	1.03E+03	102.61		3.911	8.189	1.568	0.068	9.361	4.554	1.699	0.069
1204	7.66E+03	6.80E+03	1.21E+03	3.00E+01	1.91E+02	3.33E+01	5.08E+00	1.01E+03	100.26		4.429	8.359	1.591	0.068	9.525	4.630	1.717	0.069
1205	7.66E+03	6.98E+03	1.26E+03	4.71E+01	2.48E+02	6.67E+01	4.45E+00	8.86E+02	87.81		7.515	9.350	1.714	0.069	10.472	5.090	1.828	0.070
1206	7.66E+03	7.09E+03	1.28E+03	3.60E+01	2.03E+02	1.08E+02	4.94E+00	9.83E+02	97.42		5.082	8.572	1.619	0.068	9.730	4.727	1.741	0.069
1207	7.66E+03	8.44E+03	1.26E+03	1.03E+01	2.32E+02	4.25E+02	5.18E+00	1.03E+03	102.28		3.982	8.212	1.571	0.068	9.383	4.564	1.701	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1208	7.66E+03	6.98E+03	1.26E+03	3.98E+01	2.33E+02	1.08E+02	4.77E+00	9.48E+02	94.01		5.907	8.838	1.653	0.069	9.984	4.850	1.771	0.070
1209	7.66E+03	6.51E+03	1.27E+03	3.10E+01	3.04E+02	1.25E+02	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
1210	7.67E+03	7.58E+03	1.30E+03	2.89E+01	2.50E+02	5.14E+02	4.94E+00	9.84E+02	97.54		5.056	8.564	1.618	0.068	9.721	4.723	1.740	0.069
1211	7.67E+03	6.76E+03	1.23E+03	6.59E+01	3.33E+02	1.00E+02	2.60E+00	5.17E+02	51.23		19.874	13.102	2.074	0.072	13.991	6.966	2.258	0.074
1212	7.67E+03	6.83E+03	1.22E+03	4.33E+01	2.25E+02	2.86E+01	4.68E+00	9.32E+02	92.42		6.307	8.967	1.669	0.069	10.107	4.909	1.785	0.070
1213	7.67E+03	6.99E+03	1.26E+03	2.44E+01	1.41E+02	8.33E+00	5.13E+00	1.02E+03	101.27		4.203	8.285	1.581	0.068	9.453	4.597	1.709	0.069
1214	7.67E+03	7.00E+03	1.26E+03	2.38E+01	1.47E+02	1.25E+01	5.15E+00	1.03E+03	101.66		4.118	8.257	1.578	0.068	9.426	4.584	1.706	0.069
1215	7.67E+03	7.90E+03	1.22E+03	1.03E+01	9.93E+01	1.88E+01	5.12E+00	1.02E+03	100.94		4.278	8.310	1.585	0.068	9.477	4.608	1.712	0.069
1216	7.67E+03	7.97E+03	1.23E+03	2.75E+01	1.96E+02	1.25E+01	5.12E+00	1.02E+03	101.08		4.245	8.299	1.583	0.068	9.467	4.603	1.711	0.069
1217	7.67E+03	7.88E+03	1.22E+03	1.95E+01	2.06E+02	1.50E+02	5.20E+00	1.04E+03	102.67		3.897	8.184	1.568	0.068	9.356	4.552	1.698	0.069
1218	7.67E+03	8.05E+03	1.24E+03	3.36E+01	1.90E+02	1.25E+01	5.01E+00	9.96E+02	98.77		4.770	8.471	1.606	0.068	9.632	4.681	1.730	0.069
1219	7.67E+03	6.98E+03	1.26E+03	3.53E+01	2.25E+02	5.00E+01	4.91E+00	9.78E+02	96.96		5.191	8.608	1.624	0.068	9.764	4.743	1.745	0.069
1220	7.67E+03	6.59E+03	1.26E+03	3.98E+01	3.07E+02	5.00E+01	4.10E+00	8.15E+02	80.84		9.491	9.968	1.783	0.070	11.058	5.387	1.898	0.071
1221	7.67E+03	6.62E+03	1.25E+03	2.26E+01	3.07E+02	1.00E+02	4.68E+00	9.31E+02	92.33		6.331	8.974	1.670	0.069	10.114	4.913	1.786	0.070
1222	7.67E+03	7.15E+03	1.30E+03	4.28E+01	2.02E+02	1.13E+02	4.74E+00	9.42E+02	93.42		6.054	8.886	1.659	0.069	10.030	4.872	1.776	0.070
1223	7.67E+03	8.02E+03	1.24E+03	2.46E+01	2.09E+02	4.81E+02	5.15E+00	1.02E+03	101.60		4.131	8.261	1.578	0.068	9.430	4.586	1.707	0.069
1224	7.67E+03	6.59E+03	1.26E+03	4.82E+01	3.33E+02	3.00E+01	3.42E+00	6.81E+02	67.47		13.782	11.282	1.915	0.071	12.294	6.037	2.048	0.072
1225	7.67E+03	7.81E+03	1.24E+03	3.37E+01	0.00E+00	2.08E+02	4.06E+00	8.08E+02	80.13		9.703	10.034	1.790	0.070	11.120	5.419	1.905	0.071
1226	7.67E+03	7.21E+03	1.32E+03	4.45E+01	2.16E+02	2.00E+02	4.66E+00	9.28E+02	92.01		6.412	9.000	1.673	0.069	10.139	4.925	1.789	0.070
1227	7.67E+03	7.88E+03	1.22E+03	2.56E+01	1.87E+02	5.71E+01	5.16E+00	1.03E+03	101.76		4.096	8.250	1.577	0.068	9.420	4.581	1.705	0.069
1228	7.67E+03	6.99E+03	1.26E+03	1.72E+01	1.05E+02	2.50E+01	5.08E+00	1.01E+03	100.29		4.423	8.357	1.591	0.068	9.523	4.629	1.717	0.069
1229	7.67E+03	7.89E+03	1.22E+03	3.08E+01	2.06E+02	3.33E+01	5.05E+00	1.01E+03	99.68		4.559	8.402	1.597	0.068	9.566	4.650	1.722	0.069
1230	7.67E+03	7.00E+03	1.26E+03	1.84E+01	1.16E+02	7.00E+01	5.12E+00	1.02E+03	100.95		4.275	8.309	1.585	0.068	9.476	4.608	1.712	0.069
1231	7.67E+03	6.69E+03	1.24E+03	2.03E+01	3.17E+02	2.50E+01	4.69E+00	9.34E+02	92.55		6.274	8.956	1.668	0.069	10.097	4.904	1.784	0.070
1232	7.67E+03	6.52E+03	1.27E+03	2.62E+01	3.06E+02	6.43E+01	4.58E+00	9.12E+02	90.40		6.827	9.132	1.689	0.069	10.265	4.987	1.804	0.070
1233	7.67E+03	7.58E+03	1.30E+03	2.35E+01	1.74E+02	9.17E+01	5.18E+00	1.03E+03	102.28		3.982	8.212	1.571	0.068	9.383	4.564	1.701	0.069
1234	7.68E+03	7.83E+03	1.23E+03	2.56E+01	3.33E+02	1.06E+02	4.44E+00	8.84E+02	87.68		7.552	9.362	1.716	0.069	10.483	5.096	1.829	0.070
1235	7.68E+03	6.82E+03	1.22E+03	3.98E+01	2.33E+02	8.33E+01	4.77E+00	9.48E+02	94.01		5.907	8.838	1.653	0.069	9.984	4.850	1.771	0.070
1236	7.68E+03	6.90E+03	1.24E+03	3.26E+01	2.19E+02	4.44E+01	4.99E+00	9.93E+02	98.48		4.835	8.492	1.609	0.068	9.652	4.690	1.732	0.069
1237	7.68E+03	7.72E+03	1.26E+03	3.57E+01	3.38E+02	7.86E+01	4.00E+00	7.97E+02	79.01		10.040	10.138	1.801	0.070	11.219	5.470	1.917	0.071
1238	7.68E+03	7.00E+03	1.26E+03	2.17E+01	1.52E+02	2.93E+02	5.18E+00	1.03E+03	102.27		3.985	8.213	1.572	0.068	9.384	4.565	1.701	0.069
1239	7.68E+03	6.77E+03	1.22E+03	3.26E+01	3.21E+02	4.44E+01	4.22E+00	8.40E+02	83.31		8.770	9.744	1.759	0.069	10.846	5.279	1.872	0.070
1240	7.68E+03	6.99E+03	1.26E+03	3.09E+01	1.85E+02	2.58E+02	5.07E+00	1.01E+03	99.97		4.495	8.381	1.594	0.068	9.546	4.640	1.720	0.069
1241	7.68E+03	8.00E+03	1.24E+03	3.34E+01	2.21E+02	6.25E+00	4.97E+00	9.89E+02	98.07		4.930	8.523	1.613	0.068	9.682	4.705	1.736	0.069
1242	7.68E+03	6.97E+03	1.26E+03	3.72E+01	2.21E+02	5.00E+01	4.88E+00	9.70E+02	96.18		5.377	8.668	1.632	0.068	9.821	4.771	1.752	0.069
1243	7.68E+03	6.76E+03	1.23E+03	4.50E+01	0.00E+00	1.67E+01	3.50E+00	6.97E+02	69.09		13.228	11.114	1.899	0.071	12.137	5.953	2.028	0.072
1244	7.68E+03	6.64E+03	1.25E+03	2.62E+01	3.06E+02	6.43E+01	4.58E+00	9.12E+02	90.40		6.827	9.132	1.689	0.069	10.265	4.987	1.804	0.070
1245	7.68E+03	7.59E+03	1.30E+03	3.25E+01	2.44E+02	9.00E+01	4.90E+00	9.75E+02	96.63		5.270	8.633	1.627	0.068	9.788	4.755	1.748	0.069
1246	7.68E+03	7.96E+03	1.23E+03	2.04E+01	2.07E+02	8.57E+01	5.20E+00	1.03E+03	102.53		3.928	8.194	1.569	0.068	9.366	4.556	1.699	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1247	7.68E+03	7.69E+03	1.28E+03	5.73E+01	3.29E+02	3.57E+01	3.05E+00	6.07E+02	60.16		16.403	12.070	1.986	0.071	13.031	6.436	2.138	0.073
1248	7.68E+03	6.60E+03	1.26E+03	4.33E+01	3.15E+02	2.14E+01	3.85E+00	7.67E+02	76.03		10.959	10.422	1.831	0.070	11.486	5.609	1.949	0.071
1249	7.68E+03	8.42E+03	1.26E+03	9.23E+00	2.33E+02	9.29E+01	5.18E+00	1.03E+03	102.21		3.996	8.217	1.572	0.068	9.388	4.566	1.702	0.069
1250	7.68E+03	6.71E+03	1.24E+03	2.26E+01	3.07E+02	7.50E+01	4.68E+00	9.31E+02	92.33		6.331	8.974	1.670	0.069	10.114	4.913	1.786	0.070
1251	7.69E+03	7.20E+03	1.32E+03	3.98E+01	2.17E+02	2.50E+02	4.81E+00	9.58E+02	94.93		5.681	8.766	1.644	0.069	9.915	4.816	1.763	0.069
1252	7.69E+03	6.53E+03	1.27E+03	2.46E+01	2.99E+02	2.00E+02	4.68E+00	9.31E+02	92.32		6.333	8.975	1.670	0.069	10.115	4.913	1.786	0.070
1253	7.69E+03	7.08E+03	1.28E+03	2.99E+01	2.10E+02	1.81E+02	5.06E+00	1.01E+03	99.90		4.510	8.386	1.595	0.068	9.550	4.642	1.720	0.069
1254	7.69E+03	7.98E+03	1.24E+03	4.33E+01	2.25E+02	1.43E+01	4.68E+00	9.32E+02	92.42		6.307	8.967	1.669	0.069	10.107	4.909	1.785	0.070
1255	7.69E+03	6.81E+03	1.22E+03	4.65E+01	2.52E+02	1.43E+02	4.45E+00	8.86E+02	87.80		7.518	9.351	1.714	0.069	10.473	5.091	1.828	0.070
1256	7.69E+03	6.65E+03	1.25E+03	2.52E+01	3.15E+02	1.00E+01	4.54E+00	9.04E+02	89.64		7.028	9.196	1.696	0.069	10.326	5.017	1.811	0.070
1257	7.69E+03	8.42E+03	1.26E+03	7.93E+00	1.78E+02	0.00E+00	5.22E+00	1.04E+03	102.99		3.829	8.162	1.564	0.068	9.334	4.542	1.696	0.069
1258	7.69E+03	6.72E+03	1.24E+03	2.44E+01	3.17E+02	0.00E+00	4.56E+00	9.07E+02	89.92		6.951	9.172	1.694	0.069	10.303	5.006	1.808	0.070
1259	7.69E+03	7.94E+03	1.23E+03	2.08E+01	2.21E+02	7.14E+01	5.17E+00	1.03E+03	101.95		4.055	8.236	1.575	0.068	9.406	4.575	1.704	0.069
1260	7.69E+03	7.81E+03	1.24E+03	2.18E+01	0.00E+00	3.33E+01	4.55E+00	9.05E+02	89.75		6.997	9.186	1.695	0.069	10.317	5.013	1.810	0.070
1261	7.69E+03	6.96E+03	1.26E+03	4.71E+01	2.02E+02	3.75E+01	4.58E+00	9.12E+02	90.41		6.824	9.131	1.689	0.069	10.264	4.987	1.803	0.070
1262	7.69E+03	7.60E+03	1.30E+03	3.55E+01	3.39E+02	2.29E+02	4.01E+00	7.98E+02	79.14		10.001	10.126	1.800	0.070	11.207	5.464	1.916	0.071
1263	7.70E+03	6.80E+03	1.22E+03	1.40E+01	2.70E+02	9.29E+01	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
1264	7.70E+03	7.84E+03	1.23E+03	2.26E+01	3.23E+02	1.93E+02	4.59E+00	9.13E+02	90.56		6.785	9.119	1.687	0.069	10.252	4.981	1.802	0.070
1265	7.70E+03	6.55E+03	1.27E+03	2.53E+01	3.02E+02	8.57E+01	4.64E+00	9.23E+02	91.49		6.543	9.042	1.678	0.069	10.179	4.945	1.793	0.070
1266	7.70E+03	6.61E+03	1.26E+03	3.26E+01	3.09E+02	1.43E+01	4.34E+00	8.64E+02	85.60		8.122	9.541	1.736	0.069	10.654	5.181	1.849	0.070
1267	7.70E+03	7.14E+03	1.30E+03	4.13E+01	2.04E+02	0.00E+00	4.78E+00	9.52E+02	94.36		5.821	8.811	1.650	0.069	9.958	4.837	1.768	0.069
1268	7.70E+03	6.66E+03	1.25E+03	2.62E+01	3.06E+02	0.00E+00	4.58E+00	9.12E+02	90.40		6.827	9.132	1.689	0.069	10.265	4.987	1.804	0.070
1269	7.70E+03	6.78E+03	1.22E+03	2.30E+01	1.81E+02	6.25E+01	5.19E+00	1.03E+03	102.42		3.952	8.202	1.570	0.068	9.374	4.560	1.700	0.069
1270	7.70E+03	6.76E+03	1.23E+03	5.02E+01	3.26E+02	7.14E+00	3.40E+00	6.77E+02	67.11		13.905	11.319	1.918	0.071	12.329	6.055	2.052	0.072
1271	7.70E+03	7.96E+03	1.24E+03	5.02E+01	2.36E+02	1.42E+02	4.40E+00	8.75E+02	86.77		7.798	9.439	1.725	0.069	10.557	5.133	1.838	0.070
1272	7.70E+03	7.93E+03	1.23E+03	2.37E+01	2.29E+02	4.29E+01	5.11E+00	1.02E+03	100.89		4.288	8.313	1.585	0.068	9.480	4.609	1.712	0.069
1273	7.70E+03	6.80E+03	1.22E+03	2.40E+01	1.71E+02	3.00E+01	5.18E+00	1.03E+03	102.14		4.013	8.222	1.573	0.068	9.393	4.569	1.702	0.069
1274	7.70E+03	6.88E+03	1.24E+03	3.59E+01	2.18E+02	7.14E+00	4.92E+00	9.78E+02	97.00		5.182	8.605	1.624	0.068	9.761	4.742	1.745	0.069
1275	7.70E+03	8.41E+03	1.26E+03	5.81E+00	1.17E+02	1.19E+03	5.16E+00	1.03E+03	101.78		4.090	8.248	1.576	0.068	9.418	4.580	1.705	0.069
1276	7.70E+03	6.56E+03	1.27E+03	2.57E+01	3.21E+02	1.00E+02	4.49E+00	8.94E+02	88.62		7.298	9.282	1.706	0.069	10.407	5.058	1.820	0.070
1277	7.70E+03	7.73E+03	1.26E+03	4.95E+01	3.47E+02	1.28E+02	3.28E+00	6.52E+02	64.64		14.774	11.581	1.943	0.071	12.574	6.188	2.082	0.072
1278	7.70E+03	6.74E+03	1.24E+03	4.82E+01	3.33E+02	6.25E+01	3.42E+00	6.81E+02	67.47		13.782	11.282	1.915	0.071	12.294	6.037	2.048	0.072
1279	7.70E+03	7.84E+03	1.23E+03	3.30E+01	3.18E+02	3.33E+01	4.24E+00	8.44E+02	83.65		8.675	9.714	1.755	0.069	10.818	5.264	1.869	0.070
1280	7.70E+03	7.70E+03	1.28E+03	6.51E+01	3.38E+02	3.57E+01	2.58E+00	5.13E+02	50.89		20.011	13.142	2.077	0.072	14.029	6.987	2.262	0.074
1281	7.71E+03	7.92E+03	1.23E+03	2.53E+01	2.38E+02	0.00E+00	5.06E+00	1.01E+03	99.86		4.519	8.389	1.595	0.068	9.553	4.644	1.721	0.069
1282	7.71E+03	6.80E+03	1.22E+03	2.73E+01	1.39E+02	2.14E+01	5.09E+00	1.01E+03	100.38		4.402	8.350	1.590	0.068	9.516	4.626	1.716	0.069
1283	7.71E+03	7.19E+03	1.32E+03	4.25E+01	2.09E+02	3.17E+02	4.74E+00	9.43E+02	93.53		6.026	8.877	1.658	0.069	10.021	4.868	1.775	0.070
1284	7.71E+03	6.79E+03	1.22E+03	3.45E+01	2.06E+02	7.86E+01	4.97E+00	9.89E+02	98.07		4.931	8.523	1.613	0.068	9.682	4.705	1.736	0.069
1285	7.71E+03	8.11E+03	1.26E+03	3.10E+01	2.36E+02	3.33E+01	4.97E+00	9.89E+02	98.03		4.941	8.527	1.613	0.068	9.686	4.706	1.736	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1286	7.71E+03	6.79E+03	1.22E+03	3.98E+01	1.99E+02	2.50E+01	4.83E+00	9.62E+02	95.35		5.577	8.732	1.640	0.068	9.883	4.801	1.759	0.069
1287	7.71E+03	7.81E+03	1.24E+03	4.65E+01	3.42E+02	1.36E+02	3.46E+00	6.88E+02	68.19		13.533	11.207	1.908	0.071	12.223	5.999	2.039	0.072
1288	7.71E+03	8.12E+03	1.26E+03	1.28E+01	2.70E+02	1.22E+03	5.07E+00	1.01E+03	99.96		4.497	8.382	1.594	0.068	9.546	4.640	1.720	0.069
1289	7.71E+03	7.85E+03	1.23E+03	2.26E+01	3.07E+02	7.14E+01	4.68E+00	9.31E+02	92.33		6.331	8.974	1.670	0.069	10.114	4.913	1.786	0.070
1290	7.71E+03	6.67E+03	1.25E+03	2.37E+01	3.11E+02	2.14E+01	4.62E+00	9.20E+02	91.19		6.620	9.067	1.681	0.069	10.202	4.956	1.796	0.070
1291	7.71E+03	7.91E+03	1.23E+03	2.92E+01	2.43E+02	5.00E+01	4.97E+00	9.89E+02	98.06		4.932	8.524	1.613	0.068	9.683	4.705	1.736	0.069
1292	7.71E+03	7.61E+03	1.30E+03	2.95E+01	3.32E+02	9.79E+02	4.29E+00	8.55E+02	84.72		8.370	9.619	1.745	0.069	10.727	5.218	1.858	0.070
1293	7.71E+03	7.87E+03	1.23E+03	4.59E+01	2.84E+02	1.00E+02	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
1294	7.71E+03	8.39E+03	1.26E+03	1.45E+00	2.92E+01	5.30E+02	5.11E+00	1.02E+03	100.85		4.298	8.316	1.586	0.068	9.484	4.611	1.713	0.069
1295	7.71E+03	7.89E+03	1.23E+03	6.36E+01	2.63E+02	1.00E+02	3.65E+00	7.26E+02	71.97		12.264	10.821	1.870	0.070	11.862	5.806	1.995	0.072
1296	7.71E+03	8.09E+03	1.26E+03	4.13E+01	2.46E+02	2.31E+02	4.66E+00	9.27E+02	91.93		6.432	9.007	1.674	0.069	10.145	4.928	1.789	0.070
1297	7.71E+03	6.62E+03	1.26E+03	3.10E+01	3.26E+02	1.88E+01	4.26E+00	8.47E+02	84.02		8.569	9.681	1.752	0.069	10.787	5.248	1.865	0.070
1298	7.71E+03	7.95E+03	1.24E+03	4.33E+01	2.25E+02	7.14E+01	4.68E+00	9.32E+02	92.42		6.307	8.967	1.669	0.069	10.107	4.909	1.785	0.070
1299	7.71E+03	6.94E+03	1.26E+03	3.98E+01	2.17E+02	2.50E+01	4.81E+00	9.58E+02	94.93		5.681	8.766	1.644	0.069	9.915	4.816	1.763	0.069
1300	7.71E+03	6.76E+03	1.23E+03	6.39E+01	3.49E+02	3.33E+01	2.55E+00	5.07E+02	50.30		20.253	13.214	2.083	0.072	14.095	7.024	2.271	0.074
1301	7.71E+03	8.35E+03	1.26E+03	1.23E+01	2.46E+02	3.21E+02	5.15E+00	1.02E+03	101.56		4.139	8.264	1.578	0.068	9.433	4.587	1.707	0.069
1302	7.71E+03	8.37E+03	1.26E+03	1.22E+01	2.47E+02	5.25E+02	5.15E+00	1.02E+03	101.51		4.152	8.268	1.579	0.068	9.437	4.589	1.707	0.069
1303	7.71E+03	7.06E+03	1.28E+03	3.26E+01	2.11E+02	2.67E+02	5.01E+00	9.96E+02	98.78		4.766	8.469	1.606	0.068	9.631	4.680	1.730	0.069
1304	7.71E+03	6.81E+03	1.23E+03	5.90E+01	2.33E+02	3.89E+01	4.04E+00	8.03E+02	79.61		9.858	10.082	1.795	0.070	11.166	5.442	1.911	0.071
1305	7.71E+03	7.88E+03	1.23E+03	1.40E+01	2.70E+02	5.71E+01	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
1306	7.72E+03	6.86E+03	1.24E+03	3.41E+01	2.17E+02	1.65E+02	4.96E+00	9.87E+02	97.87		4.978	8.538	1.615	0.068	9.697	4.712	1.737	0.069
1307	7.72E+03	8.38E+03	1.26E+03	2.44E+00	4.92E+01	2.11E+02	5.10E+00	1.02E+03	100.71		4.329	8.326	1.587	0.068	9.493	4.615	1.714	0.069
1308	7.72E+03	6.75E+03	1.24E+03	5.92E+01	3.33E+02	7.14E+01	2.90E+00	5.78E+02	57.31		17.481	12.392	2.015	0.071	13.331	6.600	2.175	0.073
1309	7.72E+03	8.13E+03	1.26E+03	8.50E+00	3.12E+02	4.42E+02	5.01E+00	9.96E+02	98.78		4.766	8.469	1.606	0.068	9.631	4.680	1.730	0.069
1310	7.72E+03	8.35E+03	1.26E+03	8.61E+00	2.31E+02	6.88E+01	5.18E+00	1.03E+03	102.27		3.984	8.213	1.571	0.068	9.384	4.565	1.701	0.069
1311	7.72E+03	6.55E+03	1.28E+03	6.41E+01	2.84E+02	4.00E+01	3.40E+00	6.76E+02	67.01		13.941	11.330	1.919	0.071	12.339	6.061	2.053	0.072
1312	7.72E+03	6.56E+03	1.28E+03	5.47E+01	3.15E+02	1.00E+02	3.37E+00	6.71E+02	66.50		14.118	11.383	1.924	0.071	12.389	6.088	2.059	0.072
1313	7.72E+03	8.08E+03	1.26E+03	4.13E+01	2.46E+02	1.25E+02	4.66E+00	9.27E+02	91.93		6.432	9.007	1.674	0.069	10.145	4.928	1.789	0.070
1314	7.72E+03	7.82E+03	1.24E+03	3.53E+01	3.15E+02	4.78E+02	4.18E+00	8.31E+02	82.37		9.042	9.829	1.768	0.070	10.926	5.319	1.882	0.071
1315	7.72E+03	7.13E+03	1.30E+03	4.65E+01	1.98E+02	6.25E+01	4.61E+00	9.17E+02	90.90		6.697	9.091	1.684	0.069	10.226	4.968	1.799	0.070
1316	7.72E+03	7.17E+03	1.32E+03	6.43E+01	1.96E+02	4.36E+02	3.79E+00	7.54E+02	74.71		11.377	10.550	1.844	0.070	11.607	5.672	1.964	0.071
1317	7.72E+03	6.54E+03	1.28E+03	2.18E+01	2.70E+02	7.50E+01	4.95E+00	9.84E+02	97.57		5.049	8.562	1.618	0.068	9.719	4.722	1.740	0.069
1318	7.72E+03	8.06E+03	1.26E+03	6.39E+01	2.59E+02	9.17E+01	3.67E+00	7.30E+02	72.40		12.123	10.778	1.866	0.070	11.821	5.785	1.990	0.071
1319	7.72E+03	6.63E+03	1.26E+03	3.60E+01	3.37E+02	4.29E+01	4.00E+00	7.95E+02	78.86		10.087	10.153	1.803	0.070	11.232	5.477	1.919	0.071
1320	7.72E+03	6.58E+03	1.27E+03	2.75E+01	3.10E+02	1.00E+02	4.51E+00	8.97E+02	88.88		7.229	9.260	1.704	0.069	10.386	5.047	1.818	0.070
1321	7.72E+03	6.67E+03	1.25E+03	1.99E+01	3.22E+02	2.14E+01	4.68E+00	9.32E+02	92.42		6.307	8.967	1.669	0.069	10.107	4.909	1.785	0.070
1322	7.73E+03	6.77E+03	1.23E+03	3.53E+01	3.15E+02	6.43E+01	4.18E+00	8.31E+02	82.37		9.042	9.829	1.768	0.070	10.926	5.319	1.882	0.071
1323	7.73E+03	6.80E+03	1.23E+03	5.77E+01	2.52E+02	9.44E+01	4.01E+00	7.97E+02	79.05		10.028	10.135	1.801	0.070	11.215	5.468	1.917	0.071
1324	7.73E+03	6.58E+03	1.27E+03	2.62E+01	3.24E+02	3.57E+01	4.46E+00	8.87E+02	87.93		7.484	9.340	1.713	0.069	10.463	5.086	1.827	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1325	7.73E+03	7.74E+03	1.26E+03	5.37E+01	3.49E+02	2.67E+02	3.05E+00	6.07E+02	60.16		16.406	12.071	1.987	0.071	13.032	6.436	2.138	0.073
1326	7.73E+03	7.93E+03	1.24E+03	4.74E+01	2.47E+02	6.25E+00	4.45E+00	8.85E+02	87.78		7.523	9.353	1.715	0.069	10.475	5.091	1.828	0.070
1327	7.73E+03	7.62E+03	1.30E+03	2.95E+01	3.32E+02	2.42E+02	4.29E+00	8.55E+02	84.72		8.370	9.619	1.745	0.069	10.727	5.218	1.858	0.070
1328	7.73E+03	8.04E+03	1.26E+03	5.14E+01	2.54E+02	2.86E+02	4.26E+00	8.47E+02	83.96		8.585	9.686	1.752	0.069	10.791	5.251	1.866	0.070
