18.2 Risk Review

Stripping will become a more extensive piece of the cost as deeper portions of deposits are mined. The mine is currently reviewing the opportunity to integrate full time primary stripping operations into its mine planning to ensure that stripping is accomplished in a timely fashion in the later phases of mining and that the costs incurred for this are not realized in large lumps that are years prior to liberating the ore.

Costs shown in this section are based on the CostMine database. However, review of Materion's cost show these cost assumptions to reasonably mirror their operating circumstances. Materion has been producing at Spor Mountain for decades and has good relationships with its workforce, vendors, and contractors. It is reasonable to assume that they can continue operations without significant risk of cost volatility.

19 Economic Analysis (Item 22)

The economic analysis in this section relies on the mining schedule, capital and operating cost, and recovery parameters discussed in the previous sections of this report. This analysis is not a portrayal of the mine's internal economic analysis, but of Gustavson's confirmation that the internal numbers reviewed were viable and defensible. All figures are in constant 2021 US dollars.

19.1 Principal Assumptions

19.1.1 Model Parameters

The economic model is prepared on an after-tax basis. Model parameters are summarized in Table 19-1.

Table 19-1: Economic Model Parameters

Parameter	Value
Project Funding	100% Equity
Working Capital	25% of operating costs
Discount Rate	5%
Contingency Operating Costs	10%
Contingency Capital Costs	20% (except mobile equipment)

The model spans a projected 123-year mine life. One of the primary inputs to the model is the mine schedule presented in Appendix B, which provides the tonnage and contained metal of the mineralized material mined.

19.1.2 Taxes, Royalties, Depreciation, and Depletion

The study assumes a royalty of 5% on the net smelter return.

A Federal tax rate of 21% is assessed to net income, and a Utah severance tax ranging of 2.6% of the direct mining costs, consistent with current Utah Tax law. In Utah, machinery, equipment, parts, fuel and electricity for industrial use are exempt from the Utah Sales and Use tax and is not included in capital and operating cost estimations.

Depreciation for mobile equipment is based on the 7 year Modified Accelerated Cost Recovery System (MACRS) as allowed by the Internal Revenue Service. All other capital costs such as mine development capital and the process plant capital are depreciated based on a units of production depletion model.

Depletion for federal tax purposes is calculated by the percentage depletion method. For this property the depletion percentage is 22% of the gross revenue less royalties, not to exceed 50% of the taxable income.

19.2 Cashflow Forecasts and Annual Production Forecasts

19.2.1 Production Schedule

An annual projected schedule created by Gustavson is shown in Appendix A This schedule assumes the continuation of the current level of realized beryllium hydroxide production through the LoM in-pit reserves. Pit phases (LMUs) are mined consecutively, prioritizing deposits with the lowest stripping ratios first. It is assumed the primary waste stripping is spread evenly over the LoM to keep a consistently sized fleet and work force. Secondary waste stripping is matched to be proportional to the amount of ore mined to reach production goals for a given year and area.

19.2.2 Discounted Cashflow Model

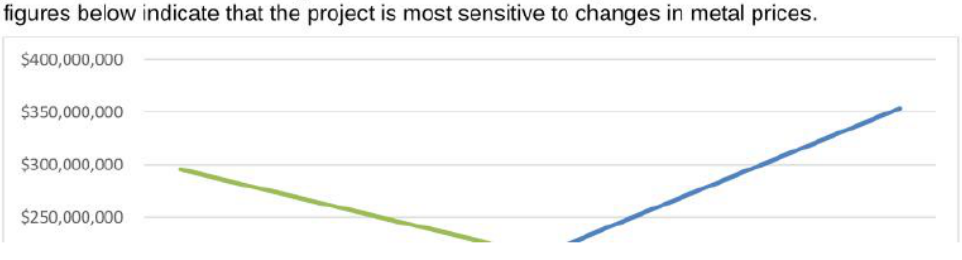
Materion sets its price to its external customers in confidential contracts based on production cost.

For the most recent three-year period through projected 2021, the price of beryllium has ranged from $180 to $227 per lb. When adjusted for conversion costs, a statistical regression analysis was performed with a regression coefficient of 0.80 implying a high confidence in the regression model. WSP has reviewed this with the company and determined it was most appropriate to use $190 per lb. for 2022. The estimated price can then be projected into the future, as the price and cost elements will rise in direct relation to each other.

The complete DCF model is included as Appendix B.

