

Financial Report for  
Weatherly International PLC/  
China Africa Resources PLC,  
Berg Aukas Project,  
Namibia.

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## DATE AND SIGNATURE PAGE

Yours faithfully,



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# 1 FINANCIAL EVALUATION

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## 1.1 INTRODUCTION AND SCOPE

Weatherly International PLC (“WTI”) is currently investigating the potential for the extraction of zinc, lead, silver and vanadium from the Berg Aukas mine in northern Namibia by means of milling and flotation. The company investigated various scenarios which were tested in the financial model.

China Africa Resources PLC (“CAR”) owns 100% of China Africa Resources Namibia (Pty) Ltd, the ultimate holder of the Berg Aukas mining licences. CAR is listed on the Alternative Investment Market (“AIM”) of the London Stock Exchange. It is a Joint Venture Company between China Mineral Exploration and Development Bureau (“ECE”) (65%) and WTI (25%), with the remaining 10% being held by other shareholders on AIM. Weatherly has a management agreement with CAR which includes the management of the Berg Aukas Project to feasibility study.

### 1.1.1 Scope of Work

Minxcon (Pty) Ltd (“Minxcon”) was mandated to review the in-house financial model completed by Mike Stuart and prepare a separate financial model to verify output of the current model. Inputs were provided to Minxcon from various sources. Minxcon did not perform any due diligence on these numbers and received it in good faith. Minxcon and its directors do not accept any liability for any errors, exclusions or payability formulas.

The Berg Aukas Project Preliminary Feasibility Study (“PFS”) (April 2014) study was prepared by the following companies:-

- Mineral resources - Coffey SA;
- Ore reserves - Lund Mining Associates;
- Mining study - Lund Mining Associates; and
- Processing and Infrastructure - Logiman.

Cost and capital, product prices and exchange rates are reported in current day money terms and discounted cash flows were based thereon.

## 1.2 DESCRIPTION OF OPERATION

The Berg Aukas Mine is located approximately 19 km east of the town of Grootfontein in northern Namibia. The Berg Aukas deposit comprises three orebodies known as the Northern Ore Horizon, the Central Ore Body and the Hanging Wall Ore Body. The Berg Aukas mine operated as a low tonnage, high grade producer of zinc, lead and Vanadium between 1958 and 1978. The mine ceased operations in 1978 due to depressed zinc prices and significant resources remain *in situ*.

The underground mining method recommended by the PFS is a variation of sub-level open stoping with ore being blasted down to the bottom of the existing voids from where it will be extracted through draw points. In places the geometry of the ore horizons may require a blast hole open stoping approach. The geometry of the stopes will be governed by the shape of the orebodies. Thus no standard stope configuration is being designed.

Currently it is projected that the mining rate will ramp up to hoisting 250,000 tonnes per annum (“tpa”) by year three of the operation. This is considered feasible as during the final six months of operation in 1978, the mine was hoisting at an annual rate of 258,000 tpa. The average LoM Ore Reserve grades reported, including dilution and after applying appropriate modifying factors, are expected to be approximately 11.16% Zn, 2.76% Pb, 0.23% V<sub>2</sub>O<sub>5</sub>. While silver is not included in the ore

reserve estimate due to insufficient data to be estimated in the Mineral Resource. Silver grades for recovery and revenue purposes were based on the silver content of the various flotation concentrates produced as part of the metallurgical testwork program.

In general the plant process flow is as follows:-

- Ore receiving and crushing;
- ore pre-concentration by dense medium separation (“DMS”) and shaking tables;
- flotation;
- concentrate handling;
- tails disposal system;
- reagents; and
- services and utilities.

Metallurgical test work was undertaken by Mintek in Johannesburg, under the supervision of Logiman. The test work regime was focused on replicating and improving the successful sequential flotation process flow sheet used when the mine was in operation. In addition, considerable effort was made to improve the pre-milling concentration of the ore using gravity separation. After gravity pre-concentration the plant is expected to mill and process approximately 80,000 tpa of upgraded ore.

### 1.3 PROCESSING OPTIONS

Four different processing options were investigated in the financial model to determine which option would be the most profitable. More detailed information regarding the processing options can be found in the Berg Aukas Concentrator Plant - Process Description report dated November 2013. The four options are summarised as follows:-

- **Option 1: New Process Plant at Berg Aukas Mine (Option 1 - Model)**
  - Construction of a crusher, gravity pre-concentration plant, mill and flotation processing plant on site.
- **Option 2: Pre-Concentration at Berg Aukas and Concentration at Tsumeb (Option 2A - Model)**
  - Construction of a crusher and gravity pre-concentration plant on site, with the pre-concentrate product trucked to an existing concentrator facility at Tsumeb (approximately 80 km by road), and rehabilitation of parts of the Tsumeb concentrator.
- **Option 3: Production of Pre-Concentrate (Option 2B - Model)**
  - Construction of a crusher and gravity pre-concentration plant on site. Direct sale of the pre-concentrate product.
- **Option 4: Use of Existing Tsumeb Concentrator Infrastructure (Option 3 -Model)**
  - Trucking all ore to Tsumeb, construction of a gravity pre-concentration plant at Tsumeb, crusher, mill and flotation section rehabilitated at Tsumeb concentrator.

The copper concentrator at Tsumeb, decommissioned in 2008, is owned by Ongopolo Ltd, the operating subsidiary of Weatherly International Plc (WTI). An investigation was carried out to determine the feasibility of re-commissioning the Tsumeb concentrator plant for processing the lead, zinc and Vanadium from the Berg Aukas run-of-mine (“RoM”) ore.