1329	7.73E+03	8.14E+03	1.26E+03	8.79E+00	3.06E+02	4.50E+02	5.01E+00	9.98E+02	98.92		4.735	8.459	1.605	0.068	9.621	4.676	1.729	0.069
1330	7.73E+03	6.84E+03	1.24E+03	3.10E+01	2.14E+02	5.71E+01	5.04E+00	1.00E+03	99.36		4.634	8.426	1.600	0.068	9.589	4.661	1.725	0.069
1331	7.73E+03	6.54E+03	1.28E+03	4.59E+01	2.56E+02	2.00E+01	4.44E+00	8.84E+02	87.61		7.571	9.368	1.716	0.069	10.489	5.098	1.830	0.070
1332	7.73E+03	6.92E+03	1.26E+03	3.98E+01	2.33E+02	2.14E+01	4.77E+00	9.48E+02	94.01		5.907	8.838	1.653	0.069	9.984	4.850	1.771	0.070
1333	7.73E+03	6.76E+03	1.24E+03	6.59E+01	2.66E+01	1.25E+01	2.60E+00	5.17E+02	51.23		19.874	13.102	2.074	0.072	13.991	6.966	2.258	0.074
1334	7.73E+03	7.83E+03	1.24E+03	3.79E+01	3.01E+02	1.43E+01	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070
1335	7.73E+03	8.34E+03	1.26E+03	5.09E+00	1.11E+02	1.25E+02	5.15E+00	1.02E+03	101.59		4.133	8.262	1.578	0.068	9.431	4.587	1.707	0.069
1336	7.74E+03	7.04E+03	1.28E+03	3.10E+01	2.36E+02	2.50E+01	4.97E+00	9.89E+02	98.03		4.941	8.527	1.613	0.068	9.686	4.706	1.736	0.069
1337	7.74E+03	6.77E+03	1.23E+03	2.91E+01	1.23E+02	1.25E+01	5.00E+00	9.96E+02	98.71		4.783	8.475	1.607	0.068	9.636	4.683	1.730	0.069
1338	7.74E+03	8.02E+03	1.26E+03	3.72E+01	2.41E+02	3.57E+01	4.80E+00	9.55E+02	94.68		5.742	8.785	1.647	0.069	9.934	4.825	1.765	0.069
1339	7.74E+03	7.70E+03	1.28E+03	5.28E+01	3.36E+02	1.67E+01	3.18E+00	6.32E+02	62.65		15.488	11.796	1.962	0.071	12.775	6.296	2.107	0.072
1340	7.74E+03	6.68E+03	1.25E+03	1.78E+01	3.09E+02	1.50E+02	4.81E+00	9.56E+02	94.81		5.710	8.775	1.645	0.069	9.924	4.821	1.764	0.069
1341	7.74E+03	6.64E+03	1.26E+03	2.75E+01	3.20E+02	3.57E+01	4.43E+00	8.82E+02	87.40		7.626	9.385	1.718	0.069	10.506	5.107	1.832	0.070
1342	7.74E+03	7.91E+03	1.24E+03	4.65E+01	2.52E+02	7.14E+00	4.45E+00	8.86E+02	87.80		7.518	9.351	1.714	0.069	10.473	5.091	1.828	0.070
1343	7.74E+03	6.61E+03	1.27E+03	3.79E+01	3.01E+02	4.29E+01	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070
1344	7.74E+03	6.79E+03	1.23E+03	3.31E+01	1.76E+02	3.57E+01	5.02E+00	9.99E+02	99.02		4.711	8.452	1.604	0.068	9.614	4.672	1.728	0.069
1345	7.74E+03	7.16E+03	1.32E+03	5.02E+01	2.14E+02	1.60E+02	4.45E+00	8.86E+02	87.83		7.509	9.348	1.714	0.069	10.471	5.089	1.828	0.070
1346	7.74E+03	7.84E+03	1.24E+03	3.10E+01	3.04E+02	7.14E+01	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
1347	7.74E+03	7.63E+03	1.30E+03	4.61E+01	3.44E+02	1.17E+02	3.47E+00	6.90E+02	68.40		13.463	11.185	1.906	0.071	12.203	5.988	2.036	0.072
1348	7.74E+03	6.77E+03	1.23E+03	3.47E+01	1.61E+02	0.00E+00	4.97E+00	9.90E+02	98.14		4.915	8.518	1.612	0.068	9.678	4.702	1.735	0.069
1349	7.74E+03	8.15E+03	1.26E+03	9.39E+00	3.00E+02	2.25E+02	5.02E+00	9.98E+02	98.97		4.723	8.455	1.604	0.068	9.617	4.674	1.728	0.069
1350	7.74E+03	7.12E+03	1.30E+03	3.67E+01	2.07E+02	2.00E+02	4.91E+00	9.78E+02	96.96		5.192	8.608	1.624	0.068	9.764	4.743	1.745	0.069
1351	7.74E+03	7.74E+03	1.26E+03	4.59E+01	3.46E+02	2.67E+02	3.47E+00	6.91E+02	68.54		13.413	11.170	1.904	0.071	12.189	5.981	2.035	0.072
1352	7.74E+03	6.69E+03	1.25E+03	2.12E+01	3.01E+02	8.33E+01	4.76E+00	9.47E+02	93.83		5.952	8.853	1.655	0.069	9.998	4.856	1.772	0.070
1353	7.74E+03	6.91E+03	1.26E+03	3.98E+01	2.17E+02	7.86E+01	4.81E+00	9.58E+02	94.93		5.681	8.766	1.644	0.069	9.915	4.816	1.763	0.069
1354	7.74E+03	6.54E+03	1.28E+03	2.04E+01	1.40E+02	4.29E+01	5.17E+00	1.03E+03	102.07		4.027	8.227	1.573	0.068	9.398	4.571	1.703	0.069
1355	7.75E+03	8.34E+03	1.26E+03	1.88E+00	3.99E+01	1.20E+02	5.11E+00	1.02E+03	100.78		4.313	8.321	1.586	0.068	9.488	4.613	1.713	0.069
1356	7.75E+03	6.78E+03	1.23E+03	4.35E+01	2.05E+02	6.25E+00	4.71E+00	9.37E+02	92.93		6.177	8.925	1.664	0.069	10.067	4.890	1.780	0.070
1357	7.75E+03	7.99E+03	1.26E+03	4.04E+01	2.42E+02	6.88E+01	4.71E+00	9.37E+02	92.88		6.189	8.929	1.664	0.069	10.071	4.892	1.781	0.070
1358	7.75E+03	6.58E+03	1.28E+03	2.18E+01	2.70E+02	1.25E+01	4.95E+00	9.84E+02	97.57		5.049	8.562	1.618	0.068	9.719	4.722	1.740	0.069
1359	7.75E+03	7.90E+03	1.24E+03	3.55E+01	2.49E+02	8.13E+01	4.80E+00	9.55E+02	94.67		5.744	8.786	1.647	0.069	9.934	4.825	1.765	0.069
1360	7.75E+03	6.62E+03	1.27E+03	3.98E+01	3.07E+02	7.14E+00	4.10E+00	8.15E+02	80.84		9.491	9.968	1.783	0.070	11.058	5.387	1.898	0.071
1361	7.75E+03	7.86E+03	1.24E+03	3.55E+01	2.91E+02	1.14E+02	4.44E+00	8.84E+02	87.59		7.576	9.369	1.717	0.069	10.491	5.099	1.830	0.070
1362	7.75E+03	6.58E+03	1.28E+03	4.33E+01	3.15E+02	5.00E+01	3.85E+00	7.67E+02	76.03		10.959	10.422	1.831	0.070	11.486	5.609	1.949	0.071
1363	7.75E+03	6.82E+03	1.24E+03	3.34E+01	2.29E+02	5.63E+01	4.95E+00	9.84E+02	97.56		5.050	8.562	1.618	0.068	9.719	4.722	1.740	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1364	7.75E+03	6.65E+03	1.26E+03	3.26E+01	3.21E+02	0.00E+00	4.22E+00	8.40E+02	83.31		8.770	9.744	1.759	0.069	10.846	5.279	1.872	0.070
1365	7.75E+03	7.88E+03	1.24E+03	1.40E+01	2.70E+02	1.75E+02	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
1366	7.75E+03	6.47E+03	1.28E+03	2.07E+01	2.89E+02	4.44E+02	4.84E+00	9.64E+02	95.56		5.528	8.717	1.638	0.068	9.868	4.793	1.757	0.069
1367	7.75E+03	8.34E+03	1.26E+03	1.39E+00	3.01E+01	8.33E+00	5.11E+00	1.02E+03	100.87		4.293	8.315	1.585	0.068	9.482	4.610	1.713	0.069
1368	7.75E+03	6.77E+03	1.24E+03	4.50E+01	2.70E+02	2.86E+01	4.35E+00	8.65E+02	85.76		8.079	9.528	1.735	0.069	10.641	5.175	1.848	0.070
1369	7.75E+03	6.70E+03	1.25E+03	2.08E+01	2.99E+02	2.14E+01	4.78E+00	9.52E+02	94.35		5.822	8.811	1.650	0.069	9.959	4.837	1.768	0.069
1370	7.75E+03	6.48E+03	1.28E+03	1.48E+01	3.03E+02	6.43E+01	4.90E+00	9.76E+02	96.74		5.245	8.625	1.626	0.068	9.780	4.751	1.747	0.069
1371	7.75E+03	6.86E+03	1.25E+03	4.71E+01	2.48E+02	2.14E+01	4.45E+00	8.86E+02	87.81		7.515	9.350	1.714	0.069	10.472	5.090	1.828	0.070
1372	7.76E+03	6.54E+03	1.28E+03	1.06E+01	1.03E+02	8.00E+01	5.12E+00	1.02E+03	101.09		4.244	8.299	1.583	0.068	9.466	4.603	1.711	0.069
1373	7.76E+03	7.02E+03	1.28E+03	3.12E+01	2.44E+02	1.41E+02	4.93E+00	9.80E+02	97.19		5.136	8.590	1.622	0.068	9.746	4.735	1.743	0.069
1374	7.76E+03	8.34E+03	1.26E+03	8.16E-01	1.70E+01	0.00E+00	5.12E+00	1.02E+03	101.01		4.262	8.304	1.584	0.068	9.472	4.606	1.711	0.069
1375	7.76E+03	6.49E+03	1.28E+03	2.79E+01	2.04E+02	2.60E+02	5.11E+00	1.02E+03	100.78		4.313	8.321	1.586	0.068	9.488	4.613	1.713	0.069
1376	7.76E+03	6.59E+03	1.28E+03	3.79E+01	3.29E+02	1.08E+02	3.95E+00	7.85E+02	77.83		10.399	10.249	1.813	0.070	11.323	5.524	1.930	0.071
1377	7.76E+03	8.27E+03	1.26E+03	2.09E+01	2.59E+02	7.78E+01	5.02E+00	9.99E+02	99.05		4.704	8.449	1.603	0.068	9.611	4.671	1.727	0.069
1378	7.76E+03	7.63E+03	1.30E+03	4.61E+01	3.44E+02	2.70E+02	3.47E+00	6.90E+02	68.40		13.463	11.185	1.906	0.071	12.203	5.988	2.036	0.072
1379	7.76E+03	6.85E+03	1.25E+03	4.65E+01	2.52E+02	3.00E+01	4.45E+00	8.86E+02	87.80		7.518	9.351	1.714	0.069	10.473	5.091	1.828	0.070
1380	7.76E+03	6.71E+03	1.25E+03	2.04E+01	2.97E+02	1.50E+02	4.80E+00	9.56E+02	94.78		5.718	8.778	1.646	0.069	9.926	4.822	1.764	0.069
1381	7.76E+03	8.28E+03	1.26E+03	5.90E+00	9.80E+01	6.67E+01	5.13E+00	1.02E+03	101.23		4.213	8.288	1.582	0.068	9.456	4.598	1.710	0.069
1382	7.76E+03	6.81E+03	1.24E+03	3.53E+01	2.25E+02	4.17E+01	4.91E+00	9.78E+02	96.96		5.191	8.608	1.624	0.068	9.764	4.743	1.745	0.069
1383	7.76E+03	8.28E+03	1.26E+03	3.50E+00	7.83E+01	1.00E+02	5.12E+00	1.02E+03	100.93		4.279	8.310	1.585	0.068	9.478	4.608	1.712	0.069
1384	7.76E+03	6.49E+03	1.28E+03	3.12E+01	1.79E+02	1.50E+02	5.06E+00	1.01E+03	99.85		4.522	8.390	1.595	0.068	9.554	4.644	1.721	0.069
1385	7.76E+03	8.16E+03	1.26E+03	1.86E+01	2.04E+02	3.43E+02	5.21E+00	1.04E+03	102.86		3.856	8.171	1.566	0.068	9.343	4.546	1.697	0.069
1386	7.76E+03	6.72E+03	1.25E+03	2.21E+01	3.05E+02	1.21E+02	4.71E+00	9.37E+02	92.92		6.181	8.926	1.664	0.069	10.068	4.891	1.780	0.070
1387	7.76E+03	7.15E+03	1.32E+03	4.62E+01	2.30E+02	5.38E+02	4.57E+00	9.10E+02	90.20		6.878	9.149	1.691	0.069	10.281	4.995	1.805	0.070
1388	7.76E+03	6.63E+03	1.27E+03	4.33E+01	3.15E+02	1.43E+01	3.85E+00	7.67E+02	76.03		10.959	10.422	1.831	0.070	11.486	5.609	1.949	0.071
1389	7.76E+03	6.50E+03	1.28E+03	3.20E+01	1.73E+02	9.00E+01	5.04E+00	1.00E+03	99.48		4.605	8.417	1.599	0.068	9.580	4.656	1.724	0.069
1390	7.76E+03	6.54E+03	1.28E+03	1.26E+01	1.15E+02	3.57E+01	5.15E+00	1.02E+03	101.59		4.134	8.262	1.578	0.068	9.431	4.587	1.707	0.069
1391	7.76E+03	6.78E+03	1.24E+03	6.46E+01	2.52E+02	1.43E+01	3.68E+00	7.33E+02	72.69		12.030	10.749	1.863	0.070	11.794	5.771	1.987	0.071
1392	7.76E+03	7.97E+03	1.26E+03	3.98E+01	2.33E+02	1.43E+01	4.77E+00	9.48E+02	94.01		5.907	8.838	1.653	0.069	9.984	4.850	1.771	0.070
1393	7.76E+03	8.27E+03	1.26E+03	5.67E+00	7.01E+01	1.78E+02	5.09E+00	1.01E+03	100.37		4.403	8.351	1.590	0.068	9.517	4.627	1.717	0.069
1394	7.76E+03	6.90E+03	1.26E+03	3.53E+01	2.12E+02	1.00E+02	4.94E+00	9.84E+02	97.52		5.059	8.565	1.618	0.068	9.722	4.724	1.740	0.069
1395	7.76E+03	6.52E+03	1.28E+03	2.93E+01	1.88E+02	2.14E+01	5.10E+00	1.01E+03	100.57		4.360	8.337	1.588	0.068	9.503	4.620	1.715	0.069
1396	7.76E+03	6.84E+03	1.25E+03	4.82E+01	2.43E+02	2.86E+01	4.44E+00	8.84E+02	87.61		7.569	9.367	1.716	0.069	10.489	5.098	1.830	0.070
1397	7.76E+03	6.80E+03	1.24E+03	4.33E+01	2.25E+02	3.33E+01	4.68E+00	9.32E+02	92.42		6.307	8.967	1.669	0.069	10.107	4.909	1.785	0.070
1398	7.76E+03	6.67E+03	1.26E+03	3.98E+01	3.07E+02	3.57E+01	4.10E+00	8.15E+02	80.84		9.491	9.968	1.783	0.070	11.058	5.387	1.898	0.071
1399	7.76E+03	6.73E+03	1.25E+03	2.52E+01	3.15E+02	1.00E+01	4.54E+00	9.04E+02	89.64		7.028	9.196	1.696	0.069	10.326	5.017	1.811	0.070
1400	7.76E+03	7.74E+03	1.26E+03	2.92E+01	3.33E+02	1.86E+02	4.30E+00	8.56E+02	84.88		8.324	9.604	1.743	0.069	10.714	5.211	1.857	0.070
1401	7.76E+03	6.79E+03	1.24E+03	5.47E+01	2.25E+02	1.67E+01	4.25E+00	8.45E+02	83.82		8.626	9.699	1.754	0.069	10.803	5.257	1.867	0.070
1402	7.76E+03	6.78E+03	1.24E+03	4.50E+01	2.70E+02	7.14E+01	4.35E+00	8.65E+02	85.76		8.079	9.528	1.735	0.069	10.641	5.175	1.848	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1403	7.77E+03	6.53E+03	1.28E+03	1.81E+01	1.66E+02	6.25E+00	5.23E+00	1.04E+03	103.09		3.807	8.154	1.563	0.068	9.327	4.539	1.695	0.069
1404	7.77E+03	8.34E+03	1.26E+03	2.72E-01	5.68E+00	0.00E+00	5.13E+00	1.02E+03	101.17		4.226	8.293	1.582	0.068	9.461	4.600	1.710	0.069
1405	7.77E+03	8.29E+03	1.26E+03	9.51E-01	2.09E+01	2.14E+01	5.12E+00	1.02E+03	100.97		4.270	8.307	1.584	0.068	9.475	4.607	1.712	0.069
1406	7.77E+03	7.11E+03	1.30E+03	2.91E+01	2.17E+02	1.43E+01	5.07E+00	1.01E+03	99.96		4.497	8.382	1.594	0.068	9.546	4.640	1.720	0.069
1407	7.77E+03	7.71E+03	1.28E+03	5.02E+01	3.26E+02	1.07E+02	3.40E+00	6.77E+02	67.11		13.905	11.319	1.918	0.071	12.329	6.055	2.052	0.072
1408	7.77E+03	6.99E+03	1.28E+03	2.99E+01	2.40E+02	9.29E+01	4.97E+00	9.89E+02	98.09		4.926	8.521	1.613	0.068	9.681	4.704	1.735	0.069
1409	7.77E+03	6.75E+03	1.25E+03	3.67E+01	2.97E+02	4.29E+01	4.33E+00	8.62E+02	85.47		8.159	9.553	1.737	0.069	10.665	5.187	1.851	0.070
1410	7.77E+03	8.27E+03	1.26E+03	3.20E+00	5.35E+01	1.67E+01	5.10E+00	1.01E+03	100.57		4.359	8.336	1.588	0.068	9.503	4.620	1.715	0.069
1411	7.77E+03	6.54E+03	1.28E+03	2.28E+01	2.04E+02	1.25E+02	5.18E+00	1.03E+03	102.16		4.007	8.221	1.573	0.068	9.391	4.568	1.702	0.069
1412	7.77E+03	6.82E+03	1.25E+03	6.46E+01	2.52E+02	2.86E+01	3.68E+00	7.33E+02	72.69		12.030	10.749	1.863	0.070	11.794	5.771	1.987	0.071
1413	7.77E+03	6.68E+03	1.26E+03	3.79E+01	3.01E+02	5.63E+01	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070
1414	7.77E+03	7.64E+03	1.30E+03	5.38E+01	3.47E+02	1.42E+02	3.05E+00	6.06E+02	60.10		16.425	12.077	1.987	0.071	13.037	6.439	2.139	0.073
1415	7.77E+03	6.59E+03	1.28E+03	3.60E+01	3.37E+02	1.83E+02	4.00E+00	7.95E+02	78.86		10.087	10.153	1.803	0.070	11.232	5.477	1.919	0.071
1416	7.77E+03	8.34E+03	1.26E+03	5.87E-01	1.20E+01	1.14E+02	5.12E+00	1.02E+03	101.07		4.247	8.300	1.583	0.068	9.467	4.603	1.711	0.069
1417	7.77E+03	6.54E+03	1.28E+03	1.85E+01	1.82E+02	2.86E+01	5.23E+00	1.04E+03	103.14		3.797	8.151	1.563	0.068	9.324	4.537	1.695	0.069
1418	7.78E+03	6.54E+03	1.28E+03	2.90E+01	2.80E+02	1.44E+02	4.72E+00	9.39E+02	93.09		6.137	8.912	1.662	0.069	10.055	4.884	1.779	0.070
1419	7.78E+03	7.95E+03	1.26E+03	3.87E+01	2.36E+02	5.00E+01	4.78E+00	9.52E+02	94.37		5.819	8.810	1.650	0.069	9.958	4.837	1.768	0.069
1420	7.78E+03	6.75E+03	1.25E+03	2.95E+01	3.15E+02	4.17E+01	4.39E+00	8.74E+02	86.67		7.827	9.448	1.726	0.069	10.566	5.137	1.839	0.070
1421	7.78E+03	8.08E+03	1.28E+03	1.84E+01	2.70E+02	1.83E+02	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
1422	7.78E+03	7.14E+03	1.32E+03	4.85E+01	2.25E+02	2.00E+01	4.50E+00	8.96E+02	88.79		7.251	9.267	1.705	0.069	10.393	5.051	1.819	0.070
1423	7.78E+03	8.07E+03	1.28E+03	1.84E+01	2.70E+02	2.75E+02	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
1424	7.78E+03	8.30E+03	1.26E+03	3.28E-01	6.95E+00	2.78E+01	5.13E+00	1.02E+03	101.15		4.230	8.294	1.583	0.068	9.462	4.601	1.710	0.069
1425	7.78E+03	8.16E+03	1.26E+03	2.38E+01	1.90E+02	2.50E+02	5.18E+00	1.03E+03	102.19		4.001	8.219	1.572	0.068	9.389	4.567	1.702	0.069
1426	7.78E+03	6.88E+03	1.26E+03	3.10E+01	2.36E+02	8.33E+00	4.97E+00	9.89E+02	98.03		4.941	8.527	1.613	0.068	9.686	4.706	1.736	0.069
1427	7.78E+03	6.64E+03	1.27E+03	3.26E+01	3.09E+02	1.05E+02	4.34E+00	8.64E+02	85.60		8.122	9.541	1.736	0.069	10.654	5.181	1.849	0.070
1428	7.78E+03	8.09E+03	1.28E+03	5.69E+01	2.83E+02	1.33E+02	3.74E+00	7.44E+02	73.77		11.677	10.642	1.853	0.070	11.693	5.717	1.974	0.071
1429	7.78E+03	8.34E+03	1.26E+03	6.40E-01	1.29E+01	2.69E+02	5.12E+00	1.02E+03	101.06		4.251	8.301	1.583	0.068	9.469	4.604	1.711	0.069
1430	7.78E+03	6.98E+03	1.28E+03	2.75E+01	2.30E+02	1.29E+02	5.06E+00	1.01E+03	99.76		4.543	8.397	1.596	0.068	9.561	4.647	1.722	0.069
1431	7.78E+03	8.27E+03	1.26E+03	2.03E+00	3.03E+01	6.67E+01	5.10E+00	1.02E+03	100.68		4.336	8.329	1.587	0.068	9.495	4.617	1.714	0.069
1432	7.78E+03	6.70E+03	1.26E+03	6.39E+01	2.81E+02	2.14E+01	3.44E+00	6.85E+02	67.90		13.633	11.237	1.911	0.071	12.252	6.014	2.042	0.072
1433	7.78E+03	6.80E+03	1.25E+03	2.66E+01	2.70E+02	6.25E+00	4.86E+00	9.66E+02	95.81		5.468	8.697	1.635	0.068	9.849	4.784	1.755	0.069
1434	7.78E+03	8.05E+03	1.28E+03	6.39E+01	2.59E+02	2.67E+02	3.67E+00	7.30E+02	72.40		12.123	10.778	1.866	0.070	11.821	5.785	1.990	0.071
1435	7.78E+03	8.10E+03	1.28E+03	3.41E+01	3.24E+02	6.43E+01	4.15E+00	8.25E+02	81.80		9.210	9.881	1.774	0.070	10.976	5.345	1.888	0.071
1436	7.78E+03	7.75E+03	1.26E+03	3.73E+01	3.18E+02	7.50E+01	4.07E+00	8.09E+02	80.24		9.671	10.024	1.789	0.070	11.111	5.414	1.904	0.071
1437	7.78E+03	6.76E+03	1.25E+03	3.53E+01	3.15E+02	5.00E+01	4.18E+00	8.31E+02	82.37		9.042	9.829	1.768	0.070	10.926	5.319	1.882	0.071
1438	7.79E+03	8.34E+03	1.26E+03	2.59E-01	5.31E+00	5.00E+01	5.13E+00	1.02E+03	101.17		4.225	8.292	1.582	0.068	9.461	4.600	1.710	0.069
1439	7.79E+03	6.60E+03	1.28E+03	2.99E+01	3.30E+02	8.57E+01	4.28E+00	8.53E+02	84.52		8.425	9.636	1.747	0.069	10.744	5.227	1.860	0.070
1440	7.79E+03	7.65E+03	1.30E+03	6.37E+01	3.51E+02	1.67E+02	2.55E+00	5.07E+02	50.23		20.281	13.222	2.084	0.072	14.103	7.029	2.272	0.074
1441	7.79E+03	7.93E+03	1.26E+03	4.25E+01	2.41E+02	9.38E+01	4.65E+00	9.25E+02	91.72		6.484	9.023	1.676	0.069	10.161	4.936	1.791	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1442	7.79E+03	6.96E+03	1.28E+03	2.99E+01	2.31E+02	2.56E+02	5.01E+00	9.98E+02	98.90		4.739	8.461	1.605	0.068	9.622	4.676	1.729	0.069
1443	7.79E+03	7.10E+03	1.30E+03	2.99E+01	2.10E+02	1.00E+02	5.06E+00	1.01E+03	99.90		4.510	8.386	1.595	0.068	9.550	4.642	1.720	0.069
1444	7.79E+03	6.76E+03	1.25E+03	3.10E+01	3.04E+02	6.67E+01	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
1445	7.79E+03	8.31E+03	1.26E+03	9.79E-02	2.04E+00	2.86E+01	5.13E+00	1.02E+03	101.22		4.215	8.289	1.582	0.068	9.457	4.599	1.710	0.069
1446	7.79E+03	8.34E+03	1.26E+03	7.14E-02	1.47E+00	6.67E+01	5.13E+00	1.02E+03	101.23		4.213	8.288	1.582	0.068	9.457	4.598	1.710	0.069
1447	7.79E+03	7.77E+03	1.26E+03	2.62E+01	3.06E+02	4.67E+02	4.58E+00	9.12E+02	90.40		6.827	9.132	1.689	0.069	10.265	4.987	1.804	0.070
1448	7.79E+03	6.65E+03	1.27E+03	2.95E+01	3.15E+02	7.14E+00	4.39E+00	8.74E+02	86.67		7.827	9.448	1.726	0.069	10.566	5.137	1.839	0.070
1449	7.79E+03	7.71E+03	1.28E+03	4.90E+01	3.30E+02	1.06E+02	3.41E+00	6.78E+02	67.25		13.858	11.305	1.917	0.071	12.315	6.048	2.050	0.072
1450	7.79E+03	6.87E+03	1.26E+03	3.02E+01	2.39E+02	4.09E+01	4.97E+00	9.89E+02	98.08		4.928	8.522	1.613	0.068	9.681	4.704	1.735	0.069
1451	7.79E+03	6.50E+03	1.29E+03	5.10E+01	2.56E+02	1.11E+02	4.25E+00	8.46E+02	83.85		8.616	9.696	1.753	0.069	10.800	5.255	1.867	0.070
1452	7.79E+03	7.14E+03	1.32E+03	6.43E+01	1.96E+02	1.42E+02	3.79E+00	7.54E+02	74.71		11.377	10.550	1.844	0.070	11.607	5.672	1.964	0.071
1453	7.79E+03	6.79E+03	1.25E+03	6.37E+01	2.61E+02	1.67E+01	3.66E+00	7.29E+02	72.23		12.178	10.794	1.868	0.070	11.837	5.793	1.992	0.072
1454	7.79E+03	6.71E+03	1.26E+03	3.41E+01	3.02E+02	1.06E+02	4.35E+00	8.66E+02	85.88		8.044	9.517	1.733	0.069	10.630	5.169	1.847	0.070
1455	7.79E+03	8.03E+03	1.28E+03	4.25E+01	2.41E+02	8.31E+02	4.65E+00	9.25E+02	91.72		6.484	9.023	1.676	0.069	10.161	4.936	1.791	0.070