19.3 Sensitivity Analysis

Sensitivity analysis was performed on the parameters, capital cost, operating cost, and metal price on a before-tax basis. Figure 19-1 shows the sensitivity of NPV at a 10% discount rate. The figures below indicate that the project is most sensitive to changes in metal prices.



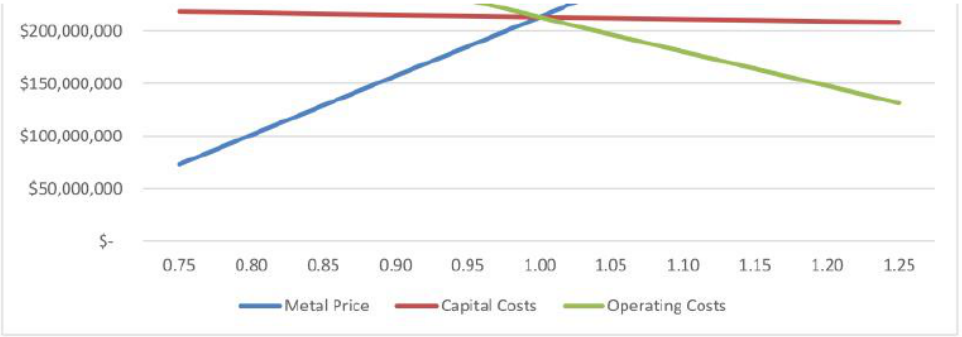


Figure 19-1: Sensitivity on NPV at 10% Discount

20 Adjacent Properties (Item 20)

20.1 Public Disclosure by Owner/Operator

No adjacent mineralized properties are known. The mine holds an ample acreage in fee property with attached mineral rights, containing sufficient material to continue production at current rates for 123 years.

21 Other Relevant Data and Information (Item 21)

As the project has been in production for about 50 years, WSP considers that there is no further material information concerning the project.

22 Interpretation and Conclusions (Item 22)

22.1 Results

Materion's Spor Mountain Mine and Mill have been in steady operations for over 50 years. The company has done a thorough job of drilling and characterizing the deposit and its limits. Materion has both currently sufficient facilities and equipment and future planning to continue its production. The reserves as Materion has defined them appear to be viable to mine at a profitable margin for decades in the future.

22.2 Significant Risks and Uncertainties

22.2.1 Exploration

The deposits are well drilled, both in extent and density. Were cost margins to become significantly more favorable to mining it might be worth drilling and defining more deeply laying mineralized margins of the deposit.

22.2.2 Mineral Resource and Reserve Estimates

Materion has produced repeatable and defensible estimates of their reserve and resource. Given their long history of production reconciliation, their current estimates are appropriate.

22.2.3 Metallurgy and Processing

The Spor Mountain plant has been in operation for over 50 years. Over those years the ore blending, reagents, temperatures and other process variables have been tuned for optimal recovery. While there is potential for increased yield in the plant's future, Materion's historical knowledge of both its raw ore materials and its processing results is extensive enough that there are not significant risks.

22.2.4 Projected Economic Outcomes

Spor Mountain is the world's largest producer of Beryllium. The bertrandite ore reserves are extensive and are rare in the world, bearing a unique value. Were additional sources of the metal to be found and developed elsewhere, it is unlikely they would endanger this operation. Materion's previous investments, integrated supply chain, client relationships, and historic success make it likely that their deposit is likely more competitive than its current or potential competitors.

23 Recommendations (Item 23)

Based on Gustavson's review we make the following recommendations for Materion's operations:

- Adding a position for a geologist for mapping, modeling, and ore control. Depending on needs this could be a full time, part time, or contract position that improves technical decision making and brings economic and safety benefits to yield and highwall stability in future pits.
- Complete the preliminary study on the potential economic impact of changing their stripping operations to a continuous, steady-state, basis in the future. Deeper pit phases will have higher waste stripping ratios that will require larger waste movement efforts. A scoping study to access the broad economic necessity and needed inputs would be a logical first.

  If this high level study shows economic benefits, it would permit a detailed scope definition for a feasibility level tradeoff study comparing campaigned waste mining versus a steady state waste fleet. The preliminary study results would form a sound decision point for future work with a potential cost benefit to Materion.