### 1.4 BASIS OF VALUATION OF THE MINING ASSETS

In generating the Financial Model and deriving the valuations, the following was completed:-

- A Cash Flow Model with an effective date of November 2013.
- The free cash flow to equity holder (“FCFE”) was set up in calendar years.

- A discount rate of 10% was applied as per the in-house model.
- The impact of mineral royalties has been included.
- Sensitivity analyses have been performed to ascertain the impact of discount factors, commodity prices, total working costs and capital expenditure.
- Capitalised expenses of USD2 million prior to start-up was included.
- A total of 10 years' production life and 11 years' project life was calculated.
- For tax purposes, assets other than freehold property are written off over three years.

## 1.5 ECONOMIC INPUT PARAMETERS

### 1.5.1 Spot Prices

The commodity prices displayed in Table 1 (sourced from the in-house model) were used in the DCF. Price forecasts are illustrated against the current price levels and highs and lows forecast prices, which were sourced from analysts as reported in Consensus Economics Inc.

*Table 1: Macro-Economic Forecasts and Commodity Prices over the LoM (Real Terms)*

| Commodities        | Unit      | LoM    | Current <sup>1</sup> | Low <sup>2</sup> | High <sup>2</sup> |
|--------------------|-----------|--------|----------------------|------------------|-------------------|
| Silver             | USD/oz.   | 20     | 19.87                | 16               | 25                |
| Zinc               | USD/tonne | 2,000  | 2,065                | 1,900            | 2,975             |
| Lead               | USD/tonne | 2,000  | 2,100                | 1,984            | 2,700             |
| Vanadium Pentoxide | USD/tonne | 13,000 | 14,550               |                  |                   |

Notes:

1. As at 14 May 2014.
2. Consensus Economics Inc.

### 1.5.2 Payability

The PFS investigated two different concentrate scenarios each of which attract a range of payabilities for the commodities at a discount to spot prices. The zinc oxide in its current form has a limited market and the obvious treatment route is through the Skorpion refinery, owned by Vedanta, at Rosh Pinah in Southern Namibia. The Skorpion refinery is a Solvent extraction and electrowinning ("SX/EW") operation and should not be affected by any deleterious elements.

In 2012 Skorpion conducted initial test work on Berg Aukas samples collected from the waste dump and concluded that the low Gangue Acid Consuming ("GAC") material would be amenable to processing at their facility (David-Howoses, 2012). Further test work carried out by Skorpion on the zinc oxide concentrate bulk sample produced by Mintek in 2013 confirmed the suitability of treating the zinc oxide concentrate at Skorpion refinery and subsequently Skorpion provided indicative treatment terms.

The descloizite (V<sub>2</sub>O<sub>5</sub>) concentrate also has a limited market, with Huludao in China being the only potential client. Currently, the financial analysis assumes that the descloizite concentrate is treated as a lead oxide concentrate with no credit for the vanadium content.

#### 1.5.2.1 DMS Concentrates

For the concentrates upgraded to DMS concentrates only, a significant discount adjustment is made to the price.

*Table 2: Payability of Metal in DMS Concentrates*

| Commodities                   | Payability |
|-------------------------------|------------|
| Zn                            | 50%        |
| Pb                            | 35%        |
| V <sub>2</sub> O <sub>5</sub> | 35%        |
| Ag                            | 35%        |

Source: China Africa Resources PFS Study.

### 1.5.2.2 Float Concentrates

Based on the current mass balance the potential concentrate grades are as follows:-

*Table 3: Grades in Float Concentrates*

| Concentrate                   | Concentrate Grade |      |                                 |        |
|-------------------------------|-------------------|------|---------------------------------|--------|
|                               | Zn %              | Pb % | V <sub>2</sub> O <sub>5</sub> % | Ag ppm |
| Zn Sulphide                   | 66.5              | 1.4  | 0.3                             | 50     |
| Pb Sulphide                   | 20.7              | 70.8 | 0.4                             | 165    |
| Zn Oxide                      | 47.7              | 1.0  | 0.2                             | 75     |
| Pb Oxide                      | 9.1               | 58.1 | 0.6                             | 175    |
| V <sub>2</sub> O <sub>5</sub> | 7.1               | 38.6 | 13.0                            | 0      |

Source: Mintek Testwork.

Indicative Treatment and Refining Charges (TC/RCs) for the lead sulphide and oxide and zinc sulphide concentrates for the PFS were sourced from Louis Dreyfus.

*Table 4: Indicative Zinc Sulphide Treatment and Refining Charges*

| Items                | Units                     | Charges |
|----------------------|---------------------------|---------|
| Zn content           | % Payable                 | 85%     |
| Minimum Zn deduction | Units                     | 8       |
| Ag content           | % Payable                 | 90%     |
| Ag deduction         | Grams                     | 50      |
| Zinc TC/RC           | USD per tonne concentrate | 170     |
| Ag RC                | USD/ oz                   | 1.5     |

Source: China Africa Resources PFS.

Zinc smelters normally pay for silver credits, but not for lead content.

*Table 5: Indicative Lead Sulphide Treatment and Refining Charges*

| Items                | Units                     | Charges |
|----------------------|---------------------------|---------|
| Pb content           | % Payable                 | 95%     |
| Minimum Pb deduction | Units                     | 3       |
| Zn content           | % Payable                 | 10%     |
| Ag content           | % Payable                 | 90%     |
| Ag deduction         | Grams                     | 50      |
| Pb TC/RC             | USD per tonne concentrate | 170     |
| Ag RC                | USD per oz                | 1.5     |

Source: China Africa Resources PFS.

Lead smelters normally pay for silver and zinc credits and do not receive a zinc TC/RC for zinc in the lead concentrates.