1456	7.79E+03	6.94E+03	1.28E+03	3.72E+01	2.29E+02	3.57E+01	4.85E+00	9.66E+02	95.75		5.482	8.702	1.636	0.068	9.854	4.787	1.755	0.069
1457	7.79E+03	7.79E+03	1.26E+03	3.30E+01	2.98E+02	1.43E+02	4.44E+00	8.83E+02	87.49		7.601	9.377	1.718	0.069	10.498	5.103	1.831	0.070
1458	7.79E+03	8.17E+03	1.26E+03	1.54E+01	1.19E+02	5.83E+01	5.15E+00	1.03E+03	101.61		4.128	8.260	1.578	0.068	9.430	4.586	1.707	0.069
1459	7.79E+03	8.11E+03	1.28E+03	4.71E+01	3.38E+02	1.63E+02	3.44E+00	6.85E+02	67.88		13.639	11.239	1.911	0.071	12.254	6.015	2.043	0.072
1460	7.79E+03	8.27E+03	1.26E+03	2.94E+00	2.86E+01	7.78E+01	5.09E+00	1.01E+03	100.38		4.403	8.351	1.590	0.068	9.517	4.626	1.717	0.069
1461	7.79E+03	7.81E+03	1.26E+03	4.13E+01	2.94E+02	5.71E+01	4.20E+00	8.36E+02	82.84		8.907	9.787	1.763	0.069	10.886	5.299	1.877	0.070
1462	7.80E+03	6.50E+03	1.29E+03	2.62E+01	3.06E+02	6.67E+01	4.58E+00	9.12E+02	90.40		6.827	9.132	1.689	0.069	10.265	4.987	1.804	0.070
1463	7.80E+03	7.86E+03	1.26E+03	6.39E+01	2.81E+02	3.13E+01	3.44E+00	6.85E+02	67.90		13.633	11.237	1.911	0.071	12.252	6.014	2.042	0.072
1464	7.80E+03	7.84E+03	1.26E+03	6.38E+01	2.80E+02	7.86E+01	3.46E+00	6.88E+02	68.21		13.527	11.205	1.907	0.071	12.222	5.998	2.039	0.072
1465	7.80E+03	8.17E+03	1.26E+03	2.02E+01	1.20E+02	1.56E+02	5.12E+00	1.02E+03	100.91		4.283	8.311	1.585	0.068	9.479	4.609	1.712	0.069
1466	7.80E+03	7.91E+03	1.26E+03	6.39E+01	2.59E+02	1.17E+02	3.67E+00	7.30E+02	72.40		12.123	10.778	1.866	0.070	11.821	5.785	1.990	0.071
1467	7.80E+03	6.77E+03	1.25E+03	2.72E+01	2.00E+02	0.00E+00	5.12E+00	1.02E+03	101.09		4.243	8.298	1.583	0.068	9.466	4.603	1.711	0.069
1468	7.80E+03	7.89E+03	1.26E+03	2.18E+01	2.70E+02	0.00E+00	4.95E+00	9.84E+02	97.57		5.049	8.562	1.618	0.068	9.719	4.722	1.740	0.069
1469	7.80E+03	6.93E+03	1.28E+03	3.98E+01	2.17E+02	6.00E+01	4.81E+00	9.58E+02	94.93		5.681	8.766	1.644	0.069	9.915	4.816	1.763	0.069
1470	7.80E+03	6.59E+03	1.28E+03	2.83E+01	3.38E+02	1.92E+02	4.33E+00	8.61E+02	85.34		8.197	9.565	1.739	0.069	10.676	5.192	1.852	0.070
1471	7.80E+03	8.31E+03	1.26E+03	3.39E-02	7.03E-01	0.00E+00	5.13E+00	1.02E+03	101.24		4.210	8.287	1.582	0.068	9.456	4.598	1.710	0.069
1472	7.80E+03	6.51E+03	1.29E+03	2.75E+01	3.10E+02	9.38E+01	4.51E+00	8.97E+02	88.88		7.229	9.260	1.704	0.069	10.386	5.047	1.818	0.070
1473	7.80E+03	6.78E+03	1.25E+03	4.37E+01	1.97E+02	3.33E+01	4.71E+00	9.37E+02	92.92		6.179	8.926	1.664	0.069	10.068	4.890	1.780	0.070
1474	7.80E+03	6.66E+03	1.27E+03	3.10E+01	3.04E+02	1.75E+02	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
1475	7.80E+03	7.14E+03	1.32E+03	7.60E+01	1.86E+02	6.71E+02	3.10E+00	6.16E+02	61.08		16.064	11.969	1.978	0.071	12.936	6.384	2.127	0.073
1476	7.80E+03	6.73E+03	1.26E+03	3.12E+01	3.15E+02	2.50E+01	4.33E+00	8.62E+02	85.42		8.175	9.558	1.738	0.069	10.669	5.189	1.851	0.070
1477	7.80E+03	6.77E+03	1.25E+03	3.90E+01	2.65E+02	1.67E+01	4.58E+00	9.12E+02	90.40		6.827	9.132	1.689	0.069	10.265	4.987	1.804	0.070
1478	7.80E+03	8.33E+03	1.26E+03	2.63E-02	5.43E-01	1.00E+02	5.13E+00	1.02E+03	101.24		4.210	8.287	1.582	0.068	9.456	4.598	1.710	0.069
1479	7.80E+03	8.01E+03	1.28E+03	3.87E+01	2.36E+02	2.67E+02	4.78E+00	9.52E+02	94.37		5.819	8.810	1.650	0.069	9.958	4.837	1.768	0.069
1480	7.80E+03	7.09E+03	1.30E+03	2.99E+01	2.10E+02	2.79E+02	5.06E+00	1.01E+03	99.90		4.510	8.386	1.595	0.068	9.550	4.642	1.720	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1481	7.81E+03	6.85E+03	1.26E+03	2.87E+01	2.46E+02	7.78E+01	4.97E+00	9.88E+02	97.99		4.949	8.529	1.614	0.068	9.688	4.707	1.736	0.069
1482	7.81E+03	6.93E+03	1.28E+03	4.13E+01	2.04E+02	4.17E+01	4.78E+00	9.52E+02	94.36		5.821	8.811	1.650	0.069	9.958	4.837	1.768	0.069
1483	7.81E+03	6.52E+03	1.29E+03	2.99E+01	3.00E+02	4.29E+01	4.52E+00	8.99E+02	89.10		7.169	9.241	1.702	0.069	10.368	5.038	1.816	0.070
1484	7.81E+03	8.12E+03	1.28E+03	4.74E+01	3.37E+02	2.86E+01	3.43E+00	6.83E+02	67.75		13.684	11.252	1.912	0.071	12.266	6.022	2.044	0.072
1485	7.81E+03	8.26E+03	1.26E+03	5.11E-01	5.22E+00	7.14E+01	5.12E+00	1.02E+03	101.09		4.243	8.298	1.583	0.068	9.466	4.603	1.711	0.069
1486	7.81E+03	7.65E+03	1.30E+03	4.65E+01	3.42E+02	2.40E+02	3.46E+00	6.88E+02	68.19		13.533	11.207	1.908	0.071	12.223	5.999	2.039	0.072
1487	7.81E+03	7.72E+03	1.28E+03	4.33E+01	3.15E+02	2.93E+02	3.85E+00	7.67E+02	76.03		10.959	10.422	1.831	0.070	11.486	5.609	1.949	0.071
1488	7.81E+03	6.59E+03	1.28E+03	2.12E+01	3.29E+02	2.25E+02	4.62E+00	9.18E+02	91.05		6.658	9.079	1.682	0.069	10.214	4.962	1.797	0.070
1489	7.81E+03	6.74E+03	1.26E+03	3.34E+01	3.19E+02	1.25E+01	4.21E+00	8.37E+02	83.02		8.854	9.770	1.762	0.069	10.871	5.291	1.875	0.070
1490	7.81E+03	8.32E+03	1.26E+03	9.53E-02	1.08E+00	5.71E+01	5.13E+00	1.02E+03	101.22		4.214	8.289	1.582	0.068	9.457	4.599	1.710	0.069
1491	7.81E+03	6.68E+03	1.27E+03	4.61E+01	2.86E+02	5.83E+01	4.13E+00	8.22E+02	81.48		9.303	9.910	1.777	0.070	11.003	5.359	1.891	0.071
1492	7.81E+03	7.09E+03	1.30E+03	2.47E+01	1.28E+02	1.25E+02	5.09E+00	1.01E+03	100.45		4.388	8.346	1.590	0.068	9.512	4.624	1.716	0.069
1493	7.81E+03	6.83E+03	1.26E+03	2.99E+01	2.40E+02	8.13E+01	4.97E+00	9.89E+02	98.09		4.926	8.521	1.613	0.068	9.681	4.704	1.735	0.069
1494	7.82E+03	7.99E+03	1.28E+03	3.79E+01	2.39E+02	1.69E+02	4.79E+00	9.54E+02	94.57		5.769	8.794	1.648	0.069	9.942	4.829	1.766	0.069
1495	7.82E+03	6.53E+03	1.29E+03	4.59E+01	2.84E+02	1.67E+01	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
1496	7.82E+03	8.34E+03	1.26E+03	1.56E-01	3.05E+00	6.25E+01	5.13E+00	1.02E+03	101.20		4.219	8.290	1.582	0.068	9.458	4.599	1.710	0.069
1497	7.82E+03	7.66E+03	1.30E+03	4.68E+01	3.40E+02	9.17E+01	3.45E+00	6.86E+02	68.05		13.581	11.221	1.909	0.071	12.237	6.006	2.041	0.072
1498	7.82E+03	7.15E+03	1.32E+03	6.37E+01	1.89E+02	5.64E+02	3.82E+00	7.60E+02	75.30		11.190	10.492	1.838	0.070	11.552	5.644	1.957	0.071
1499	7.82E+03	8.26E+03	1.26E+03	1.21E-01	1.26E+00	1.83E+02	5.13E+00	1.02E+03	101.21		4.216	8.289	1.582	0.068	9.458	4.599	1.710	0.069
1500	7.82E+03	6.54E+03	1.29E+03	2.76E+01	3.25E+02	2.00E+02	4.40E+00	8.76E+02	86.80		7.791	9.437	1.724	0.069	10.555	5.132	1.838	0.070
1501	7.82E+03	7.08E+03	1.30E+03	2.89E+01	1.37E+02	3.92E+02	5.05E+00	1.01E+03	99.72		4.550	8.399	1.597	0.068	9.563	4.648	1.722	0.069
1502	7.82E+03	6.60E+03	1.28E+03	1.95E+01	3.15E+02	7.00E+01	4.73E+00	9.41E+02	93.27		6.092	8.898	1.660	0.069	10.041	4.877	1.777	0.070
1503	7.82E+03	6.93E+03	1.28E+03	3.67E+01	2.07E+02	4.29E+02	4.91E+00	9.78E+02	96.96		5.192	8.608	1.624	0.068	9.764	4.743	1.745	0.069
1504	7.82E+03	6.69E+03	1.27E+03	2.85E+01	3.08E+02	1.88E+01	4.49E+00	8.93E+02	88.55		7.318	9.288	1.707	0.069	10.413	5.061	1.821	0.070
1505	7.82E+03	8.12E+03	1.28E+03	7.60E+01	3.55E+02	2.57E+02	1.96E+00	3.91E+02	38.76		25.209	14.667	2.196	0.073	15.442	7.785	2.440	0.075
1506	7.82E+03	6.81E+03	1.26E+03	3.60E+01	2.47E+02	1.08E+02	4.80E+00	9.56E+02	94.74		5.728	8.781	1.646	0.069	9.930	4.823	1.764	0.069
1507	7.82E+03	6.75E+03	1.26E+03	3.53E+01	3.15E+02	3.57E+01	4.18E+00	8.31E+02	82.37		9.042	9.829	1.768	0.070	10.926	5.319	1.882	0.071
1508	7.82E+03	8.32E+03	1.26E+03	6.21E-02	8.97E-01	7.14E+01	5.13E+00	1.02E+03	101.23		4.212	8.288	1.582	0.068	9.456	4.598	1.710	0.069
1509	7.83E+03	8.34E+03	1.26E+03	1.72E-01	3.37E+00	0.00E+00	5.13E+00	1.02E+03	101.20		4.220	8.291	1.582	0.068	9.459	4.599	1.710	0.069
1510	7.83E+03	7.98E+03	1.28E+03	3.38E+01	2.28E+02	3.25E+02	4.94E+00	9.83E+02	97.45		5.077	8.571	1.619	0.068	9.728	4.726	1.741	0.069
1511	7.83E+03	7.73E+03	1.28E+03	3.87E+01	3.04E+02	3.57E+01	4.18E+00	8.31E+02	82.43		9.027	9.824	1.768	0.070	10.922	5.317	1.881	0.071
1512	7.83E+03	7.07E+03	1.30E+03	2.54E+01	1.78E+02	2.80E+02	5.16E+00	1.03E+03	101.83		4.080	8.245	1.576	0.068	9.414	4.579	1.705	0.069
1513	7.83E+03	6.61E+03	1.28E+03	1.99E+01	3.08E+02	0.00E+00	4.75E+00	9.46E+02	93.74		5.975	8.860	1.656	0.069	10.005	4.860	1.773	0.070
1514	7.83E+03	8.18E+03	1.26E+03	2.47E+01	1.36E+02	6.43E+01	5.12E+00	1.02E+03	100.97		4.271	8.307	1.584	0.068	9.475	4.607	1.712	0.069
1515	7.83E+03	6.75E+03	1.26E+03	3.10E+01	3.04E+02	9.29E+01	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
1516	7.83E+03	8.26E+03	1.26E+03	2.62E-02	3.08E-01	1.88E+01	5.13E+00	1.02E+03	101.24		4.210	8.287	1.582	0.068	9.456	4.598	1.710	0.069
1517	7.83E+03	6.79E+03	1.26E+03	6.37E+01	2.62E+02	4.38E+01	3.65E+00	7.27E+02	72.09		12.224	10.809	1.869	0.070	11.850	5.800	1.993	0.072
1518	7.83E+03	8.35E+03	1.26E+03	1.35E+00	2.71E+01	4.21E+02	5.11E+00	1.02E+03	100.87		4.293	8.315	1.585	0.068	9.482	4.610	1.713	0.069
1519	7.83E+03	7.06E+03	1.30E+03	2.99E+01	2.40E+02	2.21E+02	4.97E+00	9.89E+02	98.09		4.926	8.521	1.613	0.068	9.681	4.704	1.735	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1520	7.83E+03	6.78E+03	1.26E+03	6.37E+01	2.61E+02	1.33E+02	3.66E+00	7.29E+02	72.23		12.178	10.794	1.868	0.070	11.837	5.793	1.992	0.072
1521	7.83E+03	7.66E+03	1.30E+03	4.65E+01	3.42E+02	6.67E+02	3.46E+00	6.88E+02	68.19		13.533	11.207	1.908	0.071	12.223	5.999	2.039	0.072
1522	7.83E+03	8.18E+03	1.26E+03	1.91E+01	1.19E+02	6.00E+01	5.12E+00	1.02E+03	101.09		4.243	8.298	1.583	0.068	9.466	4.603	1.711	0.069
1523	7.83E+03	6.70E+03	1.27E+03	2.62E+01	3.24E+02	3.33E+01	4.46E+00	8.87E+02	87.93		7.484	9.340	1.713	0.069	10.463	5.086	1.827	0.070
1524	7.83E+03	6.76E+03	1.26E+03	4.65E+01	2.88E+02	3.00E+01	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
1525	7.83E+03	6.77E+03	1.26E+03	1.84E+01	2.70E+02	2.14E+02	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
1526	7.83E+03	7.05E+03	1.30E+03	3.60E+01	2.47E+02	1.80E+02	4.80E+00	9.56E+02	94.74		5.728	8.781	1.646	0.069	9.930	4.823	1.764	0.069
1527	7.83E+03	6.76E+03	1.26E+03	4.65E+01	2.88E+02	2.79E+02	4.09E+00	8.13E+02	80.59		9.566	9.991	1.786	0.070	11.080	5.398	1.900	0.071
1528	7.83E+03	8.25E+03	1.26E+03	1.03E+01	5.55E+01	3.50E+02	4.99E+00	9.93E+02	98.43		4.846	8.496	1.609	0.068	9.656	4.692	1.733	0.069
1529	7.83E+03	6.92E+03	1.28E+03	3.26E+01	2.19E+02	2.50E+01	4.99E+00	9.93E+02	98.48		4.835	8.492	1.609	0.068	9.652	4.690	1.732	0.069
1530	7.84E+03	8.33E+03	1.26E+03	2.29E-01	4.52E+00	3.13E+01	5.13E+00	1.02E+03	101.18		4.223	8.292	1.582	0.068	9.460	4.600	1.710	0.069
1531	7.84E+03	8.34E+03	1.26E+03	4.70E+00	8.53E+01	1.00E+03	5.12E+00	1.02E+03	100.95		4.274	8.308	1.585	0.068	9.476	4.607	1.712	0.069
1532	7.84E+03	8.18E+03	1.26E+03	2.91E+01	2.18E+02	1.67E+02	5.06E+00	1.01E+03	99.91		4.509	8.385	1.595	0.068	9.550	4.642	1.720	0.069
1533	7.84E+03	7.04E+03	1.30E+03	3.22E+01	2.45E+02	5.50E+02	4.90E+00	9.75E+02	96.68		5.258	8.629	1.627	0.068	9.784	4.753	1.747	0.069
1534	7.84E+03	8.19E+03	1.26E+03	2.20E+01	1.82E+02	6.43E+01	5.20E+00	1.04E+03	102.61		3.910	8.188	1.568	0.068	9.360	4.554	1.699	0.069
1535	7.84E+03	6.62E+03	1.28E+03	1.99E+01	3.08E+02	6.25E+01	4.75E+00	9.46E+02	93.74		5.975	8.860	1.656	0.069	10.005	4.860	1.773	0.070
1536	7.84E+03	8.20E+03	1.26E+03	1.82E+01	1.51E+02	6.67E+01	5.21E+00	1.04E+03	102.75		3.880	8.179	1.567	0.068	9.351	4.549	1.698	0.069
1537	7.84E+03	7.74E+03	1.28E+03	3.79E+01	3.01E+02	2.08E+02	4.24E+00	8.44E+02	83.67		8.669	9.712	1.755	0.069	10.816	5.263	1.869	0.070
1538	7.84E+03	7.95E+03	1.28E+03	4.71E+01	2.48E+02	1.93E+02	4.45E+00	8.86E+02	87.81		7.515	9.350	1.714	0.069	10.472	5.090	1.828	0.070
1539	7.84E+03	8.25E+03	1.26E+03	2.06E+01	1.11E+02	8.75E+01	5.07E+00	1.01E+03	100.10		4.465	8.371	1.593	0.068	9.536	4.636	1.719	0.069
1540	7.84E+03	7.15E+03	1.32E+03	3.83E+01	1.62E+02	8.33E+01	4.88E+00	9.71E+02	96.23		5.365	8.664	1.631	0.068	9.817	4.769	1.751	0.069
1541	7.84E+03	8.34E+03	1.26E+03	5.26E+00	9.20E+01	1.60E+02	5.12E+00	1.02E+03	101.09		4.245	8.299	1.583	0.068	9.467	4.603	1.711	0.069
1542	7.84E+03	8.22E+03	1.26E+03	1.31E+01	9.98E+01	4.80E+02	5.10E+00	1.01E+03	100.60		4.352	8.334	1.588	0.068	9.501	4.619	1.715	0.069
1543	7.84E+03	6.56E+03	1.29E+03	2.52E+01	3.15E+02	1.67E+02	4.54E+00	9.04E+02	89.64		7.028	9.196	1.696	0.069	10.326	5.017	1.811	0.070
1544	7.84E+03	8.24E+03	1.26E+03	1.91E+01	1.09E+02	2.08E+02	5.08E+00	1.01E+03	100.24		4.434	8.361	1.592	0.068	9.526	4.631	1.718	0.069
1545	7.84E+03	6.56E+03	1.29E+03	2.52E+01	3.15E+02	2.33E+02	4.54E+00	9.04E+02	89.64		7.028	9.196	1.696	0.069	10.326	5.017	1.811	0.070
1546	7.84E+03	7.03E+03	1.30E+03	2.84E+01	2.35E+02	4.17E+01	5.02E+00	9.99E+02	99.08		4.697	8.447	1.603	0.068	9.609	4.670	1.727	0.069
1547	7.84E+03	8.33E+03	1.26E+03	1.39E+01	1.18E+02	9.64E+02	5.15E+00	1.03E+03	101.67		4.114	8.256	1.577	0.068	9.425	4.584	1.706	0.069
1548	7.84E+03	6.71E+03	1.27E+03	2.62E+01	3.24E+02	9.29E+01	4.46E+00	8.87E+02	87.93		7.484	9.340	1.713	0.069	10.463	5.086	1.827	0.070
1549	7.84E+03	7.75E+03	1.28E+03	4.71E+01	2.92E+02	2.83E+02	4.02E+00	8.00E+02	79.28		9.958	10.113	1.798	0.070	11.195	5.457	1.914	0.071
1550	7.85E+03	7.94E+03	1.28E+03	4.68E+01	2.50E+02	7.78E+01	4.45E+00	8.86E+02	87.82		7.513	9.349	1.714	0.069	10.472	5.090	1.828	0.070
1551	7.85E+03	7.77E+03	1.28E+03	6.37E+01	2.79E+02	1.88E+01	3.47E+00	6.91E+02	68.46		13.440	11.178	1.905	0.071	12.197	5.985	2.036	0.072
1552	7.85E+03	6.58E+03	1.29E+03	3.10E+01	3.04E+02	1.88E+01	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
1553	7.85E+03	6.92E+03	1.28E+03	2.75E+01	2.30E+02	1.25E+02	5.06E+00	1.01E+03	99.76		4.543	8.397	1.596	0.068	9.561	4.647	1.722	0.069
1554	7.85E+03	7.02E+03	1.30E+03	2.68E+01	2.32E+02	5.00E+01	5.06E+00	1.01E+03	99.83		4.526	8.391	1.596	0.068	9.555	4.645	1.721	0.069
1555	7.85E+03	7.91E+03	1.28E+03	6.39E+01	2.59E+02	1.79E+02	3.67E+00	7.30E+02	72.40		12.123	10.778	1.866	0.070	11.821	5.785	1.990	0.071
1556	7.85E+03	7.79E+03	1.28E+03	6.37E+01	2.79E+02	2.50E+02	3.47E+00	6.91E+02	68.46		13.440	11.178	1.905	0.071	12.197	5.985	2.036	0.072
1557	7.85E+03	7.81E+03	1.28E+03	5.41E+01	2.85E+02	7.86E+01	3.83E+00	7.61E+02	75.46		11.138	10.476	1.836	0.070	11.538	5.636	1.955	0.071
1558	7.85E+03	6.71E+03	1.27E+03	2.53E+01	3.28E+02	0.00E+00	4.48E+00	8.91E+02	88.30		7.384	9.309	1.710	0.069	10.433	5.070	1.823	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1559	7.85E+03	7.90E+03	1.28E+03	6.39E+01	2.59E+02	2.75E+02	3.67E+00	7.30E+02	72.40		12.123	10.778	1.866	0.070	11.821	5.785	1.990	0.071
1560	7.85E+03	8.13E+03	1.28E+03	5.17E+01	3.42E+02	4.06E+02	3.19E+00	6.34E+02	62.87		15.408	11.772	1.960	0.071	12.752	6.284	2.104	0.072
1561	7.86E+03	6.65E+03	1.28E+03	2.30E+01	2.98E+02	0.00E+00	4.73E+00	9.41E+02	93.29		6.087	8.896	1.660	0.069	10.040	4.877	1.777	0.070
1562	7.86E+03	6.59E+03	1.29E+03	2.95E+01	3.15E+02	6.67E+01	4.39E+00	8.74E+02	86.67		7.827	9.448	1.726	0.069	10.566	5.137	1.839	0.070
1563	7.86E+03	7.84E+03	1.28E+03	6.37E+01	2.79E+02	0.00E+00	3.47E+00	6.91E+02	68.46		13.440	11.178	1.905	0.071	12.197	5.985	2.036	0.072
1564	7.86E+03	7.67E+03	1.30E+03	3.17E+01	3.24E+02	1.08E+02	4.24E+00	8.44E+02	83.69		8.662	9.710	1.755	0.069	10.814	5.262	1.869	0.070
1565	7.86E+03	7.88E+03	1.28E+03	7.60E+01	2.65E+02	2.00E+02	3.00E+00	5.96E+02	59.11		16.796	12.187	1.997	0.071	13.140	6.496	2.152	0.073
1566	7.86E+03	7.02E+03	1.30E+03	2.62E+01	2.09E+02	4.56E+02	5.13E+00	1.02E+03	101.17		4.226	8.293	1.582	0.068	9.461	4.600	1.710	0.069
1567	7.86E+03	7.16E+03	1.32E+03	1.67E+01	1.46E+02	1.40E+02	5.21E+00	1.04E+03	102.76		3.878	8.178	1.567	0.068	9.350	4.549	1.697	0.069
1568	7.86E+03	7.87E+03	1.28E+03	6.37E+01	2.61E+02	7.50E+01	3.66E+00	7.29E+02	72.23		12.178	10.794	1.868	0.070	11.837	5.793	1.992	0.072
1569	7.86E+03	6.72E+03	1.27E+03	2.52E+01	3.15E+02	1.00E+01	4.54E+00	9.04E+02	89.64		7.028	9.196	1.696	0.069	10.326	5.017	1.811	0.070
1570	7.86E+03	6.91E+03	1.28E+03	2.75E+01	2.30E+02	2.86E+02	5.06E+00	1.01E+03	99.76		4.543	8.397	1.596	0.068	9.561	4.647	1.722	0.069
1571	7.86E+03	6.61E+03	1.29E+03	4.82E+01	2.97E+02	5.83E+01	3.91E+00	7.79E+02	77.22		10.589	10.308	1.819	0.070	11.379	5.553	1.936	0.071
1572	7.87E+03	8.14E+03	1.28E+03	3.98E+01	3.23E+02	9.17E+01	3.90E+00	7.77E+02	77.01		10.655	10.328	1.821	0.070	11.398	5.563	1.939	0.071
1573	7.87E+03	6.67E+03	1.28E+03	2.26E+01	3.07E+02	0.00E+00	4.68E+00	9.31E+02	92.33		6.331	8.974	1.670	0.069	10.114	4.913	1.786	0.070
1574	7.87E+03	6.90E+03	1.28E+03	2.75E+01	2.30E+02	7.65E+02	5.06E+00	1.01E+03	99.76		4.543	8.397	1.596	0.068	9.561	4.647	1.722	0.069
1575	7.87E+03	6.73E+03	1.27E+03	2.43E+01	3.04E+02	2.50E+02	4.65E+00	9.26E+02	91.81		6.461	9.016	1.675	0.069	10.154	4.932	1.790	0.070
1576	7.87E+03	7.17E+03	1.32E+03	1.99E+01	1.57E+02	4.67E+02	5.21E+00	1.04E+03	102.69		3.893	8.183	1.567	0.068	9.355	4.551	1.698	0.069
1577	7.87E+03	6.63E+03	1.29E+03	6.41E+01	2.84E+02	3.57E+01	3.40E+00	6.76E+02	67.01		13.941	11.330	1.919	0.071	12.339	6.061	2.053	0.072
1578	7.87E+03	6.89E+03	1.28E+03	3.10E+01	2.36E+02	5.33E+02	4.97E+00	9.89E+02	98.03		4.941	8.527	1.613	0.068	9.686	4.706	1.736	0.069
1579	7.87E+03	6.87E+03	1.28E+03	3.67E+01	2.43E+02	2.08E+02	4.80E+00	9.56E+02	94.73		5.729	8.781	1.646	0.069	9.930	4.823	1.764	0.069
1580	7.88E+03	6.47E+03	1.30E+03	2.73E+01	2.85E+02	5.81E+02	4.72E+00	9.40E+02	93.18		6.114	8.905	1.661	0.069	10.048	4.881	1.778	0.070
1581	7.88E+03	6.85E+03	1.28E+03	4.61E+01	2.54E+02	4.00E+02	4.45E+00	8.85E+02	87.71		7.542	9.358	1.715	0.069	10.480	5.094	1.829	0.070
1582	7.88E+03	7.18E+03	1.32E+03	1.07E+01	1.39E+02	7.40E+02	5.20E+00	1.04E+03	102.66		3.899	8.185	1.568	0.068	9.357	4.552	1.698	0.069