Table 23-1: Recommended Work Programs

Budget Item	Anticipated Cost
Geologist	$50,000-$80,000
Preliminary Analysis of Ore Stripping Fleet Trade Off	$16,100
2022-23 Project Budget	$66,100

24 References (Item 24)

Materion's Mining and Reclamation Plan (M/012/0003 – dated 12/31/13)

Materion's Undiluted Ore Reserve Estimation ~ December 31, 2019 (Dated 1/14/20)

Drillhole Spacing Study in Minex Report (Dated 4/11/15)

Topaz Mining Property, Descriptions of Individual Ore Deposits (Dated 11/13/13)

2020 USGS Commodities Report

Rainbow Pit Strength and Fracture Summaries (Dated 12/14/98)

Tertiary Volcanic Rocks and Uranium in the Thomas Range and Northern Drum Mountains, Juab County, Utah (USGS 1982)

Staatz, M., "Geology of the Beryllium Deposits in the Thomas Range Juab County, Utah", Geological Survey Bulletin 1142-M, 1963

Lindsey,D., " Beryllium Deposits at Spor Mountain, Utah", Utah Geological Survey, 2001.

25 Reliance on Information Provided by Registrant (Item 25)

The information, conclusions, and recommendations contained in this report are based largely upon review and analysis of digital and hard copy data and information supplied to Gustavson by Materion. Information was also obtained during discussions with Materion personnel familiar with the property. Several Materion personnel, listed below, contributed substantially to this report. Each has well over 15 years of experience in their area of expertise.

Brent Tolbert, Regional Operations Controller / Site Strategic Planner – Utah Operations

Robert Dalton, Mine Manager

Other technical experts have been retained by Materion to analyze metallurgical, processing, geotechnical, and environmental aspects of the Project.

26 Glossary

26.1 Mineral Resources

The Mineral Resources and Mineral Reserves have been classified according to "229.1300 (Item 1300) Definitions" (December 26, 2018). Accordingly, the Resources have been classified as Measured, Indicated or Inferred, the Reserves have been classified as Proven, and Probable based on the Measured and Indicated Resources as defined below.

A Mineral resource is a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A Mineral Resource is a reasonable estimate of mineralization, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or

in part, become economically extractable. It is not merely an inventory of all mineralization drilled or sampled.

An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of limited geological evidence and sampling. The level of geological uncertainty associated with an Inferred Mineral Resource is too high to apply relevant technical and economic factors likely to influence the prospects of economic extraction in a manner useful for evaluation of economic viability. Because an Inferred Mineral Resource has the lowest level of geological confidence of all Mineral Resources, which prevents the application of the modifying factors in a manner useful for evaluation of economic viability, an Inferred Mineral Resource may not be considered when assessing the economic viability of a mining project and may not be converted to a Mineral Reserve.

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. The level of geological certainty associated with an Indicated Mineral Resource is sufficient to allow a Qualified Person to apply modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Because an Indicated Mineral Resource has a lower level of confidence than the level of confidence of a Measured Mineral Resource, an Indicated Mineral Resource may only be converted to a Probable Mineral Reserve.

A Measured Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling. The level of geological certainty associated with a Measured Mineral Resource is sufficient to allow a Qualified Person to apply modifying factors, as defined in this section, in sufficient detail to support detailed mine planning and final evaluation of the economic viability of the deposit. Because a Measured Mineral Resource has a higher level of confidence than the level of confidence of either an Indicated Mineral Resource, or an Inferred Mineral Resource, a Measured Mineral Resource may be converted to a Proven Mineral Reserve, or to a Probable Mineral Reserve.

26.2 Mineral Reserves

A Mineral Reserve is an estimate of tonnage and grade, or quality, of Indicated and Measured Mineral Resources, that in the opinion of the Qualified Person, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a Measured, or Indicated Mineral Resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted.

A Probable Mineral Reserve is the economically mineable part of an Indicated, and in some cases, a Measured Mineral Resource.

A Proven Mineral Reserve is the economically mineable part of a Measured Mineral Resource and can only result from conversion of a Measured Mineral Resource.

26.3 Glossary

The following general mining terms, as shown in Table 26-1, are used in this TRS.