*Table 6: Indicative Lead Oxide Treatment and Refining Charges*

| Items                | Units                     | Charges |
|----------------------|---------------------------|---------|
| Pb content           | % Payable                 | 95%     |
| Minimum Pb deduction | Units                     | 3       |
| Zn content           | % Payable                 | 10%     |
| Ag content           | % Payable                 | 90%     |
| Ag deduction         | Grams                     | 50      |
| Pb TC/RC             | USD per tonne concentrate | 230     |
| Ag RC                | USD per oz                | 1.5     |

Source: China Africa Resources PFS.

Silver RC is based on USD/oz payable.

Indicative Zinc Oxide concentrate TC/RCs were obtained from Skorpion (Vedanta):-

- EITHER 85% payable & 25-30 cents per lb production costs for finished metal; and
- OR 60% payable and no further deductions.

The financial analysis has used the latter for simplicity as there is no material difference between the two options.



*Table 7: Overall Payability*

| Project Duration                                  |      | Overall Payability |
|---|------|--------------------|
| Zinc Sulphide                                     | Zinc | 57%                |
| Zinc Oxide  | Zinc | 60%                |
| Lead Sulphide                                     | Lead | 67%                |
| Lead Oxide  | Lead | 55%                |
| V <sub>2</sub> O <sub>5</sub> Treated at Pb Oxide | Lead | 5.48%              |

Source: China Africa Resources PFS.

### 1.5.2.3 Transport/Shipping

*Table 8: Road Distances*

| From       | To         | Distance |
|------------|------------|----------|
| Berg Aukas | Tsumeb     | 80 km    |
| Berg Aukas | Walvis Bay | 650 km   |
| Berg Aukas | Rosh Pinah | 1,350 km |

Source: China Africa Resources PFS.

The expected cost of trucking ore or pre-concentrate to Tsumeb from Berg Aukas is USD 12.50/tonne; this is based on the experience of Weatherly International at its Namibian operations at Otjihase and Matchless Mines. Based on the current concentrate transport costs from Otjihase to Walvis Bay, the estimated cost of concentrate transport from Tsumeb/Berg Aukas to Walvis Bay is USD 30/wet metric tonne ("WMT"), and to Rosh Pinah USD 60/WMT. Other realisation costs are based on WTI experience in Namibia (Table 9).

*Table 9: Realisation Charges*

| Item                                | Unit    | Amount |
|-------------------------------------|---------|--------|
| Moisture Content                    | %       | 10     |
| Concentrate BA/Tsumeb to Walvis Bay | USD/WMT | 30     |
| FOB/Handling                        | USD/WMT | 45     |
| Ocean Freight                       | USD/WMT | 30     |
| Insurance                           | USD/WMT | 2      |
| Concentrate to Skorpion             | USD/WMT | 60     |

Source: China Africa Resources PFS.

## 1.6 TAXES AND ROYALTIES

This section highlights the salient tax issues in Namibia as they may apply to CAR Namibia. Mining companies in Namibia, excluding those mining diamonds and petroleum, pay tax at a flat rate of 37.5%. Further detailed tax advice should be confirmed with the Namibian tax counsel as applicable. Value added tax ("VAT") is fully reclaimable, on a two-month cycle. Tax and royalties to the following amounts are expected to be paid:

*Table 10: Tax and Royalties Payable over LOM (Real terms)*

| Item      | Unit        | Option 1 | Option 2A | Option 2 B | Option3 |
|-----------|-------------|----------|-----------|------------|---------|
| Tax       | USD million | 40.347   | 41.777    | 21.584     | 37.424  |
| Royalties | USD million | 8.805    | 8.805     | 5.747      | 8.805   |

### 1.6.1 Timing of Deductions and Income

As a general rule, taxable profits and receipts are included for purposes of taxation in the tax year in which the taxpayer delivers the goods or renders the services giving rise to the income. Similarly, expenses are generally deducted on an accruals basis in the year during which the obligation to pay arises. The amount payable for customs duties varies but no duties are payable if imported from South Africa.

### 1.6.2 Deductions and Allowances

According to the Namibian tax law:-

- The cost of machinery, motor vehicles, utensils, articles, ships and aircraft may be deducted in three equal annual amounts, starting in the year of acquisition.
- An initial allowance of 20% of construction cost is permitted for commercial buildings in the year the buildings are first used. An allowance of 4% is permitted in each of the following 20 years. For industrial buildings of a registered manufacturer, an initial allowance of 20% and an annual allowance of 8% are allowed. No allowance is granted for employee housing.
- Prospecting and development expenses incurred in mining operations are not subject to the tax depreciation rules described above. In general, prospecting expenses may be deducted in the year production begins.
- Costs incurred on infrastructure may be deducted over three years, starting in the year production begins.
- All companies may carry forward unused losses indefinitely to offset taxable income in future years. Losses may not be carried back.
- Companies that carry on mining operations may offset current-year and prior-year trading losses from mining against other trade income and vice versa. However, such losses must be apportioned on a pro-rata basis between mining and other trade income to determine taxable income from each source in the current year.

The Berg Aukas Project has an unredeemed loss of USD2 million for tax purposes. This figure was considered in the tax calculation.

#### 1.6.2.1 Mining Royalties

Namibia applies a 3% mining royalty. The result is shown as a decrease in net income and thus a decrease in income tax liability.