1583	7.88E+03	6.48E+03	1.30E+03	1.96E+01	2.91E+02	3.40E+02	4.86E+00	9.67E+02	95.88		5.449	8.691	1.635	0.068	9.843	4.782	1.754	0.069
1584	7.88E+03	6.49E+03	1.30E+03	2.29E+01	2.88E+02	8.33E+01	4.80E+00	9.56E+02	94.73		5.731	8.782	1.646	0.069	9.930	4.824	1.764	0.069
1585	7.88E+03	6.83E+03	1.28E+03	4.65E+01	2.52E+02	2.00E+02	4.45E+00	8.86E+02	87.80		7.518	9.351	1.714	0.069	10.473	5.091	1.828	0.070
1586	7.88E+03	6.50E+03	1.30E+03	2.32E+01	2.91E+02	5.83E+01	4.78E+00	9.50E+02	94.20		5.860	8.823	1.651	0.069	9.970	4.843	1.769	0.069
1587	7.88E+03	7.20E+03	1.32E+03	7.42E+00	1.30E+02	6.43E+02	5.18E+00	1.03E+03	102.23		3.993	8.216	1.572	0.068	9.387	4.566	1.702	0.069
1588	7.88E+03	6.69E+03	1.28E+03	2.84E+01	3.18E+02	1.25E+02	4.41E+00	8.78E+02	87.06		7.719	9.414	1.722	0.069	10.533	5.121	1.835	0.070
1589	7.88E+03	7.68E+03	1.30E+03	2.99E+01	3.21E+02	1.58E+02	4.34E+00	8.63E+02	85.57		8.132	9.544	1.737	0.069	10.657	5.183	1.850	0.070
1590	7.88E+03	7.01E+03	1.30E+03	2.87E+01	2.04E+02	3.33E+02	5.10E+00	1.01E+03	100.52		4.372	8.340	1.589	0.068	9.507	4.622	1.715	0.069
1591	7.88E+03	6.50E+03	1.30E+03	1.83E+01	3.00E+02	3.33E+01	4.83E+00	9.62E+02	95.37		5.573	8.731	1.640	0.068	9.882	4.800	1.759	0.069
1592	7.88E+03	7.21E+03	1.32E+03	4.07E+00	7.15E+01	6.40E+02	5.11E+00	1.02E+03	100.71		4.328	8.326	1.587	0.068	9.493	4.615	1.714	0.069
1593	7.88E+03	6.65E+03	1.29E+03	5.02E+01	3.04E+02	3.57E+01	3.73E+00	7.43E+02	73.62		11.727	10.657	1.854	0.070	11.707	5.725	1.976	0.071
1594	7.89E+03	6.82E+03	1.28E+03	3.67E+01	2.43E+02	3.00E+01	4.80E+00	9.56E+02	94.73		5.729	8.781	1.646	0.069	9.930	4.823	1.764	0.069
1595	7.89E+03	6.51E+03	1.30E+03	1.67E+01	3.04E+02	6.25E+00	4.85E+00	9.66E+02	95.78		5.475	8.699	1.636	0.068	9.851	4.785	1.755	0.069
1596	7.89E+03	7.23E+03	1.32E+03	3.23E+00	5.70E+01	5.50E+02	5.10E+00	1.01E+03	100.61		4.350	8.333	1.588	0.068	9.500	4.619	1.715	0.069
1597	7.89E+03	6.52E+03	1.30E+03	1.78E+01	3.09E+02	6.43E+01	4.81E+00	9.56E+02	94.81		5.710	8.775	1.645	0.069	9.924	4.821	1.764	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1598	7.89E+03	6.67E+03	1.29E+03	5.71E+01	3.46E+02	1.21E+02	2.89E+00	5.74E+02	56.92		17.631	12.436	2.018	0.071	13.372	6.623	2.181	0.073
1599	7.89E+03	8.15E+03	1.28E+03	3.49E+01	3.05E+02	1.79E+02	4.30E+00	8.55E+02	84.80		8.346	9.611	1.744	0.069	10.720	5.215	1.857	0.070
1600	7.90E+03	6.81E+03	1.28E+03	3.60E+01	2.47E+02	2.50E+02	4.80E+00	9.56E+02	94.74		5.728	8.781	1.646	0.069	9.930	4.823	1.764	0.069
1601	7.90E+03	6.73E+03	1.28E+03	1.84E+01	2.70E+02	1.64E+02	5.00E+00	9.95E+02	98.60		4.807	8.483	1.608	0.068	9.644	4.686	1.731	0.069
1602	7.90E+03	6.56E+03	1.30E+03	4.55E+01	2.80E+02	1.43E+02	4.22E+00	8.40E+02	83.27		8.784	9.748	1.759	0.069	10.850	5.281	1.873	0.070
1603	7.90E+03	7.01E+03	1.30E+03	2.62E+01	2.05E+02	4.92E+02	5.13E+00	1.02E+03	101.27		4.203	8.285	1.581	0.068	9.453	4.597	1.709	0.069
1604	7.90E+03	6.75E+03	1.28E+03	7.17E+01	2.64E+02	3.44E+02	3.24E+00	6.44E+02	63.83		15.064	11.668	1.951	0.071	12.656	6.232	2.092	0.072
1605	7.90E+03	6.57E+03	1.30E+03	2.60E+01	2.98E+02	1.57E+02	4.65E+00	9.25E+02	91.68		6.496	9.027	1.676	0.069	10.164	4.938	1.792	0.070
1606	7.91E+03	6.79E+03	1.28E+03	4.59E+01	2.56E+02	1.67E+02	4.44E+00	8.84E+02	87.61		7.571	9.368	1.716	0.069	10.489	5.098	1.830	0.070
1607	7.91E+03	6.77E+03	1.28E+03	7.60E+01	2.66E+02	2.57E+02	2.99E+00	5.95E+02	58.94		16.862	12.207	1.999	0.071	13.159	6.506	2.154	0.073
1608	7.91E+03	7.69E+03	1.30E+03	2.48E+01	3.08E+02	8.75E+01	4.60E+00	9.16E+02	90.84		6.713	9.096	1.685	0.069	10.230	4.970	1.799	0.070
1609	7.91E+03	7.25E+03	1.32E+03	2.42E+00	4.27E+01	6.50E+02	5.10E+00	1.02E+03	100.65		4.341	8.331	1.588	0.068	9.497	4.617	1.714	0.069
1610	7.91E+03	6.59E+03	1.30E+03	2.18E+01	3.04E+02	1.88E+01	4.72E+00	9.40E+02	93.17		6.116	8.905	1.661	0.069	10.049	4.881	1.778	0.070
1611	7.91E+03	8.16E+03	1.28E+03	2.42E+01	3.15E+02	5.50E+02	4.58E+00	9.11E+02	90.31		6.851	9.140	1.690	0.069	10.272	4.991	1.804	0.070
1612	7.92E+03	7.26E+03	1.32E+03	2.82E+00	4.98E+01	4.50E+02	5.10E+00	1.01E+03	100.62		4.349	8.333	1.588	0.068	9.500	4.618	1.715	0.069
1613	7.92E+03	7.00E+03	1.30E+03	2.28E+01	2.10E+02	7.17E+02	5.17E+00	1.03E+03	101.99		4.046	8.233	1.574	0.068	9.404	4.574	1.704	0.069
1614	7.93E+03	6.62E+03	1.30E+03	2.80E+01	2.90E+02	1.08E+02	4.66E+00	9.28E+02	91.96		6.424	9.004	1.673	0.069	10.143	4.927	1.789	0.070
1615	7.93E+03	6.50E+03	1.31E+03	5.06E+01	2.60E+02	6.00E+01	4.23E+00	8.42E+02	83.51		8.715	9.727	1.757	0.069	10.830	5.270	1.870	0.070
1616	7.93E+03	8.05E+03	1.30E+03	6.35E+01	2.65E+02	3.00E+02	3.63E+00	7.23E+02	71.68		12.361	10.850	1.873	0.070	11.889	5.821	1.998	0.072
1617	7.93E+03	6.50E+03	1.31E+03	4.59E+01	2.84E+02	6.00E+01	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
1618	7.93E+03	8.17E+03	1.28E+03	1.96E+01	3.39E+02	2.25E+02	4.64E+00	9.24E+02	91.63		6.509	9.031	1.677	0.069	10.169	4.940	1.792	0.070
1619	7.93E+03	6.51E+03	1.31E+03	6.36E+01	2.77E+02	5.00E+01	3.50E+00	6.97E+02	69.13		13.214	11.110	1.898	0.071	12.133	5.951	2.028	0.072
1620	7.93E+03	7.69E+03	1.30E+03	1.61E+01	1.96E+02	6.00E+02	5.23E+00	1.04E+03	103.22		3.779	8.145	1.562	0.068	9.318	4.534	1.694	0.069
1621	7.93E+03	8.03E+03	1.30E+03	2.80E+01	2.50E+02	3.07E+02	4.96E+00	9.87E+02	97.81		4.991	8.543	1.616	0.068	9.701	4.714	1.738	0.069
1622	7.93E+03	8.01E+03	1.30E+03	3.02E+01	2.50E+02	2.50E+02	4.92E+00	9.79E+02	97.01		5.181	8.604	1.624	0.068	9.760	4.742	1.745	0.069
1623	7.93E+03	6.52E+03	1.31E+03	2.99E+01	3.00E+02	2.58E+02	4.52E+00	8.99E+02	89.10		7.169	9.241	1.702	0.069	10.368	5.038	1.816	0.070
1624	7.93E+03	7.73E+03	1.30E+03	3.53E+01	2.89E+02	1.50E+02	4.46E+00	8.87E+02	87.94		7.480	9.339	1.713	0.069	10.462	5.085	1.827	0.070
1625	7.93E+03	8.06E+03	1.30E+03	2.13E+01	3.17E+02	1.33E+02	4.66E+00	9.27E+02	91.95		6.427	9.005	1.674	0.069	10.143	4.927	1.789	0.070
1626	7.93E+03	7.73E+03	1.30E+03	1.52E+01	1.59E+02	4.17E+01	5.23E+00	1.04E+03	103.17		3.791	8.149	1.563	0.068	9.322	4.536	1.694	0.069
1627	7.93E+03	8.00E+03	1.30E+03	2.46E+01	2.41E+02	3.00E+01	5.06E+00	1.01E+03	99.81		4.532	8.393	1.596	0.068	9.557	4.646	1.721	0.069
1628	7.93E+03	7.74E+03	1.30E+03	3.55E+01	2.91E+02	7.50E+01	4.44E+00	8.84E+02	87.59		7.576	9.369	1.717	0.069	10.491	5.099	1.830	0.070
1629	7.93E+03	7.26E+03	1.32E+03	8.86E+00	1.56E+02	2.23E+02	5.22E+00	1.04E+03	102.93		3.841	8.166	1.565	0.068	9.338	4.544	1.696	0.069
1630	7.93E+03	8.06E+03	1.30E+03	2.49E+01	3.30E+02	2.07E+02	4.48E+00	8.92E+02	88.45		7.344	9.296	1.708	0.069	10.421	5.064	1.822	0.070
1631	7.94E+03	7.00E+03	1.30E+03	1.92E+01	2.15E+02	8.50E+02	5.19E+00	1.03E+03	102.44		3.947	8.201	1.570	0.068	9.372	4.559	1.700	0.069
1632	7.94E+03	7.99E+03	1.30E+03	2.62E+01	2.45E+02	1.17E+02	5.02E+00	9.99E+02	98.99		4.718	8.454	1.604	0.068	9.616	4.673	1.728	0.069
1633	7.94E+03	7.73E+03	1.30E+03	1.43E+01	1.23E+02	1.43E+01	5.17E+00	1.03E+03	101.93		4.059	8.238	1.575	0.068	9.408	4.576	1.704	0.069
1634	7.94E+03	7.75E+03	1.30E+03	3.51E+01	2.88E+02	4.29E+01	4.47E+00	8.90E+02	88.25		7.397	9.313	1.710	0.069	10.437	5.072	1.824	0.070
1635	7.94E+03	6.65E+03	1.30E+03	4.55E+01	2.80E+02	7.69E+02	4.22E+00	8.40E+02	83.27		8.784	9.748	1.759	0.069	10.850	5.281	1.873	0.070
1636	7.94E+03	7.70E+03	1.30E+03	1.48E+01	1.86E+02	2.86E+02	5.24E+00	1.04E+03	103.37		3.748	8.135	1.561	0.068	9.308	4.530	1.693	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1637	7.94E+03	7.97E+03	1.30E+03	3.51E+01	2.52E+02	4.00E+01	4.79E+00	9.54E+02	94.58		5.766	8.793	1.648	0.069	9.941	4.829	1.766	0.069
1638	7.94E+03	7.26E+03	1.32E+03	4.23E+00	1.12E+02	1.00E+02	5.15E+00	1.02E+03	101.59		4.132	8.262	1.578	0.068	9.431	4.586	1.707	0.069
1639	7.94E+03	7.73E+03	1.30E+03	1.41E+01	1.17E+02	7.14E+00	5.15E+00	1.02E+03	101.60		4.131	8.262	1.578	0.068	9.431	4.586	1.707	0.069
1640	7.95E+03	8.18E+03	1.28E+03	1.38E+01	3.24E+02	1.75E+02	4.86E+00	9.67E+02	95.82		5.464	8.696	1.635	0.068	9.848	4.784	1.755	0.069
1641	7.95E+03	7.27E+03	1.32E+03	4.23E+00	1.12E+02	5.00E+01	5.15E+00	1.02E+03	101.59		4.132	8.262	1.578	0.068	9.431	4.586	1.707	0.069
1642	7.95E+03	7.77E+03	1.30E+03	4.56E+01	2.81E+02	1.00E+02	4.21E+00	8.37E+02	82.97		8.869	9.775	1.762	0.069	10.875	5.293	1.876	0.070
1643	7.95E+03	7.70E+03	1.30E+03	1.27E+01	1.45E+02	7.50E+01	5.22E+00	1.04E+03	102.89		3.849	8.168	1.565	0.068	9.341	4.545	1.696	0.069
1644	7.95E+03	7.28E+03	1.32E+03	3.29E+00	8.30E+01	4.29E+01	5.12E+00	1.02E+03	101.04		4.255	8.302	1.584	0.068	9.470	4.605	1.711	0.069
1645	7.95E+03	7.95E+03	1.30E+03	6.35E+01	2.64E+02	4.58E+02	3.64E+00	7.24E+02	71.78		12.326	10.840	1.872	0.070	11.879	5.816	1.997	0.072
1646	7.95E+03	7.89E+03	1.30E+03	1.19E+01	2.70E+02	1.50E+02	5.08E+00	1.01E+03	100.14		4.457	8.369	1.593	0.068	9.534	4.634	1.719	0.069
1647	7.95E+03	7.88E+03	1.30E+03	7.60E+01	2.67E+02	8.33E+01	2.98E+00	5.94E+02	58.88		16.885	12.214	1.999	0.071	13.165	6.509	2.155	0.073
1648	7.95E+03	7.72E+03	1.30E+03	1.92E+01	1.65E+02	7.14E+01	5.22E+00	1.04E+03	102.94		3.839	8.165	1.565	0.068	9.337	4.543	1.696	0.069
1649	7.95E+03	7.80E+03	1.30E+03	1.13E+01	2.70E+02	1.56E+02	5.08E+00	1.01E+03	100.24		4.434	8.361	1.592	0.068	9.526	4.631	1.718	0.069
1650	7.95E+03	6.54E+03	1.31E+03	2.02E+01	3.06E+02	0.00E+00	4.76E+00	9.46E+02	93.82		5.956	8.854	1.655	0.069	10.000	4.857	1.772	0.070
1651	7.95E+03	7.71E+03	1.30E+03	1.33E+01	1.46E+02	4.17E+01	5.22E+00	1.04E+03	102.90		3.848	8.168	1.565	0.068	9.340	4.545	1.696	0.069
1652	7.95E+03	7.94E+03	1.30E+03	5.34E+01	2.61E+02	3.75E+02	4.11E+00	8.18E+02	81.08		9.419	9.946	1.781	0.070	11.037	5.376	1.895	0.071
1653	7.95E+03	7.91E+03	1.30E+03	7.60E+01	2.67E+02	7.50E+02	2.98E+00	5.93E+02	58.83		16.903	12.220	2.000	0.071	13.170	6.512	2.155	0.073
1654	7.95E+03	7.86E+03	1.30E+03	7.60E+01	2.67E+02	2.92E+02	2.98E+00	5.94E+02	58.88		16.885	12.214	1.999	0.071	13.165	6.509	2.155	0.073
1655	7.95E+03	7.30E+03	1.32E+03	1.42E+00	5.26E+01	5.58E+02	5.12E+00	1.02E+03	100.97		4.270	8.307	1.584	0.068	9.475	4.607	1.712	0.069
1656	7.95E+03	6.68E+03	1.30E+03	3.86E+01	2.90E+02	1.43E+01	4.35E+00	8.65E+02	85.72		8.090	9.531	1.735	0.069	10.644	5.176	1.848	0.070
1657	7.95E+03	7.72E+03	1.30E+03	1.77E+01	2.04E+02	6.25E+01	5.22E+00	1.04E+03	102.95		3.837	8.164	1.565	0.068	9.337	4.543	1.696	0.069
1658	7.95E+03	7.82E+03	1.30E+03	7.60E+01	2.73E+02	3.33E+01	2.93E+00	5.83E+02	57.75		17.312	12.342	2.010	0.071	13.284	6.575	2.170	0.073
1659	7.95E+03	7.84E+03	1.30E+03	1.25E+01	2.70E+02	1.00E+01	5.07E+00	1.01E+03	100.01		4.485	8.377	1.594	0.068	9.542	4.639	1.719	0.069
1660	7.95E+03	6.99E+03	1.30E+03	1.85E+01	2.22E+02	4.60E+02	5.18E+00	1.03E+03	102.28		3.983	8.213	1.571	0.068	9.384	4.564	1.701	0.069
1661	7.96E+03	7.32E+03	1.32E+03	3.55E-01	1.32E+01	2.00E+02	5.13E+00	1.02E+03	101.14		4.231	8.294	1.583	0.068	9.462	4.601	1.710	0.069
1662	7.96E+03	8.09E+03	1.30E+03	2.44E+01	3.17E+02	3.79E+02	4.56E+00	9.07E+02	89.92		6.951	9.172	1.694	0.069	10.303	5.006	1.808	0.070
1663	7.96E+03	6.55E+03	1.31E+03	1.78E+01	3.09E+02	7.50E+01	4.81E+00	9.56E+02	94.81		5.710	8.775	1.645	0.069	9.924	4.821	1.764	0.069
1664	7.96E+03	7.34E+03	1.32E+03	8.88E-02	3.29E+00	1.00E+01	5.13E+00	1.02E+03	101.22		4.214	8.289	1.582	0.068	9.457	4.599	1.710	0.069
1665	7.96E+03	6.70E+03	1.30E+03	3.10E+01	3.04E+02	2.58E+02	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
1666	7.96E+03	8.20E+03	1.28E+03	1.46E+01	3.10E+02	3.60E+02	4.88E+00	9.71E+02	96.29		5.351	8.659	1.631	0.068	9.813	4.767	1.751	0.069
1667	7.97E+03	7.35E+03	1.32E+03	1.78E-02	6.58E-01	3.33E+02	5.13E+00	1.02E+03	101.24		4.209	8.287	1.582	0.068	9.455	4.598	1.710	0.069
1668	7.97E+03	8.10E+03	1.30E+03	2.68E+01	3.22E+02	1.36E+02	4.44E+00	8.85E+02	87.69		7.549	9.361	1.716	0.069	10.482	5.095	1.829	0.070
1669	7.97E+03	6.56E+03	1.31E+03	1.59E+01	3.24E+02	3.70E+02	4.80E+00	9.55E+02	94.69		5.740	8.785	1.646	0.069	9.933	4.825	1.765	0.069
1670	7.97E+03	6.73E+03	1.30E+03	4.61E+01	2.86E+02	3.58E+02	4.13E+00	8.22E+02	81.48		9.303	9.910	1.777	0.070	11.003	5.359	1.891	0.071
1671	7.97E+03	6.99E+03	1.30E+03	1.66E+01	2.28E+02	1.12E+03	5.18E+00	1.03E+03	102.19		4.002	8.219	1.572	0.068	9.390	4.567	1.702	0.069
1672	7.98E+03	6.75E+03	1.30E+03	6.36E+01	2.78E+02	7.86E+01	3.50E+00	6.96E+02	69.00		13.258	11.123	1.900	0.071	12.145	5.957	2.029	0.072
1673	7.98E+03	8.21E+03	1.28E+03	1.56E+01	2.97E+02	1.35E+02	4.91E+00	9.78E+02	96.91		5.203	8.611	1.624	0.068	9.767	4.745	1.745	0.069
1674	7.98E+03	6.78E+03	1.30E+03	1.59E+01	2.70E+02	2.71E+02	5.03E+00	1.00E+03	99.26		4.656	8.433	1.601	0.068	9.596	4.664	1.726	0.069
1675	7.98E+03	6.47E+03	1.32E+03	4.56E+01	2.81E+02	3.50E+02	4.21E+00	8.37E+02	82.97		8.869	9.775	1.762	0.069	10.875	5.293	1.876	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1676	7.98E+03	8.10E+03	1.30E+03	2.95E+01	3.32E+02	9.29E+01	4.29E+00	8.55E+02	84.72		8.370	9.619	1.745	0.069	10.727	5.218	1.858	0.070
1677	7.99E+03	6.98E+03	1.30E+03	1.84E+01	1.87E+02	6.25E+02	5.23E+00	1.04E+03	103.13		3.798	8.152	1.563	0.068	9.325	4.537	1.695	0.069
1678	7.99E+03	6.81E+03	1.30E+03	6.36E+01	2.63E+02	3.93E+02	3.65E+00	7.25E+02	71.92		12.282	10.826	1.871	0.070	11.867	5.809	1.995	0.072
1679	7.99E+03	6.48E+03	1.32E+03	1.90E+01	3.01E+02	1.90E+02	4.81E+00	9.58E+02	94.93		5.680	8.766	1.644	0.069	9.915	4.816	1.763	0.069
1680	7.99E+03	8.22E+03	1.28E+03	1.56E+01	3.33E+02	8.42E+02	4.78E+00	9.52E+02	94.39		5.813	8.808	1.649	0.069	9.956	4.836	1.767	0.069
1681	8.00E+03	6.83E+03	1.30E+03	8.29E+01	2.69E+02	3.61E+02	2.59E+00	5.15E+02	51.07		19.937	13.121	2.076	0.072	14.009	6.976	2.260	0.074
1682	8.00E+03	6.97E+03	1.30E+03	1.95E+01	1.74E+02	7.20E+02	5.22E+00	1.04E+03	103.00		3.826	8.161	1.564	0.068	9.333	4.541	1.696	0.069
1683	8.00E+03	8.11E+03	1.30E+03	1.37E+01	0.00E+00	3.33E+02	4.82E+00	9.58E+02	95.01		5.662	8.760	1.643	0.069	9.909	4.813	1.762	0.069
1684	8.00E+03	6.49E+03	1.32E+03	1.60E+01	3.21E+02	2.17E+02	4.81E+00	9.56E+02	94.82		5.708	8.774	1.645	0.069	9.923	4.820	1.764	0.069
1685	8.00E+03	6.96E+03	1.30E+03	1.32E+01	1.14E+02	3.14E+02	5.14E+00	1.02E+03	101.48		4.158	8.270	1.579	0.068	9.439	4.590	1.708	0.069
1686	8.00E+03	8.22E+03	1.28E+03	4.40E+00	0.00E+00	3.25E+02	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
1687	8.01E+03	6.86E+03	1.30E+03	6.35E+01	2.74E+02	1.51E+03	3.54E+00	7.05E+02	69.88		12.959	11.032	1.891	0.070	12.060	5.912	2.019	0.072
1688	8.01E+03	8.11E+03	1.30E+03	2.63E+01	4.25E+01	6.00E+01	4.49E+00	8.94E+02	88.62		7.296	9.281	1.706	0.069	10.407	5.057	1.820	0.070
1689	8.01E+03	6.50E+03	1.32E+03	1.60E+01	3.21E+02	5.83E+01	4.81E+00	9.56E+02	94.82		5.708	8.774	1.645	0.069	9.923	4.820	1.764	0.069
1690	8.01E+03	8.10E+03	1.30E+03	2.52E+01	4.50E+01	1.58E+02	4.54E+00	9.04E+02	89.64		7.028	9.196	1.696	0.069	10.326	5.017	1.811	0.070
1691	8.01E+03	6.89E+03	1.30E+03	7.60E+01	2.72E+02	4.67E+02	2.94E+00	5.85E+02	57.95		17.237	12.319	2.008	0.071	13.263	6.563	2.167	0.073
1692	8.01E+03	8.22E+03	1.28E+03	4.51E+01	3.56E+02	7.79E+02	3.50E+00	6.96E+02	69.03		13.247	11.120	1.899	0.071	12.142	5.955	2.029	0.072
1693	8.01E+03	6.95E+03	1.30E+03	9.15E+00	1.20E+02	2.25E+02	5.17E+00	1.03E+03	101.95		4.054	8.236	1.575	0.068	9.406	4.575	1.704	0.069
1694	8.02E+03	6.95E+03	1.30E+03	9.15E+00	1.20E+02	3.70E+02	5.17E+00	1.03E+03	101.95		4.054	8.236	1.575	0.068	9.406	4.575	1.704	0.069
1695	8.02E+03	8.10E+03	1.30E+03	2.63E+01	4.75E+01	1.43E+02	4.53E+00	9.01E+02	89.29		7.118	9.225	1.700	0.069	10.353	5.031	1.814	0.070
1696	8.02E+03	6.92E+03	1.30E+03	4.53E+01	2.62E+02	6.89E+02	4.41E+00	8.77E+02	86.98		7.741	9.421	1.723	0.069	10.540	5.124	1.836	0.070
1697	8.02E+03	6.93E+03	1.30E+03	1.77E+01	2.02E+02	1.02E+03	5.22E+00	1.04E+03	102.98		3.830	8.162	1.564	0.068	9.335	4.542	1.696	0.069
1698	8.02E+03	8.22E+03	1.28E+03	1.83E+01	2.46E+02	1.80E+02	5.11E+00	1.02E+03	100.79		4.310	8.320	1.586	0.068	9.487	4.613	1.713	0.069
1699	8.03E+03	6.53E+03	1.32E+03	2.04E+01	2.97E+02	2.08E+02	4.80E+00	9.56E+02	94.78		5.718	8.778	1.646	0.069	9.926	4.822	1.764	0.069
1700	8.03E+03	8.09E+03	1.30E+03	2.52E+01	4.50E+01	2.57E+02	4.54E+00	9.04E+02	89.64		7.028	9.196	1.696	0.069	10.326	5.017	1.811	0.070
1701	8.03E+03	6.54E+03	1.32E+03	2.78E+01	2.88E+02	7.50E+01	4.68E+00	9.31E+02	92.34		6.327	8.973	1.670	0.069	10.113	4.912	1.786	0.070
1702	8.04E+03	8.21E+03	1.28E+03	1.16E+01	2.19E+02	2.90E+02	5.21E+00	1.04E+03	102.75		3.880	8.179	1.567	0.068	9.351	4.549	1.698	0.069
1703	8.04E+03	8.08E+03	1.30E+03	2.62E+01	3.55E+01	0.00E+00	4.46E+00	8.87E+02	87.93		7.484	9.340	1.713	0.069	10.463	5.086	1.827	0.070
1704	8.04E+03	6.56E+03	1.32E+03	8.13E+00	2.70E+02	1.50E+02	5.11E+00	1.02E+03	100.72		4.325	8.325	1.587	0.068	9.492	4.615	1.714	0.069
1705	8.05E+03	8.20E+03	1.28E+03	1.61E+01	1.97E+02	5.42E+02	5.23E+00	1.04E+03	103.20		3.784	8.147	1.562	0.068	9.320	4.535	1.694	0.069
1706	8.05E+03	8.07E+03	1.30E+03	2.74E+01	3.10E+01	4.17E+01	4.39E+00	8.74E+02	86.61		7.842	9.453	1.726	0.069	10.570	5.139	1.840	0.070
1707	8.05E+03	6.50E+03	1.33E+03	1.32E+01	2.70E+02	1.56E+02	5.06E+00	1.01E+03	99.87		4.517	8.388	1.595	0.068	9.553	4.643	1.721	0.069
1708	8.05E+03	8.19E+03	1.28E+03	1.72E+01	1.26E+02	6.92E+02	5.16E+00	1.03E+03	101.83		4.080	8.245	1.576	0.068	9.414	4.579	1.705	0.069