Table 26-1: Glossary

Term	Definition
Assay:	The chemical analysis of mineral samples to determine the metal content.
Capital Expenditure:	All other expenditures not classified as operating costs.
Composite:	Combining more than one sample result to give an average result over a larger distance.
Concentrate:	A metal-rich product resulting from a mineral enrichment process such as gravity concentration or flotation, in which most of the desired mineral has been separated from the waste material in the ore.
Crushing:	Initial process of reducing ore particle size to render it more amenable for further processing.
Cut-off Grade (CoG):	The grade of mineralized rock, which determines as to whether or not it is economic to recover its gold content by further concentration.
Dilution:	Waste, which is unavoidably mined with ore.
Dip:	Angle of inclination of a geological feature/rock from the horizontal.
Fault:	The surface of a fracture along which movement has occurred.
Footwall:	The underlying side of an orebody or stope.
Gangue:	Non-valuable components of the ore.
Grade:	The measure of concentration of gold within mineralized rock.
Hangingwall:	The overlying side of an orebody or slope.
Haulage:	A horizontal underground excavation which is used to transport mined ore.
Hydrocyclone:	A process whereby material is graded according to size by exploiting centrifugal forces of particulate materials.
Igneous:	Primary crystalline rock formed by the solidification of magma.
Kriging:	An interpolation method of assigning values from samples to blocks that minimizes the estimation error.
Level:	Horizontal tunnel the primary purpose is the transportation of personnel and materials.
Lithological:	Geological description pertaining to different rock types.
LoM Plans:	Life-of-Mine plans.
LRP:	Long Range Plan.

Material Properties:	Mine properties.
Milling:	A general term used to describe the process in which the ore is crushed and ground and subjected to physical or chemical treatment to extract the valuable metals to a concentrate or finished product.
Mineral/Mining Lease:	A lease area for which mineral rights are held.
Mining Assets:	The Material Properties and Significant Exploration Properties.
Ongoing Capital:	Capital estimates of a routine nature, which is necessary for sustaining operations.
Ore Reserve:	See Mineral Reserve.
Pillar:	Rock left behind to help support the excavations in an underground mine.
RoM:	Run-of-Mine.
Sedimentary:	Pertaining to rocks formed by the accumulation of sediments, formed by the erosion of other rocks.

Term	Definition
Shaft:	An opening cut downwards from the surface for transporting personnel, equipment, supplies, ore and waste.
Sill:	A thin, tabular, horizontal to sub-horizontal body of igneous rock formed by the injection of magma into planar zones of weakness.
Smelting:	A high temperature pyrometallurgical operation conducted in a furnace, in which the valuable metal is collected to a molten matte or doré phase and separated from the gangue components that accumulate in a less dense molten slag phase.
Stope:	Underground void created by mining.
Stratigraphy:	The study of stratified rocks in terms of time and space.
Strike:	Direction of line formed by the intersection of strata surfaces with the horizontal plane, always perpendicular to the dip direction.
Sulfide:	A sulfur bearing mineral.
Tailings:	Finely ground waste rock from which valuable minerals or metals have been extracted.
Thickening:	The process of concentrating solid particles in suspension.
Total Expenditure:	All expenditures including those of an operating and capital nature.
Variogram:	A statistical representation of the characteristics (usually grade).

26.4 Definition of Terms

The following abbreviations, as shown in Table 26-2, may be used in this TRS.

Table 26-2: Abbreviations

Abbreviation	Unit or Term
A	ampere
AA	atomic absorption
A/m^2	amperes per square meter
ANFO	ammonium nitrate fuel oil
Ag	silver
Au	gold
AuEq	gold equivalent grade
°C	degrees Centigrade
CCD	counter-current decantation
CIL	carbon-in-leach
CoG	cut-off grade
cm	centimeter
cm^2	square centimeter
cm^3	cubic centimeter
cfm	cubic feet per minute
ConfC	confidence code
CRec	core recovery
CSS	closed-side setting
CTW	calculated true width
°	degree (degrees)
dia.	diameter
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
FA	fire assay
ft	foot (feet)
ft^2	square foot (feet)
ft^3	cubic foot (feet)
fasl	feet above sea level
g	gram