### 1.7 DISCOUNT RATE

A company has different sources of finance, namely common stock, retained earnings, preferred stock and debt. Free cash flow is based on either free cash flow to the firm ("FCFF") or free cash flow to equity ("FCFE"). FCFF is the cash flow available to all the firm's suppliers of capital once the firm pays all operating expenses (including taxes) and expenditures needed to sustain the firm's productive capacity. The expenditures include what is needed to purchase fixed assets and working capital, such as inventory. FCFE is the cash flow available to the firm's common stockholders once operating expenses (including taxes), expenditures needed to sustain the firm's productive capacity, and payments to (and receipts from) debt holders are accounted for.

The cashflow was shown at 100% equity, hence the cash flow is shown as the FCFE. A discount rate of 10% was applied to the in-house model. Using this discount rate and Capital Asset Pricing Model ("CAPM") Minxcon illustrates the potential Beta or Project risk assumed for the Project in the calculation by:-

- Calculating from the 10% real discount rate used;
- converting to a nominal discount rate;
- using the 30 years US Government Bond as risk-free rate - 3.40%;
- using a market risk premium of 5%, a rate generally considered as being the investor's expectation for investing in equity rather than a risk-free government bond; and
- reflecting a Beta of 1.87, which Minxcon believes is fair for this Project.

Table 11: Berg Aukas Cost of Equity

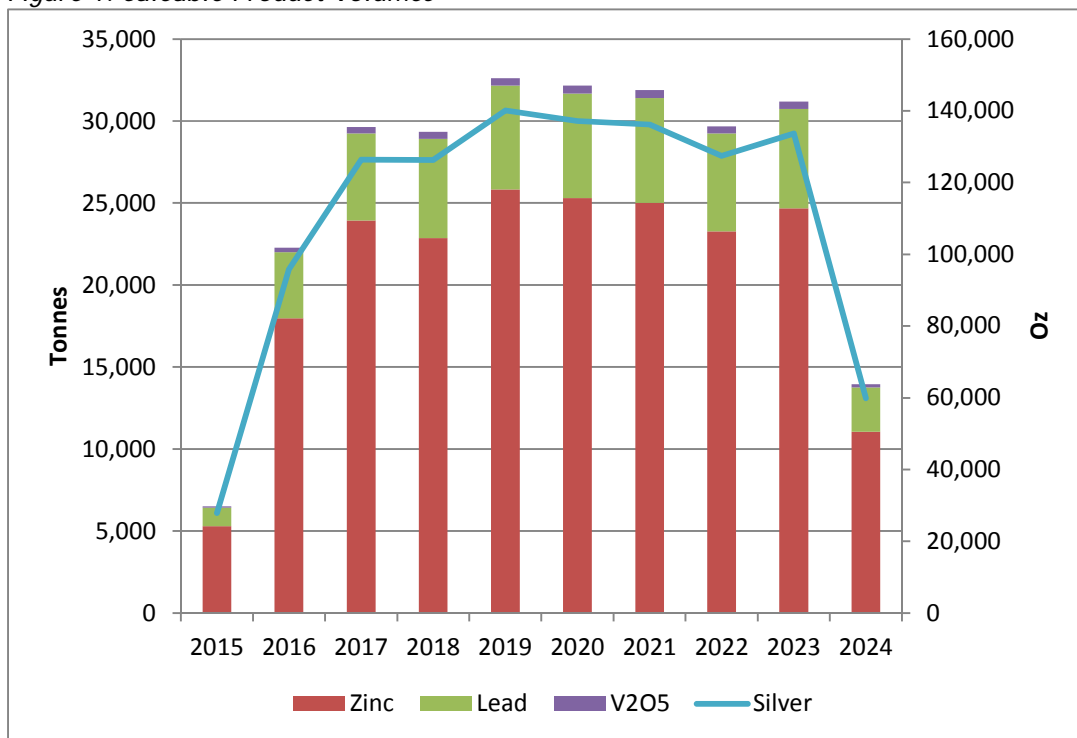
| Cost of Equity                     | Rate  |
|------------------------------------|-------|
| Risk-free rate (US Long Bond rate) | 3.40% |
| Risk premium of market             | 5.00% |
| Base beta (Project Premium)        | 1.87  |

| Cost of Equity                | Rate   |
|-------------------------------|--------|
| Nominal Cost of equity (CAPM) | 12.75% |
| Real Cost of Equity (CAPM)    | 10.00% |

### 1.8 SALEABLE PRODUCT

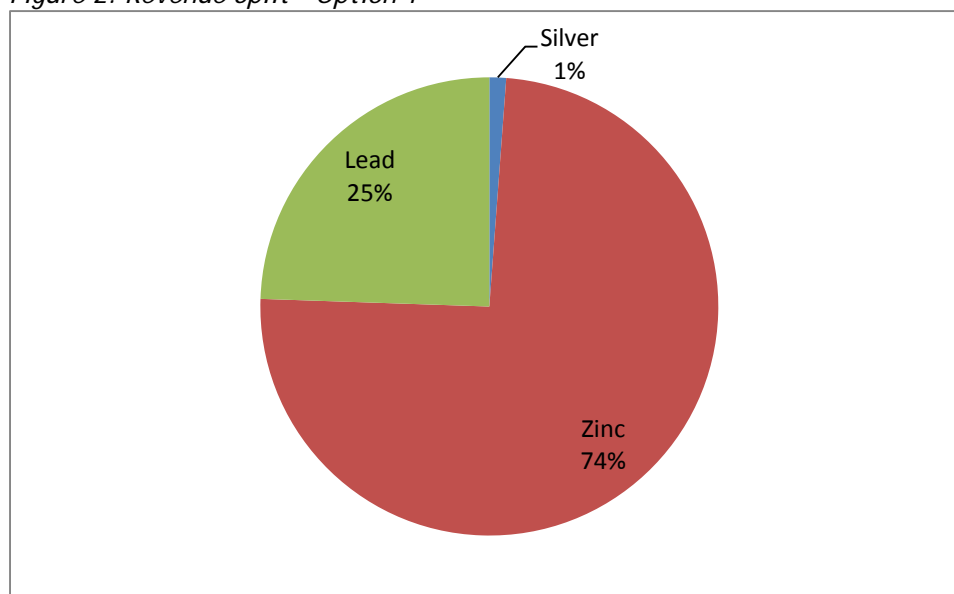
Currently, it is envisioned that the mining rate will ramp up to 250,000 tonnes per annum. After gravity pre-concentration the plant is expected to mill and process approximately 80,000tpa. Figure 1 illustrates the expected saleable product (metal in concentrate) volumes over the LoM. Note that the graph reflects zinc, lead and vanadium pentoxide (V<sub>2</sub>O<sub>5</sub>) production in thousand tonnes and silver in ounces. An average overall mass pull of 22% and recoveries of 90% (zinc), 89% (lead), 76% (V<sub>2</sub>O<sub>5</sub>) were achieved over the LoM. Silver assays results from the float concentrate was taken as the most accurate and used instead of calculating the mass flow from the original Silver head grade.