1709	8.05E+03	6.58E+03	1.32E+03	3.18E+01	2.85E+02	7.71E+02	4.61E+00	9.17E+02	90.87		6.705	9.093	1.684	0.069	10.228	4.969	1.799	0.070
1710	8.06E+03	8.18E+03	1.28E+03	1.95E+01	6.13E+01	5.00E+01	4.81E+00	9.58E+02	94.97		5.670	8.762	1.644	0.069	9.912	4.815	1.762	0.069
1711	8.06E+03	6.51E+03	1.33E+03	2.75E+01	3.10E+02	4.44E+01	4.51E+00	8.97E+02	88.88		7.229	9.260	1.704	0.069	10.386	5.047	1.818	0.070
1712	8.06E+03	8.07E+03	1.30E+03	2.99E+01	2.97E+01	2.60E+02	4.28E+00	8.53E+02	84.52		8.425	9.636	1.747	0.069	10.744	5.227	1.860	0.070
1713	8.07E+03	6.62E+03	1.32E+03	2.53E+01	2.90E+02	1.94E+02	4.73E+00	9.42E+02	93.38		6.065	8.889	1.659	0.069	10.033	4.873	1.776	0.070
1714	8.07E+03	8.16E+03	1.28E+03	2.29E+01	5.57E+01	9.29E+01	4.69E+00	9.33E+02	92.48		6.292	8.962	1.668	0.069	10.102	4.907	1.784	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1715	8.07E+03	8.06E+03	1.30E+03	2.92E+01	2.66E+01	6.29E+02	4.30E+00	8.56E+02	84.88		8.324	9.604	1.743	0.069	10.714	5.211	1.857	0.070
1716	8.07E+03	6.53E+03	1.33E+03	2.99E+01	3.00E+02	3.13E+01	4.52E+00	8.99E+02	89.10		7.169	9.241	1.702	0.069	10.368	5.038	1.816	0.070
1717	8.07E+03	7.16E+03	1.32E+03	1.24E+01	2.29E+02	7.17E+02	5.19E+00	1.03E+03	102.38		3.960	8.205	1.570	0.068	9.376	4.561	1.700	0.069
1718	8.07E+03	7.17E+03	1.32E+03	5.40E+00	1.36E+02	3.75E+02	5.18E+00	1.03E+03	102.18		4.003	8.219	1.572	0.068	9.390	4.567	1.702	0.069
1719	8.08E+03	7.14E+03	1.32E+03	1.56E+01	2.43E+02	1.25E+02	5.14E+00	1.02E+03	101.41		4.173	8.275	1.580	0.068	9.444	4.592	1.708	0.069
1720	8.08E+03	7.13E+03	1.32E+03	1.96E+01	2.49E+02	1.00E+02	5.08E+00	1.01E+03	100.29		4.422	8.357	1.591	0.068	9.523	4.629	1.717	0.069
1721	8.08E+03	6.54E+03	1.33E+03	2.92E+01	2.97E+02	7.86E+01	4.57E+00	9.09E+02	90.13		6.898	9.155	1.692	0.069	10.287	4.998	1.806	0.070
1722	8.08E+03	6.47E+03	1.34E+03	3.83E+01	2.88E+02	2.50E+02	4.37E+00	8.70E+02	86.24		7.946	9.486	1.730	0.069	10.601	5.155	1.843	0.070
1723	8.08E+03	6.65E+03	1.32E+03	2.23E+01	2.94E+02	2.93E+02	4.78E+00	9.50E+02	94.22		5.856	8.822	1.651	0.069	9.969	4.842	1.769	0.069
1724	8.08E+03	7.19E+03	1.32E+03	1.71E+01	1.82E+02	7.50E+01	5.23E+00	1.04E+03	103.27		3.768	8.141	1.562	0.068	9.315	4.533	1.693	0.069
1725	8.08E+03	7.12E+03	1.32E+03	2.73E+01	2.56E+02	1.42E+02	4.94E+00	9.82E+02	97.39		5.089	8.575	1.620	0.068	9.732	4.728	1.741	0.069
1726	8.09E+03	8.15E+03	1.28E+03	2.41E+01	5.04E+01	3.31E+02	4.62E+00	9.19E+02	91.10		6.645	9.074	1.682	0.069	10.210	4.960	1.797	0.070
1727	8.09E+03	6.56E+03	1.33E+03	4.57E+01	2.83E+02	1.43E+01	4.19E+00	8.33E+02	82.60		8.976	9.808	1.766	0.069	10.907	5.310	1.880	0.071
1728	8.09E+03	8.05E+03	1.30E+03	3.51E+01	1.84E+01	3.00E+01	4.02E+00	8.00E+02	79.34		9.941	10.108	1.798	0.070	11.190	5.455	1.914	0.071
1729	8.09E+03	6.48E+03	1.34E+03	2.62E+01	3.06E+02	6.00E+01	4.58E+00	9.12E+02	90.40		6.827	9.132	1.689	0.069	10.265	4.987	1.804	0.070
1730	8.09E+03	7.11E+03	1.32E+03	1.67E+01	2.14E+02	7.92E+02	5.21E+00	1.04E+03	102.76		3.878	8.178	1.567	0.068	9.350	4.549	1.697	0.069
1731	8.09E+03	6.58E+03	1.33E+03	3.10E+01	3.04E+02	1.00E+02	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
1732	8.10E+03	6.49E+03	1.34E+03	2.92E+01	2.97E+02	1.13E+02	4.57E+00	9.09E+02	90.13		6.898	9.155	1.692	0.069	10.287	4.998	1.806	0.070
1733	8.10E+03	7.21E+03	1.32E+03	1.23E+01	1.53E+02	5.17E+02	5.23E+00	1.04E+03	103.08		3.809	8.155	1.563	0.068	9.328	4.539	1.695	0.069
1734	8.10E+03	6.68E+03	1.32E+03	2.03E+01	2.96E+02	3.69E+02	4.81E+00	9.58E+02	94.96		5.673	8.763	1.644	0.069	9.913	4.815	1.762	0.069
1735	8.10E+03	6.50E+03	1.34E+03	4.59E+01	2.84E+02	5.00E+01	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
1736	8.10E+03	8.14E+03	1.28E+03	1.89E+01	3.44E+01	2.94E+02	4.70E+00	9.36E+02	92.82		6.206	8.934	1.665	0.069	10.076	4.894	1.781	0.070
1737	8.10E+03	6.60E+03	1.33E+03	3.10E+01	3.04E+02	8.33E+01	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
1738	8.10E+03	6.50E+03	1.34E+03	2.99E+01	3.00E+02	1.14E+02	4.52E+00	8.99E+02	89.10		7.169	9.241	1.702	0.069	10.368	5.038	1.816	0.070
1739	8.11E+03	7.22E+03	1.32E+03	8.15E+00	1.54E+02	1.18E+03	5.21E+00	1.04E+03	102.82		3.865	8.174	1.566	0.068	9.346	4.547	1.697	0.069
1740	8.11E+03	6.51E+03	1.34E+03	2.92E+01	2.97E+02	1.00E+02	4.57E+00	9.09E+02	90.13		6.898	9.155	1.692	0.069	10.287	4.998	1.806	0.070
1741	8.11E+03	8.04E+03	1.30E+03	5.34E+01	8.53E+00	1.50E+02	3.05E+00	6.08E+02	60.24		16.374	12.061	1.986	0.071	13.023	6.431	2.137	0.073
1742	8.11E+03	7.10E+03	1.32E+03	4.51E+01	1.86E+02	5.00E+01	4.66E+00	9.28E+02	91.97		6.422	9.003	1.673	0.069	10.142	4.927	1.789	0.070
1743	8.11E+03	6.61E+03	1.33E+03	4.59E+01	2.84E+02	1.00E+02	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
1744	8.11E+03	6.52E+03	1.34E+03	3.60E+01	2.93E+02	0.00E+00	4.39E+00	8.75E+02	86.70		7.818	9.446	1.725	0.069	10.563	5.136	1.839	0.070
1745	8.11E+03	6.62E+03	1.33E+03	2.66E+01	3.18E+02	2.25E+02	4.47E+00	8.90E+02	88.24		7.398	9.313	1.710	0.069	10.437	5.073	1.824	0.070
1746	8.12E+03	6.71E+03	1.32E+03	2.13E+01	2.91E+02	1.94E+02	4.82E+00	9.58E+02	95.01		5.662	8.760	1.643	0.069	9.909	4.813	1.762	0.069
1747	8.12E+03	8.14E+03	1.28E+03	2.28E+01	1.47E+01	2.36E+02	4.52E+00	9.00E+02	89.26		7.127	9.227	1.700	0.069	10.355	5.032	1.814	0.070
1748	8.12E+03	6.52E+03	1.34E+03	2.92E+01	2.97E+02	3.57E+01	4.57E+00	9.09E+02	90.13		6.898	9.155	1.692	0.069	10.287	4.998	1.806	0.070
1749	8.12E+03	7.26E+03	1.32E+03	1.01E+01	1.11E+02	2.22E+03	5.15E+00	1.02E+03	101.54		4.144	8.265	1.579	0.068	9.435	4.588	1.707	0.069
1750	8.12E+03	7.09E+03	1.32E+03	2.71E+01	1.93E+02	4.08E+02	5.13E+00	1.02E+03	101.24		4.209	8.287	1.582	0.068	9.455	4.598	1.710	0.069
1751	8.13E+03	8.03E+03	1.30E+03	4.12E+01	1.13E+01	4.29E+01	3.71E+00	7.39E+02	73.22		11.856	10.696	1.858	0.070	11.744	5.744	1.981	0.071
1752	8.13E+03	8.14E+03	1.28E+03	1.96E+01	5.75E+00	7.14E+00	4.63E+00	9.21E+02	91.32		6.589	9.057	1.680	0.069	10.193	4.952	1.795	0.070
1753	8.13E+03	6.53E+03	1.34E+03	2.87E+01	2.94E+02	5.00E+01	4.61E+00	9.17E+02	90.89		6.698	9.091	1.684	0.069	10.226	4.968	1.799	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1754	8.13E+03	7.27E+03	1.32E+03	1.38E+01	2.86E+01	1.04E+03	4.84E+00	9.64E+02	95.53		5.534	8.718	1.638	0.068	9.870	4.794	1.757	0.069
1755	8.13E+03	8.14E+03	1.28E+03	1.22E+01	1.10E+01	2.50E+01	4.86E+00	9.68E+02	95.94		5.436	8.687	1.634	0.068	9.839	4.780	1.754	0.069
1756	8.13E+03	6.74E+03	1.32E+03	2.13E+01	2.91E+02	3.57E+01	4.82E+00	9.60E+02	95.14		5.631	8.750	1.642	0.069	9.900	4.809	1.761	0.069
1757	8.13E+03	8.14E+03	1.28E+03	1.79E+01	4.58E+01	2.70E+02	4.78E+00	9.51E+02	94.25		5.848	8.820	1.651	0.069	9.966	4.841	1.769	0.069
1758	8.13E+03	6.55E+03	1.34E+03	2.92E+01	2.97E+02	5.00E+01	4.57E+00	9.09E+02	90.13		6.898	9.155	1.692	0.069	10.287	4.998	1.806	0.070
1759	8.14E+03	7.29E+03	1.32E+03	1.47E+01	8.03E+00	7.90E+02	4.79E+00	9.53E+02	94.45		5.799	8.804	1.649	0.069	9.951	4.834	1.767	0.069
1760	8.14E+03	8.02E+03	1.30E+03	2.62E+01	5.77E+01	1.46E+03	4.61E+00	9.17E+02	90.88		6.702	9.092	1.684	0.069	10.227	4.968	1.799	0.070
1761	8.14E+03	6.56E+03	1.34E+03	2.18E+01	3.04E+02	1.00E+02	4.72E+00	9.40E+02	93.17		6.116	8.905	1.661	0.069	10.049	4.881	1.778	0.070
1762	8.14E+03	6.77E+03	1.32E+03	2.29E+01	2.89E+02	2.11E+02	4.80E+00	9.54E+02	94.61		5.759	8.791	1.647	0.069	9.939	4.828	1.765	0.069
1763	8.14E+03	8.15E+03	1.28E+03	1.50E+01	3.34E+01	4.64E+02	4.82E+00	9.59E+02	95.05		5.651	8.756	1.643	0.069	9.906	4.812	1.761	0.069
1764	8.15E+03	7.08E+03	1.32E+03	1.33E+01	2.12E+02	0.00E+00	5.22E+00	1.04E+03	102.96		3.834	8.163	1.565	0.068	9.336	4.543	1.696	0.069
1765	8.15E+03	7.31E+03	1.32E+03	1.73E+01	7.29E+01	4.00E+02	4.93E+00	9.80E+02	97.18		5.140	8.591	1.622	0.068	9.748	4.736	1.743	0.069
1766	8.15E+03	6.57E+03	1.34E+03	1.99E+01	3.08E+02	2.86E+01	4.75E+00	9.46E+02	93.74		5.975	8.860	1.656	0.069	10.005	4.860	1.773	0.070
1767	8.15E+03	6.80E+03	1.32E+03	1.68E+01	2.99E+02	1.24E+03	4.88E+00	9.70E+02	96.18		5.379	8.668	1.632	0.068	9.822	4.771	1.752	0.069
1768	8.16E+03	8.15E+03	1.28E+03	1.51E+01	1.01E+01	2.58E+02	4.78E+00	9.50E+02	94.21		5.859	8.823	1.651	0.069	9.970	4.843	1.769	0.069
1769	8.16E+03	6.83E+03	1.32E+03	1.24E+01	3.19E+02	7.56E+02	4.91E+00	9.76E+02	96.79		5.232	8.621	1.626	0.068	9.776	4.749	1.746	0.069
1770	8.16E+03	6.59E+03	1.34E+03	2.41E+01	2.97E+02	1.64E+02	4.71E+00	9.38E+02	92.95		6.172	8.923	1.664	0.069	10.066	4.889	1.780	0.070
1771	8.16E+03	7.33E+03	1.32E+03	1.78E+01	1.56E+02	1.42E+02	5.22E+00	1.04E+03	102.94		3.839	8.165	1.565	0.068	9.338	4.543	1.696	0.069
1772	8.16E+03	6.94E+03	1.32E+03	4.54E+01	2.79E+02	1.21E+03	4.23E+00	8.42E+02	83.51		8.715	9.727	1.757	0.069	10.830	5.270	1.870	0.070
1773	8.16E+03	6.96E+03	1.32E+03	1.67E+01	3.04E+02	3.75E+02	4.85E+00	9.66E+02	95.78		5.475	8.699	1.636	0.068	9.851	4.785	1.755	0.069
1774	8.16E+03	6.92E+03	1.32E+03	2.78E+01	2.52E+02	2.86E+02	4.95E+00	9.86E+02	97.72		5.013	8.550	1.617	0.068	9.708	4.717	1.739	0.069
1775	8.16E+03	6.86E+03	1.32E+03	1.67E+01	3.04E+02	3.00E+02	4.85E+00	9.66E+02	95.78		5.475	8.699	1.636	0.068	9.851	4.785	1.755	0.069
1776	8.16E+03	6.90E+03	1.32E+03	9.46E+00	2.70E+02	2.58E+02	5.10E+00	1.01E+03	100.54		4.366	8.339	1.589	0.068	9.505	4.621	1.715	0.069
1777	8.17E+03	8.15E+03	1.28E+03	1.18E+01	1.13E+01	3.56E+02	4.88E+00	9.70E+02	96.20		5.374	8.667	1.632	0.068	9.820	4.770	1.752	0.069
1778	8.17E+03	6.61E+03	1.34E+03	4.54E+01	2.79E+02	6.00E+01	4.23E+00	8.42E+02	83.51		8.715	9.727	1.757	0.069	10.830	5.270	1.870	0.070
1779	8.17E+03	6.98E+03	1.32E+03	2.75E+01	2.86E+02	3.80E+02	4.71E+00	9.37E+02	92.92		6.180	8.926	1.664	0.069	10.068	4.891	1.780	0.070
1780	8.17E+03	7.07E+03	1.32E+03	1.14E+01	2.25E+02	2.14E+01	5.20E+00	1.03E+03	102.55		3.923	8.193	1.569	0.068	9.364	4.556	1.699	0.069
1781	8.17E+03	7.35E+03	1.32E+03	2.10E+01	8.14E+01	1.31E+02	4.91E+00	9.76E+02	96.80		5.231	8.620	1.626	0.068	9.776	4.749	1.746	0.069
1782	8.17E+03	6.50E+03	1.35E+03	3.22E+01	2.87E+02	2.92E+02	4.57E+00	9.10E+02	90.18		6.883	9.150	1.691	0.069	10.282	4.996	1.806	0.070
1783	8.18E+03	7.36E+03	1.32E+03	2.68E+01	8.13E+00	1.03E+03	4.36E+00	8.68E+02	86.06		7.996	9.501	1.732	0.069	10.616	5.162	1.845	0.070
1784	8.18E+03	8.15E+03	1.28E+03	1.97E+00	1.88E+00	3.21E+02	5.10E+00	1.01E+03	100.61		4.350	8.333	1.588	0.068	9.500	4.619	1.715	0.069
1785	8.18E+03	6.51E+03	1.35E+03	2.12E+01	3.01E+02	6.67E+01	4.76E+00	9.47E+02	93.83		5.952	8.853	1.655	0.069	9.998	4.856	1.772	0.070
1786	8.18E+03	6.62E+03	1.34E+03	8.13E+00	2.70E+02	1.67E+01	5.11E+00	1.02E+03	100.72		4.325	8.325	1.587	0.068	9.492	4.615	1.714	0.069
1787	8.18E+03	6.99E+03	1.32E+03	4.52E+01	2.77E+02	4.88E+02	4.26E+00	8.49E+02	84.14		8.534	9.670	1.751	0.069	10.776	5.243	1.864	0.070
1788	8.19E+03	7.06E+03	1.32E+03	1.31E+01	1.56E+02	3.11E+03	5.23E+00	1.04E+03	103.15		3.795	8.150	1.563	0.068	9.323	4.537	1.694	0.069
1789	8.19E+03	7.36E+03	1.32E+03	4.51E+01	4.09E+00	4.00E+02	3.50E+00	6.96E+02	69.04		13.244	11.119	1.899	0.071	12.141	5.955	2.029	0.072
1790	8.19E+03	6.64E+03	1.34E+03	2.73E+01	2.56E+02	2.25E+02	4.94E+00	9.82E+02	97.39		5.089	8.575	1.620	0.068	9.732	4.728	1.741	0.069
1791	8.19E+03	6.53E+03	1.35E+03	2.12E+01	3.01E+02	1.06E+02	4.76E+00	9.47E+02	93.83		5.952	8.853	1.655	0.069	9.998	4.856	1.772	0.070
1792	8.19E+03	8.16E+03	1.28E+03	5.35E+00	5.00E+01	1.45E+03	5.06E+00	1.01E+03	99.92		4.507	8.385	1.595	0.068	9.549	4.642	1.720	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1793	8.19E+03	6.66E+03	1.34E+03	5.65E+01	2.63E+02	4.71E+02	3.97E+00	7.89E+02	78.25		10.272	10.210	1.809	0.070	11.286	5.505	1.925	0.071
1794	8.19E+03	6.65E+03	1.34E+03	3.81E+01	2.71E+02	8.00E+01	4.55E+00	9.06E+02	89.83		6.977	9.180	1.695	0.069	10.310	5.010	1.809	0.070
1795	8.19E+03	6.67E+03	1.34E+03	4.00E+01	2.87E+02	2.50E+02	4.33E+00	8.62E+02	85.41		8.175	9.558	1.738	0.069	10.669	5.189	1.851	0.070
1796	8.20E+03	8.17E+03	1.28E+03	2.01E+01	1.15E+02	3.25E+02	5.10E+00	1.01E+03	100.54		4.367	8.339	1.589	0.068	9.505	4.621	1.715	0.069
1797	8.20E+03	8.19E+03	1.28E+03	3.28E+01	7.28E+01	2.33E+02	4.55E+00	9.06E+02	89.83		6.976	9.180	1.694	0.069	10.310	5.009	1.809	0.070
1798	8.20E+03	6.68E+03	1.34E+03	3.55E+01	2.91E+02	2.71E+02	4.44E+00	8.84E+02	87.59		7.576	9.369	1.717	0.069	10.491	5.099	1.830	0.070
1799	8.20E+03	8.26E+03	1.28E+03	1.88E+01	2.11E+02	1.69E+02	5.20E+00	1.04E+03	102.63		3.906	8.187	1.568	0.068	9.359	4.553	1.699	0.069
1800	8.20E+03	8.28E+03	1.28E+03	1.85E+01	2.83E+02	9.33E+02	4.93E+00	9.80E+02	97.17		5.142	8.592	1.622	0.068	9.748	4.736	1.743	0.069
1801	8.20E+03	7.36E+03	1.32E+03	4.09E+00	0.00E+00	5.60E+02	5.06E+00	1.01E+03	99.83		4.527	8.391	1.596	0.068	9.556	4.645	1.721	0.069
1802	8.20E+03	8.23E+03	1.28E+03	2.26E+01	1.92E+02	6.92E+02	5.19E+00	1.03E+03	102.42		3.952	8.202	1.570	0.068	9.374	4.560	1.700	0.069
1803	8.20E+03	8.21E+03	1.28E+03	4.79E+01	1.78E+02	8.33E+00	4.56E+00	9.07E+02	89.95		6.944	9.169	1.693	0.069	10.300	5.005	1.808	0.070
1804	8.20E+03	7.00E+03	1.32E+03	1.97E+01	2.04E+02	1.11E+02	5.21E+00	1.04E+03	102.71		3.889	8.182	1.567	0.068	9.354	4.551	1.698	0.069
1805	8.20E+03	8.33E+03	1.28E+03	2.70E+01	2.81E+02	4.36E+02	4.76E+00	9.47E+02	93.89		5.936	8.848	1.654	0.069	9.994	4.854	1.772	0.070
1806	8.20E+03	6.55E+03	1.35E+03	2.18E+01	3.04E+02	8.57E+01	4.72E+00	9.40E+02	93.17		6.116	8.905	1.661	0.069	10.049	4.881	1.778	0.070
1807	8.20E+03	8.31E+03	1.28E+03	1.51E+01	2.92E+02	1.28E+03	4.94E+00	9.84E+02	97.55		5.052	8.563	1.618	0.068	9.720	4.723	1.740	0.069
1808	8.20E+03	6.70E+03	1.34E+03	4.01E+01	2.88E+02	1.29E+02	4.31E+00	8.58E+02	85.05		8.276	9.589	1.742	0.069	10.699	5.204	1.855	0.070
1809	8.20E+03	8.35E+03	1.28E+03	5.71E+00	2.70E+02	5.20E+02	5.12E+00	1.02E+03	100.99		4.266	8.306	1.584	0.068	9.473	4.606	1.712	0.069
1810	8.21E+03	7.05E+03	1.32E+03	1.50E+01	1.57E+02	4.86E+02	5.23E+00	1.04E+03	103.14		3.796	8.151	1.563	0.068	9.324	4.537	1.694	0.069
1811	8.21E+03	6.72E+03	1.34E+03	3.22E+01	2.95E+02	1.17E+02	4.49E+00	8.94E+02	88.63		7.296	9.281	1.706	0.069	10.406	5.057	1.820	0.070
1812	8.21E+03	7.35E+03	1.32E+03	4.51E+01	3.56E+02	6.58E+02	3.50E+00	6.96E+02	69.04		13.242	11.118	1.899	0.071	12.141	5.955	2.029	0.072
1813	8.21E+03	8.36E+03	1.28E+03	4.51E+01	2.65E+02	2.70E+02	4.39E+00	8.74E+02	86.65		7.832	9.450	1.726	0.069	10.567	5.138	1.839	0.070
1814	8.21E+03	6.73E+03	1.34E+03	2.99E+01	3.00E+02	1.83E+02	4.52E+00	8.99E+02	89.10		7.169	9.241	1.702	0.069	10.368	5.038	1.816	0.070
1815	8.22E+03	6.58E+03	1.35E+03	2.30E+01	2.98E+02	6.25E+01	4.73E+00	9.41E+02	93.29		6.087	8.896	1.660	0.069	10.040	4.877	1.777	0.070
1816	8.22E+03	6.75E+03	1.34E+03	4.59E+01	2.84E+02	3.36E+02	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
1817	8.22E+03	7.01E+03	1.32E+03	9.44E+00	9.40E+01	1.69E+02	5.11E+00	1.02E+03	100.75		4.319	8.323	1.587	0.068	9.490	4.614	1.713	0.069
1818	8.22E+03	7.05E+03	1.32E+03	1.17E+01	8.51E+01	2.29E+02	5.06E+00	1.01E+03	99.85		4.521	8.389	1.595	0.068	9.554	4.644	1.721	0.069
1819	8.22E+03	8.38E+03	1.28E+03	1.90E+01	2.56E+02	4.50E+02	5.06E+00	1.01E+03	99.85		4.522	8.390	1.595	0.068	9.554	4.644	1.721	0.069
1820	8.22E+03	7.34E+03	1.32E+03	2.67E+01	3.53E+02	1.08E+03	4.36E+00	8.68E+02	86.08		7.989	9.499	1.731	0.069	10.614	5.161	1.845	0.070
1821	8.22E+03	6.76E+03	1.34E+03	4.01E+01	2.88E+02	2.50E+02	4.31E+00	8.58E+02	85.05		8.276	9.589	1.742	0.069	10.699	5.204	1.855	0.070
1822	8.23E+03	7.05E+03	1.32E+03	2.21E+01	1.21E+02	2.42E+02	5.10E+00	1.01E+03	100.60		4.353	8.334	1.588	0.068	9.501	4.619	1.715	0.069
1823	8.23E+03	6.78E+03	1.34E+03	3.22E+01	2.95E+02	2.86E+01	4.49E+00	8.94E+02	88.63		7.296	9.281	1.706	0.069	10.406	5.057	1.820	0.070
1824	8.23E+03	7.01E+03	1.32E+03	2.04E+01	1.71E+02	5.00E+01	5.21E+00	1.04E+03	102.84		3.860	8.172	1.566	0.068	9.344	4.546	1.697	0.069
1825	8.23E+03	7.02E+03	1.32E+03	2.26E+01	1.69E+02	8.33E+01	5.19E+00	1.03E+03	102.44		3.947	8.201	1.570	0.068	9.372	4.559	1.700	0.069
1826	8.23E+03	7.02E+03	1.32E+03	1.72E+01	1.27E+02	9.17E+01	5.16E+00	1.03E+03	101.89		4.068	8.241	1.575	0.068	9.411	4.577	1.704	0.069
1827	8.23E+03	6.59E+03	1.35E+03	1.85E+01	3.12E+02	1.67E+02	4.77E+00	9.50E+02	94.14		5.876	8.829	1.652	0.069	9.975	4.845	1.770	0.070
1828	8.23E+03	7.04E+03	1.32E+03	4.30E+01	1.84E+02	3.33E+02	4.74E+00	9.42E+02	93.43		6.052	8.885	1.659	0.069	10.029	4.871	1.776	0.070
1829	8.23E+03	7.03E+03	1.32E+03	3.53E+01	1.80E+02	2.21E+02	4.97E+00	9.88E+02	97.97		4.955	8.531	1.614	0.068	9.690	4.708	1.736	0.069
1830	8.23E+03	6.79E+03	1.34E+03	2.99E+01	3.00E+02	2.50E+02	4.52E+00	8.99E+02	89.10		7.169	9.241	1.702	0.069	10.368	5.038	1.816	0.070
1831	8.23E+03	8.38E+03	1.28E+03	1.61E+01	1.79E+02	4.29E+01	5.24E+00	1.04E+03	103.33		3.755	8.137	1.561	0.068	9.311	4.531	1.693	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1832	8.24E+03	8.03E+03	1.28E+03	1.68E+01	2.90E+01	9.42E+02	4.75E+00	9.46E+02	93.80		5.959	8.855	1.655	0.069	10.000	4.857	1.773	0.070
1833	8.24E+03	8.01E+03	1.28E+03	7.83E+00	1.31E+01	1.67E+01	4.98E+00	9.91E+02	98.25		4.889	8.509	1.611	0.068	9.669	4.698	1.734	0.069
1834	8.24E+03	8.03E+03	1.28E+03	7.67E+00	1.11E+01	1.00E+02	4.98E+00	9.92E+02	98.31		4.876	8.505	1.611	0.068	9.665	4.697	1.734	0.069