Abbreviation	Unit or Term
gal	gallon
g/L	gram per liter
g-mol	gram-mole
gpm	gallons per minute
g/t	grams per tonne
ha	hectares
HDPE	Height Density Polyethylene
hp	horsepower
HTW	horizontal true width
ICP	induced couple plasma
ID2	inverse-distance squared
ID3	inverse-distance cubed
IFC	International Finance Corporation
ILS	Intermediate Leach Solution
kA	kiloamperes
kg	kilograms
km	kilometer
km^2	square kilometer
koz	thousand troy ounce
kt	thousand tonnes
kt/d	thousand tonnes per day
kt/y	thousand tonnes per year
kV	kilovolt
kW	kilowatt
kWh	kilowatt-hour
kWh/t	kilowatt-hour per metric tonne
L	liter
L/sec	liters per second
L/sec/m	liters per second per meter
lb	pound
LHD	Long-Haul Dump truck
LLDDP	Linear Low Density Polyethylene Plastic
LOI	Loss On Ignition
LoM	Life-of-Mine
m	meter
m^2	square meter
m^3	cubic meter
masl	meters above sea level
MARN	Ministry of the Environment and Natural Resources
MDA	Mine Development Associates
mg/L	milligrams/liter
mm	millimeter
mm^2	square millimeter
mm^3	cubic millimeter
MME	Mine & Mill Engineering
Moz	million troy ounces
Mt	million tonnes
MTW	measured true width
MW	million watts
m.y.	million years
NGO	non-governmental organization
NI 43-101	Canadian National Instrument 43-101
OSC	Ontario Securities Commission
oz	troy ounce
%	percent

Abbreviation	Unit or Term
PLC	Programmable Logic Controller
PLS	Pregnant Leach Solution
PMF	probable maximum flood
ppb	parts per billion
ppm	parts per million
QA/QC	Quality Assurance/Quality Control
RC	rotary circulation drilling
RoM	Run-of-Mine
RQD	Rock Quality Description
SEC	U.S. Securities & Exchange Commission
sec	second
SG	specific gravity
SPT	standard penetration testing
st	short ton (2,000 pounds)

t	tonne (metric ton) (2,204.6 pounds)
t/h	tonnes per hour
t/d	tonnes per day
t/y	tonnes per year
TSF	tailings storage facility
TSP	total suspended particulates
µm	micron or microns
V	volts
VFD	variable frequency drive
W	watt
XRD	x-ray diffraction
y	year

Appendix A

Mine Production Schedule

	Total Ore	Total Primary Waste	Total Secondary Waste	Total Tons	Total Be	Sold BeO
Year	Tons	Tons	Tons	Tons	lbs	lbs
2022	78,828	5,203,207	52,750	5,334,785	350,000	311,150
2023	78,828	4,300,000	52,750	4,431,578	350,000	311,150
2024	78,828	4,300,000	52,750	4,431,578	350,000	311,150
2025	77,161	4,300,000	53,716	4,430,877	350,000	311,150
2026	73,597	4,300,000	55,781	4,429,378	350,000	311,150
2027	73,597	4,300,000	55,781	4,429,378	350,000	311,150
2028	73,597	4,300,000	55,781	4,429,378	350,000	311,150
2029	73,597	4,300,000	55,781	4,429,378	350,000	311,150
2030	73,597	4,300,000	55,781	4,429,378	350,000	311,150
2031	68,666	4,300,000	59,078	4,427,745	350,000	311,150
2032-2041	777,682	43,000,000	733,908	44,511,590	3,500,000	3,111,500
2042-2051	761,512	43,000,000	479,717	44,241,229	3,500,000	3,111,500
2052-2061	614,950	43,000,000	407,304	44,022,254	3,500,000	3,111,500
2062-2071	820,711	43,000,000	749,027	44,569,739	3,500,000	3,111,500
2072-2081	577,196	43,000,000	558,192	44,135,387	3,500,000	3,111,501
2082-2091	819,679	43,000,000	1,420,835	45,240,514	3,500,000	3,111,500
2092-2101	650,298	43,000,000	311,363	43,961,661	3,500,000	3,111,500
2102-2111	726,228	43,000,000	593,283	44,319,511	3,500,000	3,111,500
2012-2121	621,790	43,000,000	463,494	44,085,284	3,500,000	3,111,500
2122-2131	669,866	43,000,000	1,670,073	45,339,938	3,500,000	3,111,500
2132-2141	701,556	34,893,960	3,133,100	38,728,616	3,500,000	3,111,500
2142-2144	208,988	-	182,370	391,357	911,609	810,420
TOTAL	8,700,751	508,797,167	11,252,613	528,750,531	42,911,609	38,148,420