Figure 1: Saleable Product Volumes



The bulk of income is derived from lead and zinc. Planned mine closures in 2014 looks set to ease years of over-supply and bodes well for the Project. Stock at LME warehouses have also declined due to increased demand. The outlook remains buoyant with prices set to grow over the next few years. Demand for zinc has surged due to increased spending by China on luxury household items of which zinc is a major component. The price remains buoyant and fears of production shortfalls are on the increase.

Figure 2: Revenue Split - Option 1



## 1.9 OPERATING RATIOS

### 1.9.1 Mining and Processing

#### 1.9.1.1 Opex

Direct Cash Costs, expressed per ore tonne delivered to the plant (RoM), are detailed in Figure 3. Mining cost over the LoM is expected at USD22/ore tonne. Processing cost is expected at USD20-41/ore tonne over the LoM depending on the Option chosen. Other costs, including treatment and refinery costs of the concentrate and realisation fees, is expected to be between USD31-38/ore tonne.

Figure 3: Mining and Plant Operating Unit Costs (USD/ore tonne)

| Item                          | Unit             | Option 1  | Option 2A | Option 2 B | Option3   |
|-------------------------------|------------------|-----------|-----------|------------|-----------|
| Mine Cost                     | USD/tonne        | 22        | 22        | 22         | 22        |
| Plant Costs                   | USD/tonne        | 37        | 34        | 19         | 41        |
| Other Costs                   | USD/tonne        | 31        | 31        | 38         | 31        |
| <b>Direct Cash Costs (C1)</b> | <b>USD/tonne</b> | <b>90</b> | <b>87</b> | <b>78</b>  | <b>94</b> |

The following tables describe the average unit operating costs of the operation over the LoM. Although fully allocated costs are the lowest for Option 2B, Option 2A reflects the highest margins. Total notional cost per tonne/oz is also the breakeven price for the Project on different commodities. At a spot price of USD2,000/tonne all three options hurdle.

Table 12: Operating Ratios

|                                   |                         | Option 1   | Option 2A  | Option 2B  | Option 3   |
|-----------------------------------|-------------------------|------------|------------|------------|------------|
| <b>Net Turnover</b>               | <b>USD/Milled tonne</b> | <b>175</b> | <b>175</b> | <b>131</b> | <b>175</b> |
| Mine Cost                         | USD/tonne               | 22         | 22         | 22         | 22         |
| Plant Costs                       | USD/tonne               | 37         | 34         | 19         | 41         |
| Other Costs                       | USD/tonne               | 31         | 31         | 38         | 31         |
| <b>Direct Cash Costs (C1)</b>     | <b>USD/tonne</b>        | <b>90</b>  | <b>87</b>  | <b>78</b>  | <b>94</b>  |
| Capex                             | USD/tonne               | 27         | 27         | 20         | 26         |
| <b>Production Costs (C2)</b>      | <b>USD/tonne</b>        | <b>116</b> | <b>114</b> | <b>99</b>  | <b>120</b> |
| Royalties                         | USD/tonne               | 4          | 4          | 3          | 4          |
| <b>Fully Allocated Costs (C3)</b> | <b>USD/tonne</b>        | <b>120</b> | <b>118</b> | <b>101</b> | <b>124</b> |
| EBITDA*                           | USD/tonne               | 81         | 83         | 50         | 75         |
| <b>Notional Cost</b>              | <b>USD/tonne</b>        | <b>120</b> | <b>118</b> | <b>101</b> | <b>124</b> |
| EBITDA Margin                     | %                       | 46%        | 48%        | 38%        | 44%        |
| <b>NCE Margin</b>                 | <b>%</b>                | <b>31%</b> | <b>32%</b> | <b>23%</b> | <b>29%</b> |
| Zinc Equivalent                   | Tonnes                  | 179,062    | 179,062    | 134,737    | 179,062    |
| Lead Equivalent                   | Tonnes                  | 179,062    | 179,062    | 134,737    | 179,062    |

|                      |                      | Option 1    | Option 2A   | Option 2B   | Option 3    |
|----------------------|----------------------|-------------|-------------|-------------|-------------|
| <b>Notional Cost</b> | <b>USD/ Pb/Zn t.</b> | <b>1379</b> | <b>1357</b> | <b>1545</b> | <b>1423</b> |

Note:

1. EBITDA - Earnings before interest, tax, depreciation and amortisation
2. Notional Cash Expenditure ("NCE") includes:-
  - All operating costs;
  - All capital expenditure (e.g. growth and sustaining capital expenditure); and
  - All near-mine exploration expenditure.
  - Plant Opex and Capital at ZAR/USD 10,00

### 1.9.1.2 Capex

The total capital expenditure for the LoM is displayed in Table 13.