1835	8.24E+03	7.99E+03	1.28E+03	1.51E+01	2.71E+01	4.94E+02	4.80E+00	9.56E+02	94.73		5.729	8.781	1.646	0.069	9.930	4.823	1.764	0.069
1836	8.24E+03	6.50E+03	1.36E+03	3.75E+01	2.83E+02	2.00E+02	4.46E+00	8.88E+02	88.00		7.463	9.334	1.712	0.069	10.457	5.082	1.826	0.070
1837	8.24E+03	7.96E+03	1.28E+03	1.34E+01	2.56E+01	1.00E+02	4.85E+00	9.65E+02	95.64		5.507	8.710	1.637	0.068	9.861	4.790	1.756	0.069
1838	8.24E+03	6.81E+03	1.34E+03	4.59E+01	2.84E+02	5.83E+01	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
1839	8.24E+03	7.34E+03	1.32E+03	4.51E+01	3.58E+00	1.50E+02	3.50E+00	6.97E+02	69.05		13.241	11.118	1.899	0.071	12.140	5.955	2.029	0.072
1840	8.24E+03	8.03E+03	1.28E+03	4.56E+00	1.52E+01	8.33E+01	5.05E+00	1.01E+03	99.69		4.559	8.402	1.597	0.068	9.566	4.650	1.722	0.069
1841	8.24E+03	7.94E+03	1.28E+03	1.30E+01	2.53E+01	2.50E+02	4.86E+00	9.67E+02	95.82		5.464	8.696	1.635	0.068	9.848	4.784	1.755	0.069
1842	8.24E+03	6.50E+03	1.36E+03	1.85E+01	3.12E+02	2.50E+01	4.77E+00	9.50E+02	94.14		5.876	8.829	1.652	0.069	9.975	4.845	1.770	0.070
1843	8.24E+03	7.92E+03	1.28E+03	1.30E+01	2.52E+01	9.33E+02	4.86E+00	9.67E+02	95.86		5.456	8.693	1.635	0.068	9.846	4.783	1.754	0.069
1844	8.25E+03	6.62E+03	1.35E+03	2.78E+01	2.88E+02	4.64E+02	4.68E+00	9.31E+02	92.34		6.327	8.973	1.670	0.069	10.113	4.912	1.786	0.070
1845	8.25E+03	7.90E+03	1.28E+03	1.75E+01	3.41E+01	4.57E+02	4.75E+00	9.44E+02	93.62		6.005	8.870	1.657	0.069	10.015	4.864	1.774	0.070
1846	8.25E+03	6.84E+03	1.34E+03	7.60E+01	2.73E+02	2.86E+01	2.93E+00	5.82E+02	57.71		17.325	12.345	2.011	0.071	13.288	6.577	2.170	0.073
1847	8.25E+03	7.88E+03	1.28E+03	1.45E+01	2.81E+01	3.00E+01	4.82E+00	9.59E+02	95.12		5.635	8.751	1.642	0.069	9.901	4.809	1.761	0.069
1848	8.25E+03	8.38E+03	1.28E+03	8.63E+00	9.20E+01	1.25E+02	5.11E+00	1.02E+03	100.75		4.318	8.323	1.586	0.068	9.490	4.614	1.713	0.069
1849	8.25E+03	6.63E+03	1.35E+03	3.45E+01	2.84E+02	1.08E+02	4.54E+00	9.03E+02	89.50		7.063	9.207	1.698	0.069	10.336	5.022	1.812	0.070
1850	8.25E+03	7.88E+03	1.28E+03	9.15E+00	1.77E+01	2.07E+02	4.95E+00	9.85E+02	97.68		5.023	8.553	1.617	0.068	9.711	4.718	1.739	0.069
1851	8.25E+03	8.04E+03	1.28E+03	1.02E+01	8.91E+01	1.51E+03	5.09E+00	1.01E+03	100.37		4.404	8.351	1.590	0.068	9.517	4.627	1.717	0.069
1852	8.25E+03	6.86E+03	1.34E+03	4.57E+01	2.83E+02	4.29E+01	4.19E+00	8.33E+02	82.60		8.976	9.808	1.766	0.069	10.907	5.310	1.880	0.071
1853	8.25E+03	6.51E+03	1.36E+03	1.72E+01	3.24E+02	5.00E+01	4.76E+00	9.48E+02	93.95		5.922	8.843	1.654	0.069	9.989	4.852	1.771	0.070
1854	8.26E+03	6.65E+03	1.35E+03	3.43E+01	2.83E+02	5.00E+01	4.56E+00	9.07E+02	89.89		6.960	9.174	1.694	0.069	10.305	5.007	1.808	0.070
1855	8.26E+03	7.88E+03	1.28E+03	5.15E+00	9.98E+00	2.22E+01	5.04E+00	1.00E+03	99.42		4.620	8.422	1.600	0.068	9.585	4.659	1.724	0.069
1856	8.26E+03	8.03E+03	1.28E+03	7.35E+00	6.20E+01	2.75E+02	5.05E+00	1.01E+03	99.69		4.558	8.402	1.597	0.068	9.566	4.649	1.722	0.069
1857	8.26E+03	8.38E+03	1.28E+03	8.45E+00	1.11E+02	5.00E+01	5.15E+00	1.02E+03	101.61		4.129	8.261	1.578	0.068	9.430	4.586	1.707	0.069
1858	8.26E+03	7.34E+03	1.32E+03	1.45E+01	1.40E+01	2.01E+03	4.80E+00	9.55E+02	94.70		5.736	8.784	1.646	0.069	9.932	4.824	1.765	0.069
1859	8.26E+03	6.66E+03	1.35E+03	2.78E+01	2.88E+02	1.25E+02	4.68E+00	9.31E+02	92.34		6.327	8.973	1.670	0.069	10.113	4.912	1.786	0.070
1860	8.26E+03	6.87E+03	1.34E+03	2.83E+01	2.92E+02	2.08E+02	4.64E+00	9.23E+02	91.49		6.545	9.043	1.678	0.069	10.179	4.945	1.793	0.070
1861	8.27E+03	7.83E+03	1.28E+03	9.91E+00	1.92E+01	4.17E+01	4.93E+00	9.82E+02	97.32		5.106	8.580	1.620	0.068	9.737	4.731	1.742	0.069
1862	8.27E+03	7.82E+03	1.28E+03	1.74E+01	3.76E+01	2.25E+02	4.76E+00	9.47E+02	93.91		5.932	8.847	1.654	0.069	9.992	4.854	1.772	0.070
1863	8.27E+03	6.68E+03	1.35E+03	4.53E+01	2.78E+02	1.00E+02	4.25E+00	8.46E+02	83.87		8.610	9.694	1.753	0.069	10.799	5.254	1.867	0.070
1864	8.27E+03	7.88E+03	1.28E+03	7.13E+00	1.38E+01	5.83E+02	5.00E+00	9.94E+02	98.58		4.812	8.484	1.608	0.068	9.645	4.687	1.731	0.069
1865	8.27E+03	6.69E+03	1.35E+03	2.21E+01	2.93E+02	1.93E+02	4.79E+00	9.53E+02	94.45		5.798	8.803	1.649	0.069	9.951	4.834	1.767	0.069
1866	8.27E+03	7.83E+03	1.28E+03	3.81E+00	7.39E+00	5.00E+01	5.07E+00	1.01E+03	99.94		4.500	8.383	1.595	0.068	9.547	4.641	1.720	0.069
1867	8.27E+03	6.53E+03	1.36E+03	1.60E+01	3.21E+02	7.86E+01	4.81E+00	9.56E+02	94.82		5.708	8.774	1.645	0.069	9.923	4.820	1.764	0.069
1868	8.27E+03	7.84E+03	1.28E+03	3.62E+00	7.02E+00	1.67E+01	5.07E+00	1.01E+03	100.02		4.484	8.377	1.594	0.068	9.542	4.638	1.719	0.069
1869	8.27E+03	8.03E+03	1.28E+03	7.57E+00	2.56E+01	2.00E+01	5.00E+00	9.94E+02	98.55		4.819	8.487	1.608	0.068	9.647	4.688	1.732	0.069
1870	8.27E+03	7.82E+03	1.28E+03	9.91E+00	2.20E+01	6.67E+01	4.94E+00	9.82E+02	97.38		5.093	8.576	1.620	0.068	9.733	4.729	1.741	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1871	8.27E+03	6.89E+03	1.34E+03	3.46E+01	2.85E+02	2.08E+02	4.52E+00	8.99E+02	89.17		7.151	9.235	1.701	0.069	10.363	5.036	1.815	0.070
1872	8.27E+03	7.87E+03	1.28E+03	2.46E+00	4.77E+00	7.33E+02	5.09E+00	1.01E+03	100.44		4.388	8.346	1.590	0.068	9.512	4.624	1.716	0.069
1873	8.28E+03	6.71E+03	1.35E+03	2.02E+01	2.95E+02	9.29E+01	4.82E+00	9.60E+02	95.13		5.633	8.750	1.642	0.069	9.900	4.809	1.761	0.069
1874	8.28E+03	8.38E+03	1.28E+03	1.14E+01	1.42E+02	2.75E+02	5.21E+00	1.04E+03	102.77		3.877	8.177	1.567	0.068	9.350	4.549	1.697	0.069
1875	8.28E+03	8.03E+03	1.28E+03	1.10E+01	9.85E+01	4.09E+01	5.11E+00	1.02E+03	100.81		4.306	8.319	1.586	0.068	9.486	4.612	1.713	0.069
1876	8.28E+03	7.85E+03	1.28E+03	1.46E+00	2.83E+00	5.00E+01	5.11E+00	1.02E+03	100.79		4.311	8.321	1.586	0.068	9.488	4.613	1.713	0.069
1877	8.28E+03	7.83E+03	1.28E+03	6.20E+00	1.42E+01	1.50E+02	5.02E+00	9.99E+02	99.00		4.716	8.453	1.604	0.068	9.615	4.673	1.728	0.069
1878	8.28E+03	7.86E+03	1.28E+03	1.29E+00	2.51E+00	1.31E+02	5.11E+00	1.02E+03	100.84		4.299	8.317	1.586	0.068	9.484	4.611	1.713	0.069
1879	8.28E+03	7.86E+03	1.28E+03	6.89E-01	1.34E+00	9.00E+01	5.12E+00	1.02E+03	101.04		4.255	8.302	1.584	0.068	9.470	4.605	1.711	0.069
1880	8.28E+03	6.73E+03	1.35E+03	2.78E+01	2.88E+02	6.67E+01	4.68E+00	9.31E+02	92.34		6.327	8.973	1.670	0.069	10.113	4.912	1.786	0.070
1881	8.28E+03	6.75E+03	1.35E+03	3.76E+01	2.83E+02	1.36E+02	4.45E+00	8.86E+02	87.81		7.516	9.350	1.714	0.069	10.473	5.090	1.828	0.070
1882	8.28E+03	6.91E+03	1.34E+03	2.31E+01	2.97E+02	3.11E+02	4.74E+00	9.43E+02	93.48		6.039	8.881	1.658	0.069	10.025	4.870	1.775	0.070
1883	8.28E+03	8.47E+03	1.28E+03	8.79E+00	1.70E+02	2.25E+02	5.22E+00	1.04E+03	103.07		3.812	8.156	1.564	0.068	9.329	4.539	1.695	0.069
1884	8.28E+03	8.46E+03	1.28E+03	9.25E+00	1.42E+02	8.75E+01	5.20E+00	1.04E+03	102.68		3.896	8.184	1.567	0.068	9.356	4.552	1.698	0.069
1885	8.28E+03	8.49E+03	1.28E+03	7.42E+00	2.54E+02	6.38E+03	5.14E+00	1.02E+03	101.46		4.162	8.271	1.580	0.068	9.440	4.591	1.708	0.069
1886	8.29E+03	7.34E+03	1.32E+03	4.51E+01	3.58E+00	1.28E+03	3.50E+00	6.97E+02	69.05		13.241	11.118	1.899	0.071	12.140	5.955	2.029	0.072
1887	8.29E+03	8.45E+03	1.28E+03	2.23E+01	1.75E+02	4.81E+02	5.20E+00	1.03E+03	102.55		3.924	8.193	1.569	0.068	9.365	4.556	1.699	0.069
1888	8.29E+03	8.38E+03	1.28E+03	2.37E+01	2.04E+02	2.25E+02	5.17E+00	1.03E+03	101.96		4.051	8.235	1.575	0.068	9.405	4.574	1.704	0.069
1889	8.29E+03	6.54E+03	1.36E+03	1.46E+01	3.10E+02	1.79E+02	4.88E+00	9.71E+02	96.29		5.351	8.659	1.631	0.068	9.813	4.767	1.751	0.069
1890	8.29E+03	6.77E+03	1.35E+03	3.45E+01	2.84E+02	1.57E+02	4.54E+00	9.03E+02	89.50		7.063	9.207	1.698	0.069	10.336	5.022	1.812	0.070
1891	8.29E+03	6.97E+03	1.34E+03	3.14E+01	2.97E+02	1.43E+02	4.50E+00	8.96E+02	88.84		7.239	9.263	1.704	0.069	10.389	5.049	1.818	0.070
1892	8.29E+03	6.79E+03	1.35E+03	4.55E+01	2.80E+02	5.71E+01	4.22E+00	8.40E+02	83.27		8.784	9.748	1.759	0.069	10.850	5.281	1.873	0.070
1893	8.29E+03	8.42E+03	1.28E+03	2.37E+01	1.56E+02	1.71E+02	5.17E+00	1.03E+03	101.96		4.052	8.235	1.575	0.068	9.405	4.575	1.704	0.069
1894	8.29E+03	6.99E+03	1.34E+03	4.09E+01	2.93E+02	3.57E+01	4.24E+00	8.43E+02	83.55		8.702	9.723	1.756	0.069	10.826	5.268	1.870	0.070
1895	8.29E+03	6.93E+03	1.34E+03	1.99E+01	3.08E+02	1.86E+02	4.75E+00	9.46E+02	93.74		5.975	8.860	1.656	0.069	10.005	4.860	1.773	0.070
1896	8.29E+03	8.39E+03	1.28E+03	2.02E+01	1.57E+02	7.00E+01	5.20E+00	1.04E+03	102.66		3.900	8.185	1.568	0.068	9.357	4.552	1.698	0.069
1897	8.29E+03	8.40E+03	1.28E+03	2.89E+01	1.88E+02	2.64E+02	5.10E+00	1.02E+03	100.71		4.329	8.326	1.587	0.068	9.493	4.615	1.714	0.069
1898	8.29E+03	6.80E+03	1.35E+03	2.46E+01	2.99E+02	1.25E+02	4.68E+00	9.31E+02	92.32		6.333	8.975	1.670	0.069	10.115	4.913	1.786	0.070
1899	8.29E+03	6.95E+03	1.34E+03	2.46E+01	2.99E+02	2.25E+02	4.68E+00	9.31E+02	92.32		6.333	8.975	1.670	0.069	10.115	4.913	1.786	0.070
1900	8.30E+03	7.00E+03	1.34E+03	4.21E+01	2.88E+02	2.50E+01	4.24E+00	8.45E+02	83.73		8.650	9.706	1.755	0.069	10.810	5.261	1.868	0.070
1901	8.30E+03	6.55E+03	1.36E+03	1.61E+01	3.00E+02	7.50E+01	4.89E+00	9.73E+02	96.44		5.316	8.648	1.629	0.068	9.802	4.762	1.749	0.069
1902	8.30E+03	6.82E+03	1.35E+03	2.12E+01	3.01E+02	1.43E+02	4.76E+00	9.47E+02	93.83		5.952	8.853	1.655	0.069	9.998	4.856	1.772	0.070
1903	8.30E+03	7.83E+03	1.28E+03	5.35E+00	1.28E+01	2.92E+02	5.04E+00	1.00E+03	99.35		4.636	8.427	1.600	0.068	9.590	4.661	1.725	0.069
1904	8.31E+03	7.03E+03	1.34E+03	7.60E+01	2.74E+02	2.56E+02	2.92E+00	5.81E+02	57.63		17.357	12.355	2.011	0.071	13.297	6.581	2.171	0.073
1905	8.31E+03	6.85E+03	1.35E+03	2.53E+01	2.95E+02	1.88E+01	4.69E+00	9.34E+02	92.55		6.274	8.956	1.668	0.069	10.097	4.904	1.784	0.070
1906	8.31E+03	7.33E+03	1.32E+03	4.50E+01	3.57E+02	2.70E+03	3.50E+00	6.97E+02	69.05		13.239	11.117	1.899	0.071	12.140	5.954	2.029	0.072
1907	8.31E+03	8.03E+03	1.28E+03	1.30E+01	1.09E+02	1.31E+02	5.13E+00	1.02E+03	101.25		4.208	8.287	1.582	0.068	9.455	4.598	1.709	0.069
1908	8.31E+03	7.05E+03	1.34E+03	6.36E+01	2.63E+02	1.20E+02	3.65E+00	7.26E+02	71.97		12.264	10.821	1.870	0.070	11.862	5.806	1.995	0.072
1909	8.31E+03	6.57E+03	1.36E+03	1.77E+01	2.97E+02	0.00E+00	4.87E+00	9.69E+02	96.03		5.415	8.680	1.633	0.068	9.833	4.777	1.753	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1910	8.31E+03	8.03E+03	1.28E+03	1.74E+01	1.40E+02	5.00E+01	5.19E+00	1.03E+03	102.46		3.942	8.199	1.570	0.068	9.371	4.558	1.700	0.069
1911	8.32E+03	6.87E+03	1.35E+03	2.18E+01	3.04E+02	7.14E+01	4.72E+00	9.40E+02	93.17		6.116	8.905	1.661	0.069	10.049	4.881	1.778	0.070
1912	8.32E+03	6.60E+03	1.36E+03	2.75E+01	2.86E+02	4.43E+02	4.71E+00	9.37E+02	92.92		6.180	8.926	1.664	0.069	10.068	4.891	1.780	0.070
1913	8.32E+03	6.50E+03	1.37E+03	3.74E+01	2.81E+02	2.40E+02	4.48E+00	8.91E+02	88.33		7.375	9.306	1.709	0.069	10.430	5.069	1.823	0.070
1914	8.32E+03	6.62E+03	1.36E+03	2.76E+01	2.87E+02	7.78E+01	4.70E+00	9.35E+02	92.65		6.247	8.947	1.667	0.069	10.089	4.901	1.783	0.070
1915	8.32E+03	6.50E+03	1.37E+03	2.08E+01	3.11E+02	6.00E+01	4.71E+00	9.37E+02	92.88		6.190	8.929	1.664	0.069	10.071	4.892	1.781	0.070
1916	8.32E+03	8.02E+03	1.28E+03	1.53E+01	8.41E+01	2.22E+01	5.01E+00	9.98E+02	98.90		4.738	8.460	1.605	0.068	9.622	4.676	1.729	0.069
1917	8.32E+03	7.06E+03	1.34E+03	5.35E+01	2.61E+02	1.00E+02	4.12E+00	8.19E+02	81.19		9.389	9.937	1.780	0.070	11.028	5.372	1.894	0.071
1918	8.32E+03	7.61E+03	1.30E+03	2.68E+01	3.52E+02	4.88E+02	4.36E+00	8.68E+02	86.06		7.996	9.501	1.732	0.069	10.616	5.162	1.845	0.070
1919	8.32E+03	6.51E+03	1.37E+03	2.52E+01	3.15E+02	1.25E+02	4.54E+00	9.04E+02	89.64		7.028	9.196	1.696	0.069	10.326	5.017	1.811	0.070
1920	8.32E+03	6.65E+03	1.36E+03	2.80E+01	2.90E+02	2.07E+02	4.66E+00	9.28E+02	91.96		6.424	9.004	1.673	0.069	10.143	4.927	1.789	0.070
1921	8.32E+03	8.19E+03	1.30E+03	4.52E+01	2.77E+02	1.58E+02	4.26E+00	8.49E+02	84.14		8.534	9.670	1.751	0.069	10.776	5.243	1.864	0.070
1922	8.32E+03	8.01E+03	1.28E+03	6.54E+00	4.87E+01	2.00E+02	5.04E+00	1.00E+03	99.50		4.601	8.416	1.599	0.068	9.579	4.656	1.724	0.069
1923	8.32E+03	8.18E+03	1.30E+03	6.82E+01	2.73E+02	5.63E+01	3.32E+00	6.62E+02	65.59		14.438	11.480	1.933	0.071	12.480	6.137	2.070	0.072
1924	8.33E+03	7.83E+03	1.28E+03	4.29E+00	1.04E+01	4.57E+02	5.06E+00	1.01E+03	99.77		4.541	8.396	1.596	0.068	9.560	4.647	1.722	0.069
1925	8.33E+03	6.94E+03	1.35E+03	1.40E+01	2.70E+02	0.00E+00	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
1926	8.33E+03	8.17E+03	1.30E+03	2.48E+01	2.48E+02	1.13E+03	5.02E+00	9.99E+02	99.08		4.697	8.447	1.603	0.068	9.609	4.670	1.727	0.069
1927	8.33E+03	6.96E+03	1.35E+03	4.59E+01	2.84E+02	7.14E+01	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
1928	8.33E+03	6.90E+03	1.35E+03	2.87E+01	2.94E+02	1.14E+02	4.61E+00	9.17E+02	90.89		6.698	9.091	1.684	0.069	10.226	4.968	1.799	0.070
1929	8.33E+03	6.92E+03	1.35E+03	4.59E+01	2.84E+02	1.50E+02	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
1930	8.33E+03	7.07E+03	1.34E+03	4.55E+01	2.60E+02	1.25E+01	4.42E+00	8.81E+02	87.29		7.656	9.395	1.720	0.069	10.515	5.111	1.833	0.070
1931	8.33E+03	8.21E+03	1.30E+03	4.11E+01	2.80E+02	6.50E+02	4.37E+00	8.70E+02	86.29		7.931	9.481	1.729	0.069	10.597	5.153	1.843	0.070
1932	8.33E+03	8.00E+03	1.28E+03	5.75E+00	2.50E+01	7.78E+01	5.03E+00	1.00E+03	99.31		4.646	8.430	1.601	0.068	9.593	4.662	1.725	0.069
1933	8.33E+03	6.68E+03	1.36E+03	3.76E+01	2.83E+02	1.57E+02	4.45E+00	8.86E+02	87.81		7.516	9.350	1.714	0.069	10.473	5.090	1.828	0.070
1934	8.33E+03	7.62E+03	1.30E+03	2.11E+01	1.44E+02	8.50E+02	5.18E+00	1.03E+03	102.11		4.019	8.225	1.573	0.068	9.395	4.570	1.703	0.069
1935	8.33E+03	6.52E+03	1.37E+03	2.62E+01	3.06E+02	6.00E+01	4.58E+00	9.12E+02	90.40		6.827	9.132	1.689	0.069	10.265	4.987	1.804	0.070
1936	8.33E+03	6.78E+03	1.36E+03	1.40E+01	2.70E+02	1.64E+02	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
1937	8.33E+03	6.73E+03	1.36E+03	2.85E+01	2.93E+02	2.19E+02	4.62E+00	9.19E+02	91.11		6.643	9.074	1.682	0.069	10.209	4.960	1.797	0.070
1938	8.33E+03	7.99E+03	1.28E+03	5.36E+00	1.26E+01	6.43E+01	5.04E+00	1.00E+03	99.34		4.637	8.427	1.600	0.068	9.590	4.661	1.725	0.069
1939	8.33E+03	8.16E+03	1.30E+03	1.87E+01	2.08E+02	1.94E+02	5.21E+00	1.04E+03	102.74		3.883	8.180	1.567	0.068	9.352	4.550	1.698	0.069
1940	8.33E+03	6.71E+03	1.36E+03	4.56E+01	2.81E+02	7.50E+01	4.21E+00	8.37E+02	82.97		8.869	9.775	1.762	0.069	10.875	5.293	1.876	0.070
1941	8.33E+03	6.80E+03	1.36E+03	7.16E+01	2.75E+02	9.38E+01	3.13E+00	6.23E+02	61.78		15.806	11.891	1.971	0.071	12.864	6.345	2.118	0.073
1942	8.33E+03	6.97E+03	1.35E+03	2.62E+01	3.06E+02	7.14E+00	4.58E+00	9.12E+02	90.40		6.827	9.132	1.689	0.069	10.265	4.987	1.804	0.070
1943	8.33E+03	8.21E+03	1.30E+03	2.32E+01	2.91E+02	0.00E+00	4.78E+00	9.50E+02	94.20		5.860	8.823	1.651	0.069	9.970	4.843	1.769	0.069
1944	8.34E+03	7.62E+03	1.30E+03	2.83E+01	1.64E+02	1.00E+02	5.11E+00	1.02E+03	100.80		4.307	8.319	1.586	0.068	9.486	4.612	1.713	0.069
1945	8.34E+03	7.33E+03	1.32E+03	1.27E+01	1.72E+02	8.71E+02	5.24E+00	1.04E+03	103.35		3.752	8.136	1.561	0.068	9.310	4.530	1.693	0.069
1946	8.34E+03	7.08E+03	1.34E+03	2.40E+01	2.44E+02	1.67E+01	5.05E+00	1.01E+03	99.68		4.560	8.402	1.597	0.068	9.566	4.650	1.722	0.069
1947	8.34E+03	8.22E+03	1.30E+03	2.75E+01	2.86E+02	1.20E+02	4.71E+00	9.37E+02	92.92		6.180	8.926	1.664	0.069	10.068	4.891	1.780	0.070
1948	8.34E+03	7.63E+03	1.30E+03	2.78E+01	1.68E+02	7.86E+01	5.12E+00	1.02E+03	101.04		4.254	8.302	1.584	0.068	9.470	4.605	1.711	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1949	8.34E+03	6.53E+03	1.37E+03	2.37E+01	3.11E+02	8.33E+01	4.62E+00	9.20E+02	91.19		6.620	9.067	1.681	0.069	10.202	4.956	1.796	0.070
1950	8.34E+03	7.98E+03	1.28E+03	5.85E+00	1.17E+01	3.25E+02	5.02E+00	1.00E+03	99.13		4.686	8.443	1.603	0.068	9.606	4.668	1.727	0.069
1951	8.34E+03	8.16E+03	1.30E+03	4.19E+01	1.38E+02	1.93E+02	4.74E+00	9.43E+02	93.44		6.051	8.885	1.659	0.069	10.029	4.871	1.776	0.070
1952	8.34E+03	7.84E+03	1.28E+03	1.12E+00	2.58E+00	3.33E+01	5.11E+00	1.02E+03	100.90		4.286	8.312	1.585	0.068	9.480	4.609	1.712	0.069
1953	8.34E+03	7.08E+03	1.34E+03	2.24E+01	3.01E+02	7.50E+01	4.72E+00	9.40E+02	93.21		6.107	8.903	1.661	0.069	10.046	4.880	1.778	0.070
1954	8.34E+03	8.23E+03	1.30E+03	2.75E+01	2.86E+02	5.71E+01	4.71E+00	9.37E+02	92.92		6.180	8.926	1.664	0.069	10.068	4.891	1.780	0.070
1955	8.34E+03	7.64E+03	1.30E+03	3.16E+01	1.75E+02	1.67E+01	5.05E+00	1.01E+03	99.66		4.564	8.403	1.597	0.068	9.567	4.650	1.722	0.069
1956	8.35E+03	6.99E+03	1.35E+03	2.46E+01	2.99E+02	5.83E+01	4.68E+00	9.31E+02	92.32		6.333	8.975	1.670	0.069	10.115	4.913	1.786	0.070
1957	8.35E+03	7.64E+03	1.30E+03	1.24E+01	3.36E+02	7.00E+02	4.87E+00	9.70E+02	96.15		5.385	8.670	1.632	0.068	9.823	4.772	1.752	0.069
1958	8.35E+03	7.98E+03	1.28E+03	2.24E+00	4.86E+00	1.25E+02	5.10E+00	1.01E+03	100.52		4.371	8.340	1.589	0.068	9.507	4.622	1.715	0.069
1959	8.35E+03	6.83E+03	1.36E+03	6.36E+01	2.76E+02	4.29E+01	3.51E+00	6.99E+02	69.34		13.143	11.088	1.896	0.071	12.113	5.940	2.025	0.072
1960	8.35E+03	8.23E+03	1.30E+03	1.85E+01	2.93E+02	4.39E+02	4.87E+00	9.68E+02	96.01		5.420	8.682	1.633	0.068	9.834	4.777	1.753	0.069
1961	8.35E+03	7.09E+03	1.34E+03	1.20E+01	3.23E+02	3.67E+01	4.91E+00	9.77E+02	96.84		5.220	8.617	1.625	0.068	9.772	4.748	1.746	0.069