Appendix B

Discounted Cashflow Model

	Units	TOTAL	2022-2031 1-10	2032-2041 11-20	2042-2051 21-30	2052-2061 31-40	2062-2071 41-50	2072-2081 51-60	2082-2091 61-70	2092-2101 71-80	2102-2111 81-90	2112-2121 91-100	2122-2131 101-110	2132-2141 111-120	214 121
Mine Production															
Total Ore	Tons	8,700,751	760,289	777,882	791,512	614,950	820,711	809,412	817,448	848,333	728,573	618,215	869,469	703,344	
Primary Waste	Tons	508,797,167	43,803,207	43,000,000	43,000,000	42,999,999	43,000,000	43,000,000	43,000,000	43,000,000	43,000,000	43,000,000	43,000,000	34,883,960	
Secondary Waste	Tons	11,252,613	549,948	733,908	479,717	407,304	749,027	622,111	1,371,261	311,435	568,535	460,519	1,761,695	3,341,812	
Total Waste	Tons	520,049,780	44,453,155	43,733,908	43,479,717	43,407,304	43,749,027	43,622,111	44,371,261	43,311,435	43,568,535	43,460,519	44,761,695	37,695,771	
Total	Tons	528,750,531	45,203,453	44,511,790	44,241,229	44,022,254	44,569,739	44,222,723	45,188,711	43,959,769	44,328,108	44,078,734	45,631,163	38,639,115	
Total Mined Recoverable Beryllium	lbs	42,911,609	3,500,003	3,500,000	3,500,000	3,500,000	3,499,999	3,500,101	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	
Sold Metal (Be)	lbs	38,148,420	3,111,500	3,111,500	3,111,500	3,111,500	3,111,500	3,111,501	3,111,500	3,111,500	3,111,500	3,111,500	3,111,500	3,111,500	
Total Project Income			561,625,751	561,625,784	561,625,688	561,625,788	561,625,689	561,625,843	561,625,812	561,625,731	561,625,689	561,625,710	561,625,752	561,625,773	
Market Price Be	/lb	-	180	180	180	180	180	180	180	180	180	180	180	180	
Produced Be Value		7,248,195,784	591,185,000	591,185,036	591,184,938	591,185,039	591,184,944	591,185,098	591,185,061	591,184,980	591,184,936	591,184,958	591,185,002	591,185,024	
Royalty	5%	362,409,890	29,559,250	29,559,252	29,559,247	29,559,252	29,559,246	29,559,255	29,559,253	29,559,249	29,559,247	29,559,248	29,559,250	29,559,251	
Net Be Income		6,885,785,895	561,625,751	561,625,784	561,625,688	561,625,788	561,625,699	561,625,843	561,625,812	561,625,731	561,625,689	561,625,710	561,625,752	561,625,773	
Total Net Income	$	6,627,180,636	561,625,751	561,625,784	561,625,688	561,625,788	561,625,699	561,625,843	561,625,812	561,625,731	561,625,689	561,625,710	561,625,752	561,625,773	
Total Project Operating Costs	$		329,426,232	334,466,444	333,010,767	296,187,049	350,997,353	310,722,866	351,765,517	308,762,182	328,966,748	305,366,745	322,191,630	322,590,821	
Contingency	15%	360,671,030	29,947,839	31,406,040	30,273,706	26,835,186	31,998,859	28,247,542	31,973,229	28,071,162	29,905,159	27760,613	29,294,330	29,335,529	
Mining Cost - Total	$		78,308,531	77,149,815	79,156,925	74,957,960	83,315,482	92,075,800	84,631,399	80,441,579	82,049,638	83539,652	88,774,433	81,755,546	
Load Haul - Total Cost	$	534,457,500	39,784,308	39,081,380	41,088,488	36,889,425	45,247,047	54,007,367	46,562,966	42,373,544	43,981,203	45471,217	50,207,998	47,121,851	
Drill / Blasting - Total Cost	$	192,330,379	15,868,085	15,395,500	15,395,500	15,395,499	15,395,500	15,395,499	15,395,500	15,395,500	15,395,500	15,395,499	15,395,500	12,787,298	
Mine Support - Total Cost	$	106,819,277	8,818,197	8,835,015	8,835,015	8,835,014	8,835,015	8,835,014	8,835,015	8,835,015	8,835,015	8835,015	8,835,015	8,088,476	
Mine Maintenance - Total Cost	$	46,877,400	3,811,171	3,811,171	3,811,171	3,811,171	3,811,171	3,811,171	3,811,171	3,811,171	3,811,171	3811,171	3,811,171	3,811,171	
Mine G & A - Total Cost	$	123,326,025	10,026,750	10,026,750	10,026,750	10,026,750	10,026,750	10,026,750	10,026,750	10,026,750	10,026,750	10026,750	10,026,750	10,026,750	
Process Cost - Total Cost	$		207,806,693	213,433,903	210,111,539	176,998,982	222,274,826	177,011,571	121,684,321	186,957,630	203,549,329	180,069,527	191,204,278	198,160,229	
Process Plant - Total Cost	$	2,465,576,933	204,387,149	210,040,328	206,696,237	174,597,869	218,945,329	171,612,313	118,176,181	183,452,163	200,132,480	177,268,277	187,796,850	194,747,061	
Laboratory - Total Cost	$	41,988,915	3,419,741	3,423,575	3,421,312	3,400,793	3,479,600	3,398,758	3,429,141	3,405,467	3,416,849	3401,250	3,408,428	3,413,168	
Site G&A - Total		165,330,869	13,462,992	13,476,686	13,468,601	11,395,320	13,498,201	13,388,951	13,496,569	13,412,012	13,452,632	13396,053	13,422,589	13,439,517	
EBDITA		2,918,406,478	232,399,533	227,159,340	228,614,919	264,438,739	210,628,315	250,902,877	209,920,294	252,842,950	232,668,941	256,258,995	239,432,122	238,934,952	
Total Project Capital Costs		261,846,289	20,966,753	18,721,299	27,350,194	24,362,959	23,967,430	21,572,201	29,755,645	19,551,758	19,156,529	23572,201	32,554,325	24,362,659	