Table 13: Project Mining Capex

| Item                                   | Unit       | Total             | 2014              | 2015              |
|--|------------|-------------------|-------------------|-------------------|
| Shaft Refurbishment/Head Frame/Winders | USD        | 5,500,000         | 5,500,000         | 0                 |
| U/G Refurbishment                      | USD        | 0                 | 0                 | 0                 |
| Dewatering                             | USD        | 7,018,000         | 6,009,000         | 1,009,000         |
| Mining Equipment                       | USD        | 3,393,980         | 0                 | 3,393,980         |
| Development                            | USD        | 8,071,380         | 180               | 8,071,200         |
| <b>Total</b>                           | <b>USD</b> | <b>23,983,360</b> | <b>11,509,180</b> | <b>12,474,180</b> |

Table 14: Project Plant Capex

| Item                                     | Unit | Total      | 2014      | 2015       |
|--|------|------------|-----------|------------|
| Option 1 - All Processing On Site        | USD  | 25,763,575 | 6,440,894 | 19,322,682 |
| Option 2B - DMS on Site                  | USD  | 14,361,270 | 3,590,318 | 10,770,953 |
| Option 2A - DMS on Site, Float at Tsumeb | USD  | 27,675,495 | 6,918,874 | 20,756,621 |
| Option 3 - All Processing at Tsumeb      | USD  | 24,151,237 | 6,037,809 | 18,113,428 |

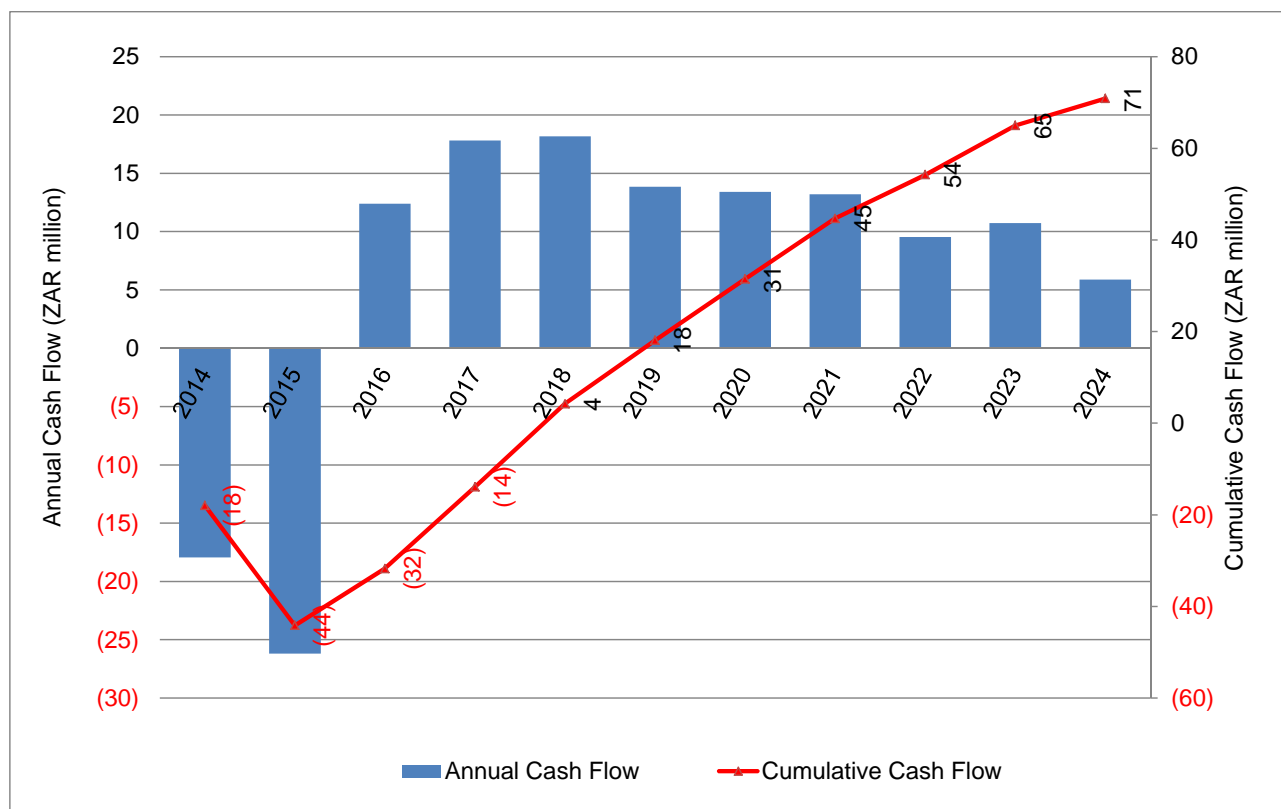
Note: Plant Opex and Capital at ZAR/USD 10,00

## 1.10 DISCOUNTED CASH FLOW ANALYSIS

Minxcon's in-house Discounted Cash Flow ("DCF") model was used to illustrate the FCFE net present value ("NPV") for the operation in real terms. The NPV is derived from post-royalties and tax, pre-debt real cash flows, using the techno-economic parameters, commodity price and macro-economic projections

This valuation is based on a free cash flow and measures the economic viability of the orebody to demonstrate if the extraction of the Mineral Reserve is viable and justifiable under a defined set of realistically assumed modifying factors. The model is based on calendar years running from January to December. The peak funding requirement for the annual model (See Option 1 in Figure 4) is expected in 2015 for all the scenarios.