1962	8.35E+03	6.54E+03	1.37E+03	2.26E+01	3.07E+02	1.07E+02	4.68E+00	9.31E+02	92.33		6.331	8.974	1.670	0.069	10.114	4.913	1.786	0.070
1963	8.35E+03	7.32E+03	1.32E+03	1.06E+01	1.44E+02	4.57E+02	5.21E+00	1.04E+03	102.82		3.866	8.174	1.566	0.068	9.346	4.547	1.697	0.069
1964	8.35E+03	7.84E+03	1.28E+03	1.85E+00	3.77E+00	7.81E+02	5.10E+00	1.02E+03	100.65		4.341	8.330	1.587	0.068	9.497	4.617	1.714	0.069
1965	8.35E+03	7.65E+03	1.30E+03	1.26E+01	3.33E+02	2.17E+02	4.87E+00	9.69E+02	96.10		5.396	8.674	1.632	0.068	9.827	4.774	1.752	0.069
1966	8.35E+03	8.13E+03	1.30E+03	1.92E+01	2.15E+02	2.79E+02	5.19E+00	1.03E+03	102.44		3.947	8.201	1.570	0.068	9.372	4.559	1.700	0.069
1967	8.35E+03	8.24E+03	1.30E+03	1.62E+01	1.09E+02	1.50E+02	5.11E+00	1.02E+03	100.79		4.311	8.320	1.586	0.068	9.487	4.613	1.713	0.069
1968	8.35E+03	7.98E+03	1.28E+03	2.23E+00	7.08E+00	0.00E+00	5.10E+00	1.01E+03	100.53		4.369	8.340	1.589	0.068	9.506	4.621	1.715	0.069
1969	8.36E+03	7.04E+03	1.35E+03	5.66E+01	2.78E+02	7.86E+01	3.81E+00	7.58E+02	75.13		11.243	10.509	1.839	0.070	11.568	5.652	1.959	0.071
1970	8.36E+03	6.85E+03	1.36E+03	4.57E+01	2.83E+02	1.06E+02	4.19E+00	8.33E+02	82.60		8.976	9.808	1.766	0.069	10.907	5.310	1.880	0.071
1971	8.36E+03	7.00E+03	1.35E+03	2.12E+01	3.01E+02	8.75E+01	4.76E+00	9.47E+02	93.83		5.952	8.853	1.655	0.069	9.998	4.856	1.772	0.070
1972	8.36E+03	7.03E+03	1.35E+03	1.13E+01	2.70E+02	3.57E+01	5.08E+00	1.01E+03	100.24		4.434	8.361	1.592	0.068	9.526	4.631	1.718	0.069
1973	8.36E+03	8.24E+03	1.30E+03	1.25E+01	7.22E+01	1.00E+02	5.01E+00	9.96E+02	98.74		4.774	8.472	1.606	0.068	9.633	4.681	1.730	0.069
1974	8.36E+03	8.11E+03	1.30E+03	1.95E+01	2.25E+02	1.75E+02	5.17E+00	1.03E+03	101.98		4.047	8.234	1.574	0.068	9.404	4.574	1.704	0.069
1975	8.36E+03	7.05E+03	1.35E+03	3.10E+01	3.04E+02	3.57E+01	4.44E+00	8.84E+02	87.68		7.551	9.361	1.716	0.069	10.483	5.095	1.829	0.070
1976	8.36E+03	7.10E+03	1.34E+03	8.66E+00	1.32E+02	1.00E+02	5.19E+00	1.03E+03	102.36		3.965	8.207	1.571	0.068	9.378	4.562	1.701	0.069
1977	8.36E+03	8.10E+03	1.30E+03	2.28E+01	2.23E+02	1.42E+02	5.14E+00	1.02E+03	101.47		4.159	8.271	1.579	0.068	9.439	4.590	1.708	0.069
1978	8.36E+03	8.25E+03	1.30E+03	4.78E+00	3.02E+01	3.57E+01	5.06E+00	1.01E+03	99.75		4.544	8.397	1.596	0.068	9.561	4.647	1.722	0.069
1979	8.36E+03	7.99E+03	1.28E+03	1.99E+00	8.02E+00	1.00E+02	5.10E+00	1.01E+03	100.61		4.351	8.334	1.588	0.068	9.500	4.619	1.715	0.069
1980	8.36E+03	6.88E+03	1.36E+03	6.37E+01	2.78E+02	1.25E+02	3.49E+00	6.94E+02	68.85		13.309	11.139	1.901	0.071	12.160	5.965	2.031	0.072
1981	8.36E+03	8.09E+03	1.30E+03	2.75E+01	2.20E+02	5.00E+01	5.09E+00	1.01E+03	100.35		4.409	8.353	1.590	0.068	9.519	4.627	1.717	0.069
1982	8.36E+03	7.02E+03	1.35E+03	1.17E+01	1.73E+02	1.75E+02	5.24E+00	1.04E+03	103.32		3.758	8.138	1.561	0.068	9.312	4.531	1.693	0.069
1983	8.36E+03	7.01E+03	1.35E+03	2.22E+01	2.76E+02	1.50E+02	4.90E+00	9.75E+02	96.64		5.269	8.633	1.627	0.068	9.788	4.755	1.748	0.069
1984	8.36E+03	8.33E+03	1.30E+03	2.57E+01	3.04E+02	2.92E+02	4.61E+00	9.18E+02	90.99		6.674	9.084	1.683	0.069	10.219	4.964	1.798	0.070
1985	8.36E+03	8.08E+03	1.30E+03	2.95E+01	2.25E+02	5.00E+01	5.04E+00	1.00E+03	99.40		4.624	8.423	1.600	0.068	9.586	4.659	1.725	0.069
1986	8.36E+03	7.67E+03	1.30E+03	1.18E+01	3.23E+02	2.50E+02	4.91E+00	9.78E+02	96.92		5.201	8.611	1.624	0.068	9.766	4.745	1.745	0.069
1987	8.37E+03	8.31E+03	1.30E+03	3.06E+01	2.85E+02	2.13E+02	4.64E+00	9.23E+02	91.45		6.553	9.045	1.678	0.069	10.182	4.946	1.794	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
1988	8.37E+03	8.25E+03	1.30E+03	1.27E+01	7.06E+01	5.00E+01	5.00E+00	9.94E+02	98.55		4.820	8.487	1.608	0.068	9.648	4.688	1.732	0.069
1989	8.37E+03	6.56E+03	1.37E+03	2.37E+01	2.94E+02	1.43E+01	4.74E+00	9.43E+02	93.46		6.046	8.883	1.659	0.069	10.027	4.870	1.776	0.070
1990	8.37E+03	8.35E+03	1.30E+03	3.55E+01	2.91E+02	9.00E+01	4.44E+00	8.84E+02	87.59		7.576	9.369	1.717	0.069	10.491	5.099	1.830	0.070
1991	8.37E+03	7.05E+03	1.35E+03	3.14E+01	3.36E+02	8.75E+01	4.21E+00	8.37E+02	82.97		8.870	9.775	1.762	0.069	10.875	5.294	1.876	0.070
1992	8.37E+03	8.08E+03	1.30E+03	2.72E+01	2.25E+02	4.17E+01	5.08E+00	1.01E+03	100.17		4.449	8.366	1.592	0.068	9.531	4.633	1.718	0.069
1993	8.37E+03	7.99E+03	1.28E+03	2.38E+00	1.36E+01	1.21E+02	5.09E+00	1.01E+03	100.49		4.378	8.343	1.589	0.068	9.509	4.623	1.716	0.069
1994	8.37E+03	7.84E+03	1.28E+03	1.05E+00	2.62E+00	6.43E+01	5.12E+00	1.02E+03	100.92		4.281	8.311	1.585	0.068	9.478	4.608	1.712	0.069
1995	8.37E+03	6.91E+03	1.36E+03	1.40E+01	2.70E+02	4.29E+01	5.05E+00	1.01E+03	99.70		4.555	8.401	1.597	0.068	9.565	4.649	1.722	0.069
1996	8.37E+03	7.10E+03	1.34E+03	2.14E+01	2.44E+02	1.36E+02	5.09E+00	1.01E+03	100.36		4.407	8.352	1.590	0.068	9.518	4.627	1.717	0.069
1997	8.37E+03	8.08E+03	1.30E+03	6.46E+01	1.98E+02	8.33E+00	3.77E+00	7.51E+02	74.42		11.470	10.578	1.846	0.070	11.633	5.686	1.967	0.071
1998	8.37E+03	8.37E+03	1.30E+03	4.59E+01	2.84E+02	3.75E+01	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
1999	8.37E+03	8.26E+03	1.30E+03	2.15E+01	1.09E+02	4.08E+02	5.05E+00	1.01E+03	99.72		4.550	8.399	1.597	0.068	9.563	4.648	1.722	0.069
2000	8.37E+03	8.28E+03	1.30E+03	1.98E+01	1.77E+02	8.75E+01	5.22E+00	1.04E+03	102.98		3.831	8.162	1.564	0.068	9.335	4.542	1.696	0.069
2001	8.37E+03	8.10E+03	1.30E+03	4.50E+01	9.00E+01	7.50E+01	4.35E+00	8.65E+02	85.76		8.079	9.528	1.735	0.069	10.641	5.175	1.848	0.070
2002	8.37E+03	8.11E+03	1.30E+03	6.59E+01	6.34E+01	7.86E+01	3.14E+00	6.25E+02	62.00		15.724	11.867	1.968	0.071	12.841	6.332	2.115	0.073
2003	8.37E+03	8.08E+03	1.30E+03	5.31E+01	9.00E+01	3.13E+01	4.04E+00	8.04E+02	79.73		9.823	10.071	1.794	0.070	11.155	5.437	1.909	0.071
2004	8.37E+03	7.68E+03	1.30E+03	7.87E+01	3.56E+02	4.29E+02	1.84E+00	3.65E+02	36.23		26.359	15.002	2.221	0.073	15.751	7.962	2.479	0.076
2005	8.37E+03	8.27E+03	1.30E+03	2.38E+01	1.85E+02	3.14E+02	5.18E+00	1.03E+03	102.21		3.996	8.217	1.572	0.068	9.388	4.566	1.702	0.069
2006	8.37E+03	8.13E+03	1.30E+03	4.50E+01	9.00E+01	1.17E+02	4.35E+00	8.65E+02	85.76		8.079	9.528	1.735	0.069	10.641	5.175	1.848	0.070
2007	8.37E+03	7.32E+03	1.32E+03	1.28E+01	1.41E+02	1.64E+02	5.21E+00	1.04E+03	102.75		3.879	8.178	1.567	0.068	9.350	4.549	1.698	0.069
2008	8.38E+03	7.11E+03	1.34E+03	1.26E+01	1.75E+02	1.00E+01	5.24E+00	1.04E+03	103.36		3.748	8.135	1.561	0.068	9.309	4.530	1.693	0.069
2009	8.38E+03	8.02E+03	1.28E+03	4.03E+00	2.44E+01	2.79E+02	5.07E+00	1.01E+03	99.96		4.497	8.382	1.594	0.068	9.546	4.640	1.720	0.069
2010	8.38E+03	7.84E+03	1.28E+03	1.28E+00	5.22E+00	6.43E+01	5.11E+00	1.02E+03	100.85		4.297	8.316	1.586	0.068	9.483	4.611	1.713	0.069
2011	8.38E+03	8.15E+03	1.30E+03	7.05E+01	1.35E+02	8.33E+01	3.46E+00	6.89E+02	68.31		13.492	11.194	1.906	0.071	12.212	5.993	2.037	0.072
2012	8.38E+03	6.58E+03	1.37E+03	2.78E+01	2.88E+02	1.75E+02	4.68E+00	9.31E+02	92.34		6.327	8.973	1.670	0.069	10.113	4.912	1.786	0.070
2013	8.38E+03	7.68E+03	1.30E+03	6.10E+01	5.63E+01	8.33E+00	3.27E+00	6.50E+02	64.44		14.844	11.602	1.944	0.071	12.594	6.198	2.084	0.072
2014	8.38E+03	7.05E+03	1.35E+03	4.56E+01	3.49E+02	5.56E+01	3.48E+00	6.93E+02	68.73		13.351	11.151	1.902	0.071	12.172	5.971	2.033	0.072
2015	8.38E+03	7.11E+03	1.34E+03	1.65E+01	2.76E+02	7.50E+01	4.99E+00	9.94E+02	98.54		4.822	8.488	1.608	0.068	9.648	4.689	1.732	0.069
2016	8.38E+03	8.04E+03	1.28E+03	8.10E+00	6.33E+01	2.69E+03	5.05E+00	1.00E+03	99.53		4.595	8.413	1.599	0.068	9.577	4.655	1.723	0.069
2017	8.38E+03	7.67E+03	1.30E+03	7.64E+01	7.60E+01	3.57E+01	2.79E+00	5.55E+02	54.97		18.384	12.660	2.037	0.072	13.581	6.738	2.206	0.073
2018	8.38E+03	7.32E+03	1.32E+03	1.71E+01	2.05E+02	1.70E+03	5.22E+00	1.04E+03	102.98		3.831	8.162	1.564	0.068	9.335	4.542	1.696	0.069
2019	8.38E+03	8.16E+03	1.30E+03	5.31E+01	9.00E+01	8.33E+01	4.04E+00	8.04E+02	79.73		9.823	10.071	1.794	0.070	11.155	5.437	1.909	0.071
2020	8.38E+03	8.40E+03	1.30E+03	6.36E+01	2.76E+02	2.83E+02	3.51E+00	6.99E+02	69.34		13.143	11.088	1.896	0.071	12.113	5.940	2.025	0.072
2021	8.38E+03	8.06E+03	1.28E+03	2.18E+01	1.11E+02	3.58E+02	5.06E+00	1.01E+03	99.79		4.535	8.394	1.596	0.068	9.558	4.646	1.721	0.069
2022	8.38E+03	7.33E+03	1.32E+03	1.31E+01	2.04E+02	7.83E+02	5.23E+00	1.04E+03	103.16		3.793	8.150	1.563	0.068	9.323	4.536	1.694	0.069
2023	8.38E+03	6.93E+03	1.36E+03	1.13E+01	2.70E+02	1.71E+02	5.08E+00	1.01E+03	100.24		4.434	8.361	1.592	0.068	9.526	4.631	1.718	0.069
2024	8.38E+03	7.84E+03	1.28E+03	1.92E+00	1.08E+01	5.00E+01	5.10E+00	1.02E+03	100.64		4.344	8.331	1.588	0.068	9.498	4.618	1.714	0.069
2025	8.38E+03	8.17E+03	1.30E+03	4.50E+01	9.00E+01	7.50E+01	4.35E+00	8.65E+02	85.76		8.079	9.528	1.735	0.069	10.641	5.175	1.848	0.070
2026	8.38E+03	7.67E+03	1.30E+03	4.50E+01	9.00E+01	1.67E+01	4.35E+00	8.65E+02	85.76		8.079	9.528	1.735	0.069	10.641	5.175	1.848	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
2027	8.38E+03	6.61E+03	1.37E+03	9.46E+00	2.70E+02	6.43E+01	5.10E+00	1.01E+03	100.54		4.366	8.339	1.589	0.068	9.505	4.621	1.715	0.069
2028	8.38E+03	7.34E+03	1.32E+03	1.11E+01	1.67E+02	1.50E+02	5.23E+00	1.04E+03	103.24		3.775	8.144	1.562	0.068	9.317	4.534	1.694	0.069
2029	8.38E+03	7.12E+03	1.34E+03	2.37E+01	3.47E+02	7.50E+01	4.49E+00	8.93E+02	88.52		7.324	9.290	1.707	0.069	10.415	5.061	1.821	0.070
2030	8.38E+03	8.07E+03	1.28E+03	3.22E+01	1.21E+02	2.08E+02	4.93E+00	9.82E+02	97.35		5.099	8.578	1.620	0.068	9.735	4.730	1.742	0.069
2031	8.39E+03	7.34E+03	1.32E+03	1.07E+01	1.66E+02	1.58E+02	5.23E+00	1.04E+03	103.20		3.783	8.146	1.562	0.068	9.320	4.535	1.694	0.069
2032	8.39E+03	8.09E+03	1.28E+03	3.03E+01	1.02E+02	2.08E+02	4.86E+00	9.68E+02	95.92		5.440	8.688	1.634	0.068	9.841	4.780	1.754	0.069
2033	8.39E+03	6.63E+03	1.37E+03	6.35E+01	2.74E+02	6.25E+01	3.54E+00	7.05E+02	69.91		12.951	11.030	1.891	0.070	12.058	5.910	2.019	0.072
2034	8.39E+03	8.11E+03	1.28E+03	3.25E+01	9.26E+01	1.67E+01	4.74E+00	9.44E+02	93.57		6.016	8.874	1.657	0.069	10.018	4.866	1.775	0.070
2035	8.39E+03	7.81E+03	1.28E+03	8.05E-01	1.79E+00	9.17E+01	5.12E+00	1.02E+03	101.00		4.263	8.305	1.584	0.068	9.473	4.606	1.711	0.069
2036	8.39E+03	7.66E+03	1.30E+03	7.05E+01	4.50E+01	1.67E+01	2.64E+00	5.26E+02	52.17		19.496	12.990	2.065	0.072	13.888	6.908	2.245	0.074
2037	8.39E+03	7.36E+03	1.32E+03	1.25E+01	2.52E+02	1.60E+02	5.13E+00	1.02E+03	101.20		4.219	8.290	1.582	0.068	9.459	4.599	1.710	0.069
2038	8.39E+03	7.82E+03	1.28E+03	5.48E+00	4.51E+01	5.44E+02	5.06E+00	1.01E+03	99.77		4.541	8.396	1.596	0.068	9.560	4.647	1.722	0.069
2039	8.39E+03	7.79E+03	1.28E+03	4.92E+00	1.21E+01	2.42E+02	5.04E+00	1.00E+03	99.52		4.597	8.414	1.599	0.068	9.578	4.655	1.724	0.069
2040	8.39E+03	8.18E+03	1.30E+03	7.05E+01	1.35E+02	4.29E+01	3.46E+00	6.89E+02	68.31		13.492	11.194	1.906	0.071	12.212	5.993	2.037	0.072
2041	8.39E+03	8.13E+03	1.28E+03	3.36E+01	8.41E+01	1.63E+02	4.64E+00	9.24E+02	91.56		6.526	9.037	1.677	0.069	10.174	4.942	1.793	0.070
2042	8.39E+03	6.94E+03	1.36E+03	3.19E+01	2.86E+02	5.00E+01	4.60E+00	9.15E+02	90.67		6.757	9.110	1.686	0.069	10.244	4.977	1.801	0.070
2043	8.39E+03	7.05E+03	1.35E+03	1.89E+01	2.17E+02	3.33E+01	5.19E+00	1.03E+03	102.42		3.952	8.202	1.570	0.068	9.374	4.560	1.700	0.069
2044	8.39E+03	8.41E+03	1.30E+03	3.95E+01	2.84E+02	4.25E+02	4.38E+00	8.72E+02	86.45		7.888	9.468	1.728	0.069	10.584	5.146	1.841	0.070
2045	8.39E+03	6.96E+03	1.36E+03	2.38E+01	3.02E+02	1.00E+02	4.68E+00	9.32E+02	92.39		6.313	8.969	1.669	0.069	10.109	4.910	1.785	0.070
2046	8.39E+03	7.78E+03	1.28E+03	7.78E+00	1.93E+01	2.75E+02	4.99E+00	9.92E+02	98.35		4.865	8.502	1.610	0.068	9.662	4.695	1.733	0.069
2047	8.39E+03	6.67E+03	1.37E+03	4.54E+01	2.79E+02	2.44E+02	4.24E+00	8.44E+02	83.64		8.676	9.714	1.756	0.069	10.818	5.264	1.869	0.070
2048	8.39E+03	8.15E+03	1.28E+03	3.93E+01	7.73E+01	5.00E+01	4.40E+00	8.76E+02	86.86		7.774	9.432	1.724	0.069	10.550	5.129	1.837	0.070
2049	8.39E+03	7.64E+03	1.30E+03	6.46E+01	1.84E+01	3.57E+01	2.57E+00	5.11E+02	50.67		20.102	13.169	2.080	0.072	14.054	7.001	2.265	0.074
2050	8.39E+03	7.37E+03	1.32E+03	7.70E+00	3.25E+02	1.50E+03	5.00E+00	9.96E+02	98.69		4.786	8.476	1.607	0.068	9.637	4.683	1.730	0.069
2051	8.40E+03	7.76E+03	1.28E+03	8.73E+00	2.16E+01	2.25E+02	4.96E+00	9.88E+02	97.95		4.960	8.532	1.614	0.068	9.691	4.709	1.737	0.069
2052	8.40E+03	8.19E+03	1.30E+03	4.50E+01	1.80E+02	4.17E+01	4.67E+00	9.29E+02	92.08		6.393	8.994	1.672	0.069	10.133	4.922	1.788	0.070
2053	8.40E+03	7.13E+03	1.34E+03	2.71E+01	3.48E+02	2.92E+02	4.36E+00	8.67E+02	85.93		8.030	9.512	1.733	0.069	10.626	5.167	1.846	0.070
2054	8.40E+03	7.63E+03	1.30E+03	2.66E+01	0.00E+00	1.58E+02	4.37E+00	8.69E+02	86.16		7.967	9.493	1.731	0.069	10.608	5.158	1.844	0.070
2055	8.40E+03	6.77E+03	1.37E+03	2.75E+01	2.86E+02	2.50E+01	4.71E+00	9.37E+02	92.92		6.180	8.926	1.664	0.069	10.068	4.891	1.780	0.070
2056	8.40E+03	6.98E+03	1.36E+03	2.53E+01	3.02E+02	1.10E+02	4.64E+00	9.23E+02	91.49		6.543	9.042	1.678	0.069	10.179	4.945	1.793	0.070
2057	8.40E+03	6.74E+03	1.37E+03	3.43E+01	2.82E+02	3.83E+02	4.56E+00	9.08E+02	90.00		6.931	9.165	1.693	0.069	10.296	5.003	1.807	0.070
2058	8.40E+03	7.05E+03	1.35E+03	2.65E+01	3.02E+02	7.14E+00	4.60E+00	9.15E+02	90.74		6.737	9.104	1.685	0.069	10.238	4.974	1.800	0.070
2059	8.40E+03	7.74E+03	1.28E+03	9.05E+00	2.24E+01	2.50E+02	4.96E+00	9.87E+02	97.81		4.991	8.543	1.616	0.068	9.701	4.714	1.738	0.069
2060	8.40E+03	8.19E+03	1.30E+03	4.50E+01	1.80E+02	0.00E+00	4.67E+00	9.29E+02	92.08		6.393	8.994	1.672	0.069	10.133	4.922	1.788	0.070
2061	8.40E+03	7.69E+03	1.28E+03	2.03E+01	1.88E+01	5.00E+01	4.62E+00	9.19E+02	91.07		6.651	9.076	1.682	0.069	10.212	4.961	1.797	0.070
2062	8.40E+03	7.72E+03	1.28E+03	2.65E+01	1.06E+02	3.30E+02	4.96E+00	9.87E+02	97.89		4.974	8.537	1.615	0.068	9.696	4.711	1.737	0.069
2063	8.40E+03	7.71E+03	1.28E+03	4.66E+01	1.34E+02	1.00E+02	4.57E+00	9.09E+02	90.13		6.899	9.155	1.692	0.069	10.287	4.998	1.806	0.070
2064	8.40E+03	7.68E+03	1.28E+03	3.94E+01	3.78E+01	0.00E+00	3.93E+00	7.82E+02	77.51		10.500	10.280	1.816	0.070	11.353	5.539	1.933	0.071
2065	8.40E+03	7.06E+03	1.35E+03	2.26E+01	3.23E+02	1.80E+02	4.59E+00	9.13E+02	90.56		6.785	9.119	1.687	0.069	10.252	4.981	1.802	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
2066	8.40E+03	7.67E+03	1.28E+03	4.02E+01	5.09E+01	2.00E+01	4.06E+00	8.07E+02	80.00		9.741	10.046	1.791	0.070	11.132	5.425	1.907	0.071
2067	8.40E+03	6.73E+03	1.37E+03	4.53E+01	2.62E+02	5.00E+01	4.41E+00	8.78E+02	87.05		7.723	9.416	1.722	0.069	10.535	5.121	1.835	0.070
2068	8.40E+03	6.70E+03	1.37E+03	4.53E+01	2.78E+02	1.50E+02	4.25E+00	8.46E+02	83.87		8.610	9.694	1.753	0.069	10.799	5.254	1.867	0.070
2069	8.40E+03	8.17E+03	1.28E+03	4.29E+01	1.36E+02	9.50E+01	4.70E+00	9.35E+02	92.71		6.232	8.943	1.666	0.069	10.084	4.898	1.782	0.070
2070	8.40E+03	7.38E+03	1.32E+03	1.90E+01	3.46E+02	1.79E+03	4.66E+00	9.26E+02	91.85		6.452	9.013	1.675	0.069	10.151	4.931	1.790	0.070
2071	8.40E+03	8.44E+03	1.30E+03	6.35E+01	2.75E+02	2.25E+02	3.53E+00	7.02E+02	69.63		13.043	11.058	1.893	0.071	12.084	5.925	2.022	0.072
2072	8.40E+03	6.79E+03	1.37E+03	2.34E+01	2.93E+02	5.00E+01	4.76E+00	9.47E+02	93.86		5.944	8.850	1.655	0.069	9.996	4.855	1.772	0.070
2073	8.40E+03	7.67E+03	1.28E+03	5.18E+01	9.22E+01	5.71E+01	4.12E+00	8.19E+02	81.21		9.382	9.934	1.779	0.070	11.026	5.371	1.894	0.071
2074	8.40E+03	7.13E+03	1.34E+03	3.89E+01	3.53E+02	1.08E+03	3.82E+00	7.60E+02	75.34		11.176	10.488	1.837	0.070	11.549	5.642	1.957	0.071
2075	8.40E+03	8.20E+03	1.30E+03	3.37E+01	1.80E+02	1.65E+02	5.01E+00	9.96E+02	98.77		4.769	8.470	1.606	0.068	9.632	4.681	1.730	0.069
2076	8.41E+03	7.62E+03	1.30E+03	6.39E+01	3.49E+02	3.13E+02	2.55E+00	5.07E+02	50.30		20.253	13.214	2.083	0.072	14.095	7.024	2.271	0.074
2077	8.41E+03	6.98E+03	1.36E+03	2.12E+01	3.01E+02	4.29E+01	4.76E+00	9.47E+02	93.83		5.952	8.853	1.655	0.069	9.998	4.856	1.772	0.070
2078	8.41E+03	8.46E+03	1.30E+03	2.52E+01	1.98E+02	2.75E+02	5.16E+00	1.03E+03	101.72		4.105	8.253	1.577	0.068	9.422	4.582	1.706	0.069
2079	8.41E+03	7.06E+03	1.35E+03	2.02E+01	3.24E+02	3.33E+01	4.66E+00	9.28E+02	92.03		6.406	8.998	1.673	0.069	10.137	4.924	1.789	0.070
2080	8.41E+03	6.82E+03	1.37E+03	2.80E+01	2.90E+02	1.43E+02	4.66E+00	9.28E+02	91.96		6.424	9.004	1.673	0.069	10.143	4.927	1.789	0.070
2081	8.41E+03	6.84E+03	1.37E+03	4.56E+01	2.81E+02	5.00E+01	4.21E+00	8.37E+02	82.97		8.869	9.775	1.762	0.069	10.875	5.293	1.876	0.070
2082	8.41E+03	6.87E+03	1.37E+03	4.56E+01	2.82E+02	3.75E+01	4.19E+00	8.35E+02	82.73		8.938	9.796	1.764	0.069	10.895	5.304	1.878	0.070
2083	8.42E+03	6.99E+03	1.36E+03	2.55E+01	2.97E+02	1.00E+02	4.67E+00	9.30E+02	92.15		6.375	8.988	1.672	0.069	10.128	4.920	1.787	0.070
2084	8.42E+03	8.48E+03	1.30E+03	9.30E+00	1.29E+02	3.20E+02	5.19E+00	1.03E+03	102.31		3.975	8.210	1.571	0.068	9.381	4.563	1.701	0.069
2085	8.42E+03	7.07E+03	1.35E+03	1.95E+01	3.15E+02	1.33E+02	4.73E+00	9.41E+02	93.27		6.092	8.898	1.660	0.069	10.041	4.877	1.777	0.070
2086	8.42E+03	6.89E+03	1.37E+03	2.18E+01	3.04E+02	1.00E+02	4.72E+00	9.40E+02	93.17		6.116	8.905	1.661	0.069	10.049	4.881	1.778	0.070
2087	8.42E+03	6.51E+03	1.38E+03	1.99E+01	2.93E+02	8.75E+01	4.84E+00	9.63E+02	95.42		5.561	8.727	1.639	0.068	9.878	4.798	1.758	0.069