Mining - Subtotal			-	-	-	-	-	-	-	-	-	-	-	-	
Mining - Capitalized Leasing			-	-	-	-	-	-	-	-	-	-	-	-	
Other - Expenditures			9,368,800	9,528,800	9,568,800	9,568,800	9,568,800	9,568,800	9,568,800	9,568,800	9,568,800	9,568,800	9,568,800	9,568,800	
Contingency	25%		1,394,800	1,654,800	1,594,800	1,594,800	1,594,800	1,594,800	1,594,800	1,594,800	1,594,800	1,594,800	1,594,800	1,594,800	
EnvBond Interest or Letter of Credit		2,460,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	
Sustaining Capital	2%	69,305,200	6,774,000	6,774,000	6,774,000	6,774,000	6,774,000	6,774,000	6,774,000	6,774,000	6,774,000	6,774,000	6,774,000	6,774,000	
Mine Closure and Reclamation		13,200,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	
Before Tax Revenue and Cashflow															
EBITDA		$ 2,918,408,478	$ 232,399,538	$ 227,159,340	$ 228,614,919	$ 266,438,739	$ 710,628,315	$ 256,902,877	$ 209,930,294	$ 252,842,950	$ 232,668,941	$ 256,258,995	$ 239,432,122	$ 238,934,952	$
Revenue-Capital		$ 2,626,562,188	$ 211,232,769	$ 209,438,041	$ 201,264,725	$ 240,076,079	$ 188,660,885	$ 227,330,676	$ 180,184,656	$ 233,291,192	$ 213,512,412	$ 232,686,785	$ 206,871,797	$ 214,572,282	$
Cumulative cashflow		$ 2,626,562,188	$ 1,170,305,509	$ 3,332,900,520	$ 5,134,378,019	$ 7,560,884,570	$ 9,953,283,187	$ 11,828,965,630	$ 13,142,689,497	$ 15,840,570,690	$ 18,088,411,848	$ 20,269,380,738	$ 22,477,787,666	$ 24,618,210,151	$ 7
Pre-tax NPV @ 35%per annum		$ -	$ 211,674,845	0	0	0	0	0	0	0	0	0	0	0	
Pre-tax NPV @ 15% per annum		$ -	$ 141,278,733	0	0	0	0	0	0	0	0	0	0	0	
After Tax Cash Flow															
0	$ -	$ -	$ 187,806,324	$ 184,719,881	$ 177,477,552	$ 211,965,953	$ 164,979,985	$ 200,198,446	$ 159,366,129	$ 206,548,590	$ 188,915,117	$ 205,618,582	$ 193,084,548	$ 189,574,749	$
0	$ -	$ -	$ 1,036,646,235	$ 2,951,953,080	$ 4,543,463,838	$ 6,688,476,129	$ 8,535,992,398	$ 10,451,624,868	$ 12,143,986,777	$ 13,990,887,593	$ 15,989,765,469	$ 17,918,199,436	$ 19,870,922,668	$ 21,764,117,885	$ 6
Post Tax NPV @ 35%per annum			$ 186,822,266												