Figure 4: Annual and Cumulative Real Cash Flow Option 1 (Real Terms - post tax)



Pre-tax NPV and IRR's for the four scenarios are shown below

Table 15: Pre-Tax NPV's and IRR's (Real Terms - Pre-Tax)

| Item             | Unit               | Option 1  | Option 2A | Option 2B | Option 3  |
|------------------|--------------------|-----------|-----------|-----------|-----------|
| IRR (%)          |                    | 31.53%    | 31.43%    | 25.27%    | 30.58%    |
| NPV @ 0%         | USD million        | 111       | 115       | 61        | 103       |
| NPV @ 3%         | USD million        | 88        | 91        | 47        | 81        |
| NPV @ 5%         | USD million        | 75        | 77        | 40        | 69        |
| <b>NPV @ 10%</b> | <b>USD million</b> | <b>49</b> | <b>51</b> | <b>24</b> | <b>45</b> |

Table 16 displays the NPV of the four scenarios in constant money terms at various discount rates. A best-estimated value calculated at a real discount rate of 10% is either Option 1 or 2A. This is also reflected in the IRR of 25% for these two options.

Table 16: NPV at Various Discount Rates (Real Term - Post Tax)

| NPV @ Different Discount Rates | Unit               | Option 1  | Option 2A | Option 2B | Option 3  |
|--------------------------------|--------------------|-----------|-----------|-----------|-----------|
| NPV @ 0%                       | USD million        | 71        | 73        | 40        | 66        |
| NPV @ 3%                       | USD million        | 55        | 57        | 30        | 51        |
| NPV @ 5%                       | USD million        | 46        | 47        | 24        | 42        |
| <b>NPV @ 10%</b>               | <b>USD million</b> | <b>29</b> | <b>29</b> | <b>13</b> | <b>26</b> |

Table 17 illustrates the profitability ratios of the Project.

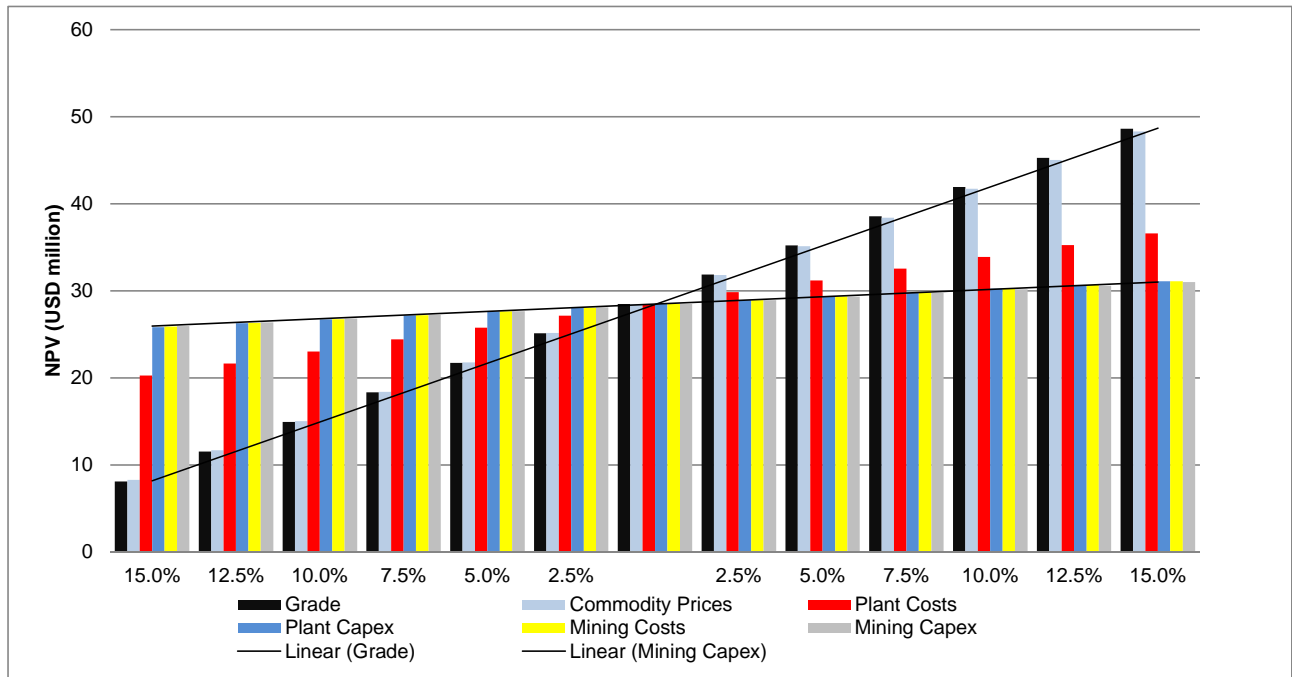
Table 17: Profitability Ratios (Real Term - Post Tax)

| Item               | Option 1 | Option 2A | Option 2B | Option 3 |
|--------------------|----------|-----------|-----------|----------|
| IRR (%)            | 25.08%   | 24.98%    | 19.96%    | 24.31%   |
| LoM                | 10       | 10        | 10        | 10       |
| PV of Income Flow  | 99       | 102       | 63        | 94       |
| PV of Investment   | 47       | 49        | 36        | 45       |
| Benefit-Cost Ratio | 2.11     | 2.10      | 1.73      | 2.06     |
| Capital Gain       | 111%     | 110%      | 73%       | 106%     |
| Average Payback    | 3.77     | 3.77      | 4.29      | 3.82     |

### 1.10.1.1 Sensitivity Analysis

Based on the real cash flows calculated in the financial model, Minxcon reported a DCF valuation and performed single-parameter sensitivity analyses to ascertain the impact on the NPV. For the DCF the commodity prices and grade have the biggest impact on the NPV and the steepness of the curve illustrates a high sensitivity.