2088	8.42E+03	6.99E+03	1.36E+03	2.78E+01	2.88E+02	1.29E+02	4.68E+00	9.31E+02	92.34		6.327	8.973	1.670	0.069	10.113	4.912	1.786	0.070
2089	8.42E+03	6.52E+03	1.38E+03	2.04E+01	2.97E+02	1.10E+02	4.80E+00	9.56E+02	94.78		5.718	8.778	1.646	0.069	9.926	4.822	1.764	0.069
2090	8.42E+03	6.50E+03	1.38E+03	1.75E+01	2.95E+02	1.25E+02	4.88E+00	9.71E+02	96.28		5.354	8.660	1.631	0.068	9.814	4.768	1.751	0.069
2091	8.43E+03	6.55E+03	1.38E+03	2.80E+01	2.90E+02	2.00E+02	4.66E+00	9.28E+02	91.96		6.424	9.004	1.673	0.069	10.143	4.927	1.789	0.070
2092	8.43E+03	7.01E+03	1.36E+03	2.58E+01	2.93E+02	1.06E+02	4.69E+00	9.34E+02	92.58		6.266	8.954	1.667	0.069	10.095	4.903	1.784	0.070
2093	8.43E+03	7.08E+03	1.35E+03	1.89E+01	3.17E+02	1.06E+02	4.74E+00	9.42E+02	93.43		6.052	8.885	1.659	0.069	10.029	4.871	1.776	0.070
2094	8.43E+03	6.58E+03	1.38E+03	3.48E+01	2.87E+02	1.30E+02	4.50E+00	8.95E+02	88.76		7.259	9.269	1.705	0.069	10.395	5.052	1.819	0.070
2095	8.43E+03	6.91E+03	1.37E+03	2.46E+01	2.99E+02	9.29E+01	4.68E+00	9.31E+02	92.32		6.333	8.975	1.670	0.069	10.115	4.913	1.786	0.070
2096	8.43E+03	8.49E+03	1.30E+03	4.65E+00	6.47E+01	3.33E+01	5.09E+00	1.01E+03	100.45		4.388	8.346	1.590	0.068	9.512	4.624	1.716	0.069
2097	8.44E+03	7.03E+03	1.36E+03	2.62E+01	3.06E+02	2.50E+01	4.58E+00	9.12E+02	90.40		6.827	9.132	1.689	0.069	10.265	4.987	1.804	0.070
2098	8.44E+03	6.93E+03	1.37E+03	2.83E+01	2.92E+02	8.57E+01	4.64E+00	9.23E+02	91.49		6.545	9.043	1.678	0.069	10.179	4.945	1.793	0.070
2099	8.44E+03	6.60E+03	1.38E+03	2.80E+01	2.90E+02	1.30E+02	4.66E+00	9.28E+02	91.96		6.424	9.004	1.673	0.069	10.143	4.927	1.789	0.070
2100	8.44E+03	7.10E+03	1.35E+03	2.26E+01	3.07E+02	1.79E+02	4.68E+00	9.31E+02	92.33		6.331	8.974	1.670	0.069	10.114	4.913	1.786	0.070
2101	8.45E+03	7.04E+03	1.36E+03	2.62E+01	3.06E+02	1.43E+01	4.58E+00	9.12E+02	90.40		6.827	9.132	1.689	0.069	10.265	4.987	1.804	0.070
2102	8.45E+03	6.95E+03	1.37E+03	2.38E+01	3.02E+02	1.50E+02	4.68E+00	9.32E+02	92.39		6.313	8.969	1.669	0.069	10.109	4.910	1.785	0.070
2103	8.45E+03	8.49E+03	1.30E+03	5.19E+00	1.03E+02	1.92E+02	5.14E+00	1.02E+03	101.39		4.178	8.277	1.580	0.068	9.445	4.593	1.708	0.069
2104	8.45E+03	6.62E+03	1.38E+03	4.54E+01	2.79E+02	1.70E+02	4.23E+00	8.42E+02	83.51		8.715	9.727	1.757	0.069	10.830	5.270	1.870	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
2105	8.45E+03	6.75E+03	1.38E+03	5.34E+01	2.79E+02	1.80E+02	3.94E+00	7.83E+02	77.64		10.460	10.268	1.815	0.070	11.341	5.533	1.932	0.071
2106	8.45E+03	6.72E+03	1.38E+03	6.35E+01	2.64E+02	2.08E+02	3.64E+00	7.24E+02	71.78		12.326	10.840	1.872	0.070	11.879	5.816	1.997	0.072
2107	8.45E+03	6.69E+03	1.38E+03	4.56E+01	2.81E+02	2.00E+02	4.21E+00	8.37E+02	82.97		8.869	9.775	1.762	0.069	10.875	5.293	1.876	0.070
2108	8.45E+03	8.33E+03	1.31E+03	4.52E+01	2.77E+02	4.29E+01	4.27E+00	8.49E+02	84.19		8.519	9.665	1.750	0.069	10.771	5.241	1.863	0.070
2109	8.45E+03	6.80E+03	1.38E+03	6.36E+01	2.76E+02	7.86E+01	3.51E+00	6.99E+02	69.34		13.143	11.088	1.896	0.071	12.113	5.940	2.025	0.072
2110	8.45E+03	7.06E+03	1.36E+03	3.34E+01	3.19E+02	1.14E+02	4.21E+00	8.37E+02	83.02		8.854	9.770	1.762	0.069	10.871	5.291	1.875	0.070
2111	8.45E+03	8.31E+03	1.31E+03	3.41E+01	2.59E+02	6.00E+01	4.76E+00	9.48E+02	93.98		5.915	8.841	1.653	0.069	9.987	4.851	1.771	0.070
2112	8.45E+03	6.67E+03	1.38E+03	3.46E+01	2.85E+02	1.83E+02	4.52E+00	8.99E+02	89.17		7.151	9.235	1.701	0.069	10.363	5.036	1.815	0.070
2113	8.46E+03	6.83E+03	1.38E+03	3.78E+01	2.85E+02	1.79E+02	4.43E+00	8.81E+02	87.32		7.648	9.392	1.719	0.069	10.512	5.110	1.833	0.070
2114	8.46E+03	6.65E+03	1.38E+03	8.13E+00	2.70E+02	5.71E+01	5.11E+00	1.02E+03	100.72		4.325	8.325	1.587	0.068	9.492	4.615	1.714	0.069
2115	8.46E+03	7.12E+03	1.35E+03	4.54E+01	2.79E+02	1.33E+02	4.23E+00	8.42E+02	83.51		8.715	9.727	1.757	0.069	10.830	5.270	1.870	0.070
2116	8.46E+03	6.63E+03	1.38E+03	1.78E+01	1.83E+02	2.50E+01	5.23E+00	1.04E+03	103.20		3.783	8.146	1.562	0.068	9.320	4.535	1.694	0.069
2117	8.46E+03	8.29E+03	1.31E+03	3.41E+01	2.61E+02	9.00E+01	4.76E+00	9.47E+02	93.86		5.946	8.851	1.655	0.069	9.996	4.856	1.772	0.070
2118	8.46E+03	8.35E+03	1.31E+03	1.47E+01	2.98E+02	1.67E+01	4.92E+00	9.80E+02	97.12		5.153	8.595	1.622	0.068	9.752	4.738	1.744	0.069
2119	8.46E+03	6.97E+03	1.37E+03	2.92E+01	2.97E+02	0.00E+00	4.57E+00	9.09E+02	90.13		6.898	9.155	1.692	0.069	10.287	4.998	1.806	0.070
2120	8.46E+03	6.63E+03	1.38E+03	1.30E+01	2.27E+02	0.00E+00	5.19E+00	1.03E+03	102.48		3.938	8.198	1.569	0.068	9.369	4.558	1.700	0.069
2121	8.46E+03	8.27E+03	1.31E+03	6.34E+00	2.70E+02	2.25E+02	5.12E+00	1.02E+03	100.93		4.279	8.310	1.585	0.068	9.478	4.608	1.712	0.069
2122	8.46E+03	8.25E+03	1.31E+03	5.64E+01	2.65E+02	3.00E+02	3.95E+00	7.87E+02	77.97		10.357	10.236	1.811	0.070	11.311	5.518	1.928	0.071
2123	8.46E+03	8.24E+03	1.31E+03	1.67E+01	2.36E+02	8.75E+01	5.16E+00	1.03E+03	101.73		4.103	8.252	1.577	0.068	9.422	4.582	1.706	0.069
2124	8.46E+03	8.49E+03	1.30E+03	5.74E+00	1.41E+02	1.63E+02	5.19E+00	1.03E+03	102.30		3.978	8.211	1.571	0.068	9.382	4.564	1.701	0.069
2125	8.47E+03	8.23E+03	1.31E+03	2.12E+01	2.08E+02	3.91E+02	5.19E+00	1.03E+03	102.37		3.963	8.206	1.571	0.068	9.377	4.561	1.701	0.069
2126	8.47E+03	6.87E+03	1.38E+03	2.83E+01	2.92E+02	1.29E+02	4.64E+00	9.23E+02	91.49		6.545	9.043	1.678	0.069	10.179	4.945	1.793	0.070
2127	8.47E+03	6.99E+03	1.37E+03	4.57E+01	2.83E+02	5.83E+01	4.19E+00	8.33E+02	82.60		8.976	9.808	1.766	0.069	10.907	5.310	1.880	0.071
2128	8.47E+03	7.07E+03	1.36E+03	2.52E+01	3.15E+02	1.00E+01	4.54E+00	9.04E+02	89.64		7.028	9.196	1.696	0.069	10.326	5.017	1.811	0.070
2129	8.47E+03	8.50E+03	1.30E+03	5.46E+00	1.22E+02	1.67E+01	5.16E+00	1.03E+03	101.88		4.069	8.241	1.575	0.068	9.411	4.577	1.704	0.069
2130	8.47E+03	8.37E+03	1.31E+03	1.56E+01	2.97E+02	5.00E+02	4.91E+00	9.78E+02	96.91		5.203	8.611	1.624	0.068	9.767	4.745	1.745	0.069
2131	8.47E+03	7.13E+03	1.35E+03	8.13E+00	2.70E+02	0.00E+00	5.11E+00	1.02E+03	100.72		4.325	8.325	1.587	0.068	9.492	4.615	1.714	0.069
2132	8.48E+03	7.00E+03	1.37E+03	2.43E+01	3.04E+02	1.21E+02	4.65E+00	9.26E+02	91.81		6.461	9.016	1.675	0.069	10.154	4.932	1.790	0.070
2133	8.48E+03	6.90E+03	1.38E+03	2.87E+01	2.94E+02	9.17E+01	4.61E+00	9.17E+02	90.89		6.698	9.091	1.684	0.069	10.226	4.968	1.799	0.070
2134	8.48E+03	8.39E+03	1.31E+03	1.72E+01	2.92E+02	4.00E+01	4.90E+00	9.75E+02	96.69		5.257	8.629	1.627	0.068	9.784	4.753	1.747	0.069
2135	8.48E+03	7.08E+03	1.36E+03	2.52E+01	3.15E+02	1.25E+02	4.54E+00	9.04E+02	89.64		7.028	9.196	1.696	0.069	10.326	5.017	1.811	0.070
2136	8.49E+03	8.40E+03	1.31E+03	1.20E+01	3.19E+02	5.14E+02	4.92E+00	9.78E+02	96.97		5.189	8.607	1.624	0.068	9.763	4.743	1.745	0.069
2137	8.49E+03	7.14E+03	1.35E+03	1.67E+01	3.26E+02	9.71E+02	4.77E+00	9.49E+02	94.08		5.889	8.833	1.652	0.069	9.979	4.847	1.770	0.070
2138	8.49E+03	7.10E+03	1.36E+03	3.45E+01	3.31E+02	1.00E+02	4.09E+00	8.14E+02	80.66		9.545	9.985	1.785	0.070	11.074	5.395	1.900	0.071
2139	8.49E+03	6.93E+03	1.38E+03	2.44E+01	3.32E+02	5.00E+01	4.49E+00	8.94E+02	88.65		7.289	9.279	1.706	0.069	10.405	5.056	1.820	0.070
2140	8.49E+03	6.78E+03	1.39E+03	6.36E+01	2.63E+02	1.00E+01	3.65E+00	7.26E+02	71.97		12.264	10.821	1.870	0.070	11.862	5.806	1.995	0.072
2141	8.49E+03	6.76E+03	1.39E+03	4.59E+01	2.56E+02	1.25E+02	4.44E+00	8.84E+02	87.61		7.571	9.368	1.716	0.069	10.489	5.098	1.830	0.070
2142	8.49E+03	7.02E+03	1.37E+03	2.34E+01	3.27E+02	7.14E+01	4.55E+00	9.05E+02	89.69		7.014	9.192	1.696	0.069	10.322	5.015	1.810	0.070
2143	8.50E+03	6.81E+03	1.39E+03	2.08E+01	3.19E+02	2.67E+02	4.67E+00	9.29E+02	92.13		6.380	8.990	1.672	0.069	10.129	4.920	1.788	0.070

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT				NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal	Compacted till Ksat (cm/s)	Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
2144	8.50E+03	6.73E+03	1.39E+03	2.60E+01	2.46E+02	2.67E+02	5.02E+00	9.98E+02	98.95		4.728	8.457	1.604	0.068	9.619	4.675	1.728	0.069
2145	7.60E+03	7.40E+03	1.32E+03	2.69E+01	3.06E+02	2.25E+02	4.55E+00	9.06E+02	89.84		6.974	9.179	1.694	0.069	10.310	5.009	1.809	0.070
2146	7.60E+03	7.50E+03	1.31E+03	3.13E+01	3.30E+02	5.00E+01	4.23E+00	8.41E+02	83.38		8.752	9.738	1.758	0.069	10.841	5.276	1.872	0.070
2147	7.70E+03	7.25E+03	1.32E+03	3.38E+01	1.61E+02	1.44E+02	5.00E+00	9.94E+02	98.55		4.819	8.487	1.608	0.068	9.647	4.688	1.732	0.069
2148	7.70E+03	7.35E+03	1.32E+03	2.43E+01	1.82E+02	8.50E+02	5.18E+00	1.03E+03	102.11		4.020	8.225	1.573	0.068	9.395	4.570	1.703	0.069
2149	7.70E+03	7.40E+03	1.32E+03	8.05E+00	3.15E+02	7.14E+02	5.01E+00	9.97E+02	98.85		4.750	8.464	1.605	0.068	9.626	4.678	1.729	0.069
2150	7.70E+03	7.50E+03	1.32E+03	5.66E+01	3.52E+02	2.62E+03	2.89E+00	5.74E+02	56.94		17.620	12.433	2.018	0.071	13.370	6.622	2.180	0.073
2151	7.80E+03	7.25E+03	1.32E+03	2.82E+01	1.33E+02	1.41E+02	5.06E+00	1.01E+03	99.73		4.550	8.399	1.597	0.068	9.563	4.648	1.722	0.069
2152	7.80E+03	7.35E+03	1.32E+03	1.21E+01	1.26E+02	0.00E+00	5.18E+00	1.03E+03	102.18		4.003	8.219	1.572	0.068	9.390	4.567	1.702	0.069
2153	7.80E+03	7.40E+03	1.32E+03	1.37E+01	1.32E+02	7.14E+02	5.19E+00	1.03E+03	102.40		3.955	8.203	1.570	0.068	9.375	4.560	1.700	0.069
2154	7.80E+03	7.50E+03	1.32E+03	5.71E+00	0.00E+00	8.33E+02	5.03E+00	1.00E+03	99.15		4.681	8.442	1.602	0.068	9.604	4.668	1.727	0.069
2155	7.80E+03	7.60E+03	1.31E+03	2.45E+01	3.26E+02	9.86E+02	4.52E+00	8.99E+02	89.08		7.175	9.243	1.702	0.069	10.370	5.039	1.816	0.070
2156	7.90E+03	7.10E+03	1.31E+03	1.79E+01	2.08E+02	4.75E+02	5.21E+00	1.04E+03	102.82		3.865	8.173	1.566	0.068	9.346	4.547	1.697	0.069
2157	7.90E+03	7.35E+03	1.32E+03	5.86E+00	5.78E+01	7.67E+02	5.07E+00	1.01E+03	99.97		4.495	8.381	1.594	0.068	9.546	4.640	1.720	0.069
2158	7.90E+03	7.40E+03	1.32E+03	5.56E+00	8.43E+01	1.43E+03	5.11E+00	1.02E+03	100.83		4.302	8.318	1.586	0.068	9.485	4.612	1.713	0.069
2159	7.90E+03	7.50E+03	1.32E+03	8.05E+00	3.15E+02	0.00E+00	5.01E+00	9.97E+02	98.85		4.750	8.464	1.605	0.068	9.626	4.678	1.729	0.069
2160	7.90E+03	7.60E+03	1.32E+03	3.28E+01	3.34E+02	1.82E+03	4.15E+00	8.26E+02	81.87		9.189	9.874	1.773	0.070	10.969	5.342	1.887	0.071
2161	7.90E+03	8.25E+03	1.27E+03	5.16E+01	2.77E+02	1.04E+03	4.02E+00	8.01E+02	79.39		9.927	10.103	1.797	0.070	11.186	5.453	1.913	0.071
2162	8.00E+03	7.10E+03	1.31E+03	1.57E+01	1.99E+02	5.47E+02	5.23E+00	1.04E+03	103.19		3.786	8.147	1.562	0.068	9.320	4.535	1.694	0.069
2163	8.00E+03	7.25E+03	1.32E+03	3.81E+00	1.80E+02	3.17E+02	5.18E+00	1.03E+03	102.25		3.988	8.214	1.572	0.068	9.385	4.565	1.702	0.069
2164	8.00E+03	7.35E+03	1.32E+03	8.14E-01	3.57E+01	2.25E+02	5.12E+00	1.02E+03	101.04		4.254	8.302	1.584	0.068	9.470	4.604	1.711	0.069
2165	8.00E+03	7.40E+03	1.32E+03	3.21E+00	6.87E+01	9.38E+02	5.11E+00	1.02E+03	100.80		4.308	8.319	1.586	0.068	9.487	4.612	1.713	0.069
2166	8.00E+03	7.50E+03	1.32E+03	1.34E+01	1.98E+02	0.00E+00	5.23E+00	1.04E+03	103.25		3.772	8.143	1.562	0.068	9.316	4.533	1.694	0.069
2167	8.00E+03	7.60E+03	1.32E+03	2.29E+01	3.36E+02	1.71E+03	4.54E+00	9.03E+02	89.54		7.052	9.204	1.697	0.069	10.333	5.021	1.811	0.070
2168	8.00E+03	7.70E+03	1.31E+03	2.05E+01	3.01E+02	1.30E+03	4.77E+00	9.50E+02	94.18		5.865	8.825	1.651	0.069	9.972	4.843	1.769	0.070
2169	8.00E+03	7.85E+03	1.30E+03	3.63E+01	2.30E+02	6.82E+01	4.87E+00	9.70E+02	96.13		5.390	8.672	1.632	0.068	9.825	4.773	1.752	0.069
2170	8.00E+03	7.95E+03	1.30E+03	3.33E+01	1.52E+02	1.08E+03	5.00E+00	9.94E+02	98.57		4.814	8.485	1.608	0.068	9.646	4.687	1.731	0.069
2171	8.00E+03	8.00E+03	1.30E+03	2.85E+01	1.65E+02	2.44E+02	5.11E+00	1.02E+03	100.74		4.322	8.324	1.587	0.068	9.491	4.615	1.714	0.069
2172	8.00E+03	8.35E+03	1.27E+03	1.61E+01	2.78E+02	3.94E+03	4.99E+00	9.93E+02	98.47		4.838	8.493	1.609	0.068	9.653	4.691	1.732	0.069
2173	8.10E+03	6.90E+03	1.31E+03	6.71E+00	2.70E+02	9.21E+02	5.11E+00	1.02E+03	100.89		4.288	8.313	1.585	0.068	9.480	4.609	1.712	0.069
2174	8.10E+03	7.00E+03	1.31E+03	1.43E+01	2.45E+02	6.11E+01	5.14E+00	1.02E+03	101.46		4.163	8.272	1.580	0.068	9.441	4.591	1.708	0.069
2175	8.10E+03	7.35E+03	1.32E+03	1.11E+01	7.87E+01	9.23E+02	5.05E+00	1.00E+03	99.57		4.585	8.410	1.598	0.068	9.574	4.653	1.723	0.069
2176	8.10E+03	7.40E+03	1.32E+03	8.05E+00	4.50E+01	1.11E+03	5.01E+00	9.97E+02	98.85		4.750	8.464	1.605	0.068	9.626	4.678	1.729	0.069
2177	8.10E+03	7.50E+03	1.32E+03	5.71E+00	9.00E+01	8.33E+02	5.12E+00	1.02E+03	100.99		4.266	8.306	1.584	0.068	9.473	4.606	1.712	0.069
2178	8.10E+03	7.60E+03	1.32E+03	1.67E+01	9.00E+01	0.00E+00	5.02E+00	9.99E+02	99.07		4.699	8.448	1.603	0.068	9.610	4.670	1.727	0.069
2179	8.10E+03	7.70E+03	1.32E+03	2.66E+01	9.00E+01	2.08E+03	4.86E+00	9.66E+02	95.81		5.468	8.697	1.635	0.068	9.849	4.784	1.755	0.069
2180	8.10E+03	7.75E+03	1.31E+03	1.73E+01	3.29E+02	1.79E+02	4.74E+00	9.44E+02	93.60		6.009	8.871	1.657	0.069	10.016	4.865	1.774	0.070
2181	8.10E+03	7.85E+03	1.30E+03	5.71E+00	9.00E+01	0.00E+00	5.12E+00	1.02E+03	100.99		4.266	8.306	1.584	0.068	9.473	4.606	1.712	0.069
2182	8.10E+03	7.95E+03	1.30E+03	3.13E+01	9.95E+01	2.00E+03	4.82E+00	9.60E+02	95.15		5.628	8.749	1.642	0.069	9.899	4.808	1.761	0.069

EQUITY SILVER MINE WASTE DUMP TOPOGRAPHIC DATA							SUNMODEL OUTPUT			Compacted till Ksat (cm/s)	NET INFILTRATION (%) calculated from polynomial eqns							
Node	x	y	z	slope	azimuth	area	average Qnet (of 199 days)	total Qnet	average % Qnet to horizontal		Uncompacted till Ksat 6E-4cm/s				Uncompacted till 6E-5cm/s			
Horizontal							5.068940245				2E-5	2E-6	2.E-07	2.E-08	2E-5	2E-6	2.E-07	2.E-08
2183	8.10E+03	8.00E+03	1.30E+03	3.48E+01	6.73E+01	1.83E+02	4.44E+00	8.83E+02	87.54		7.590	9.374	1.717	0.069	10.495	5.101	1.831	0.070
2184	8.10E+03	8.20E+03	1.29E+03	4.04E+01	1.38E+02	4.68E+02	4.78E+00	9.52E+02	94.35		5.824	8.812	1.650	0.069	9.959	4.837	1.768	0.069
2185	8.10E+03	8.25E+03	1.28E+03	1.26E+01	3.33E+02	1.76E+03	4.87E+00	9.69E+02	96.10		5.396	8.674	1.632	0.068	9.827	4.774	1.752	0.069
2186	8.10E+03	8.35E+03	1.27E+03	1.85E+01	2.79E+02	2.81E+03	4.95E+00	9.85E+02	97.66		5.026	8.554	1.617	0.068	9.712	4.719	1.739	0.069
2187	8.20E+03	7.50E+03	1.31E+03	2.29E+01	9.12E+01	2.13E+03	4.93E+00	9.82E+02	97.35		5.100	8.578	1.620	0.068	9.735	4.730	1.742	0.069
2188	8.20E+03	7.60E+03	1.31E+03	1.35E+01	3.37E+01	3.57E+02	4.86E+00	9.67E+02	95.89		5.447	8.691	1.635	0.068	9.843	4.781	1.754	0.069
2189	8.20E+03	7.75E+03	1.30E+03	1.84E+01	4.50E+01	8.61E+02	4.76E+00	9.47E+02	93.89		5.938	8.848	1.654	0.069	9.994	4.854	1.772	0.070
2190	8.20E+03	7.85E+03	1.29E+03	4.04E+01	7.83E+01	3.90E+02	4.38E+00	8.71E+02	86.39		7.905	9.473	1.728	0.069	10.589	5.149	1.842	0.070
2191	8.20E+03	7.95E+03	1.29E+03	5.18E+01	1.01E+02	9.44E+01	4.19E+00	8.34E+02	82.73		8.939	9.797	1.765	0.069	10.896	5.304	1.878	0.070
2192	8.20E+03	8.00E+03	1.29E+03	4.59E+01	7.60E+01	1.57E+02	4.16E+00	8.28E+02	82.12		9.116	9.852	1.771	0.070	10.948	5.331	1.885	0.071
2193	8.20E+03	8.20E+03	1.29E+03	9.00E+01	0.00E+00	2.83E+02	1.30E+00	2.59E+02	25.70		31.405	16.462	2.324	0.074	17.097	8.739	2.650	0.077
2194	8.30E+03	7.50E+03	1.31E+03	1.49E+01	1.96E+01	9.85E+02	4.80E+00	9.54E+02	94.60		5.763	8.792	1.647	0.069	9.940	4.828	1.765	0.069
2195	8.30E+03	7.60E+03	1.30E+03	3.81E+00	0.00E+00	3.33E+02	5.07E+00	1.01E+03	99.93		4.503	8.383	1.595	0.068	9.548	4.641	1.720	0.069
2196	8.30E+03	7.75E+03	1.29E+03	1.84E+01	4.57E+01	3.42E+02	4.76E+00	9.48E+02	93.94		5.924	8.844	1.654	0.069	9.990	4.852	1.771	0.070
									103.39									
									25.70									
									90.57									

APPENDIX E – FLOW QUANTITY CALCULATIONS FOR 2004 (AREA METHOD)

Appendix E - Manual Flow Calculations (Method 2)

Total squares	3604	
Total area	118	HA
Total precip	512.5	

1

Number	Squares	% Area	Area (ha)	Area (m2)	% Infiltration	% infiltration (dec)	Infiltration (mm)	Area X % Infil.	Area X Infil. (mm)	Infiltration	% of total	Location
1	1802	50.000	59.000	5.900E+05	5.870	0.059	30.084	3.463	1.775E+07	3.463	35.330966	Horizontal and south-facing slopes
2	353	9.795	11.558	1.156E+05	7.150	0.072	36.644	0.826	4.235E+06			All other sloping area(s)
3	165	4.578	5.402	5.402E+04	8.439	0.084	43.251	0.456	2.337E+06			
4	706	19.589	23.115	2.312E+05	9.724	0.097	49.834	2.248	1.152E+07			
6	126	3.496	4.125	4.125E+04	12.293	0.123	63.001	0.507	2.599E+06			
7	84	2.331	2.750	2.750E+04	13.577	0.136	69.584	0.373	1.914E+06	6.33914921	64.669034	
8	286	7.936	9.364	9.364E+04	14.862	0.149	76.167	1.392	7.132E+06			
11	70	1.942	2.292	2.292E+04	18.716	0.187	95.917	0.429	2.198E+06			
13	6	0.166	0.196	1.964E+03	24.563	0.246	125.884	0.048	2.473E+05			
14	6	0.166	0.196	1.964E+03	30.410	0.304	155.851	0.060	3.062E+05			
Total:	3604	1802	118.000	1.180E+06								

Avereage infiltration: 8.31% 42.574 mm for each mm2 in a m2
0.04 m

Total Flow: 50,237.55 m3

2

Number	Squares	% Area	Area (ha)	Area (m2)	% Infiltration	% infiltration (dec)	Infiltration (mm)			Infiltration	% of total	Location
1	1802	100.000	118.000	1.180E+06	5.870	0.059	30.084	5.870	3.550E+07	5.87	99.009901	Horizontal and south-facing slopes

Average Infiltration: 5.87% 30.084 mm
0.03 m

Total Flow: 35,498.83 m3

Percent increase from 1 to 2:
41.51891567