Figure 5: Sensitivity Analysis (Option 1)



## 2 CONCLUSIONS

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### 2.1 CONCLUSIONS

Minxcon concludes the following with regard to the Berg Aukas Project:-

- The financial analysis performed on the Berg Aukas project proved to be viable under the technical and economic scenarios for all four scenarios.
- Notional Cost margins of 30% in real terms are attractive.
- Options 1 and 2A show the best returns and IRR of 25% in real USD terms.
- Under the current economic environment the Project is robust and it is recommended that the project phases move to the next decision level.
- Although not a big revenue earner, more work is required to establish silver grades.
- The price outlook for both zinc and lead remains buoyant with strong demand and possible supply shortages foreseen in future.



### 3 APPENDIX 1

Table 18: Real Cash Flow Option 1



**Project Title:** Berg Aukas  
**Client:** Weatherleys  
**Project Code:** M14\_024a

| Project Duration                           | Unit                             | Totals      | 2014                 | 2015                | 2016                | 2017                | 2018                | 2019                | 2020                | 2021                | 2022                | 2023                | 2024                |
|--|----------------------------------|-------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Calendar Years                             |                                  |             | 2014                 | 2015                | 2016                | 2017                | 2018                | 2019                | 2020                | 2021                | 2022                | 2023                | 2024                |
| Financial Years                            | years                            | 10          | 0                    | 1                   | 2                   | 3                   | 4                   | 5                   | 6                   | 7                   | 8                   | 9                   | 10                  |
| <b>Macro-Economic Factors (Real Terms)</b> |                                  |             |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <b>Commodities</b>                         |                                  |             |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Commodity prices                           | Silver                           | USD/oz      | 20                   | 20                  | 20                  | 20                  | 20                  | 20                  | 20                  | 20                  | 20                  | 20                  | 20                  |
| Commodity prices                           | Zinc                             | USD/tonne   | 2,000                | 2,000               | 2,000               | 2,000               | 2,000               | 2,000               | 2,000               | 2,000               | 2,000               | 2,000               | 2,000               |
| Commodity prices                           | Lead                             | USD/tonne   | 2,000                | 2,000               | 2,000               | 2,000               | 2,000               | 2,000               | 2,000               | 2,000               | 2,000               | 2,000               | 2,000               |
| Commodity prices                           | Vanadium Pentoxide               | USD/tonne   | 13,000               | 13,000              | 13,000              | 13,000              | 13,000              | 13,000              | 13,000              | 13,000              | 13,000              | 13,000              | 13,000              |
| <b>Operating Statistics</b>                |                                  |             |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <b>Tonnes Produced</b>                     |                                  |             |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Development                                |                                  | tonnes      | 17,341               | 0                   | 6,726               | 2,823               | 2,242               | -                   | -                   | -                   | -                   | 2,775               | 2,775               |
| Ore Hoisted                                |                                  | tonnes      | 2,207,251            | -                   | 131,276             | 205,390             | 251,843             | 248,809             | 251,158             | 252,531             | 253,223             | 252,957             | 248,710             |
| ROM  |                                  | tonnes      | 2,051,627            | -                   | 42,753              | 167,797             | 222,335             | 248,809             | 251,158             | 252,531             | 253,223             | 252,957             | 248,710             |
| ROM  | (Max)                            | tonnes/mnth | 21,102               | -                   | 3,563               | 13,983              | 18,528              | 20,734              | 20,930              | 21,044              | 21,102              | 21,080              | 20,726              |
| Mill Head grade                            | Silver                           | g/t         | 8.94                 | -                   | 13.68               | 13.34               | 10.41               | 3.81                | 12.52               | 9.09                | 8.07                | 6.35                | 8.81                |
| Mill Head grade                            | Zinc                             | %           | 11.12%               | 0.00%               | 15.96%              | 12.58%              | 12.74%              | 9.47%               | 11.66%              | 11.13%              | 10.83%              | 9.53%               | 10.96%              |
| Mill Head grade                            | Lead                             | %           | 2.75%                | 0.00%               | 3.52%               | 2.74%               | 2.37%               | 2.74%               | 3.10%               | 2.91%               | 2.42%               | 2.71%               | 2.71%               |
| Mill Head grade                            | Vanadium Pentoxide               | %           | 0.23%                | 0.00%               | 0.21%               | 0.16%               | 0.22%               | 0.23%               | 0.29%               | 0.29%               | 0.21%               | 0.23%               | 0.23%               |
| Tonnes to DMS                              |                                  | tonnes      | 2,051,627            | -                   | 42,753              | 167,797             | 222,335             | 248,809             | 251,158             | 252,531             | 253,223             | 252,957             | 248,710             |
| <b>Recovered Concentrate</b>               |                                  |             |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Zinc Sulphide                              |                                  | Tonnes      | 96,202               | -                   | 2,507               | 8,466               | 11,299              | 10,667              | 12,104              | 11,845              | 11,693              | 10,881              | 11,563              |
| Zinc Oxide                                 |                                  | Tonnes      | 270,948              | -                   | 7,061               | 23,844              | 31,822              | 30,042              | 34,091              | 33,361              | 32,932              | 30,647              | 32,567              |
| Lead Sulphide                              |                                  | Tonnes      | 46,788               | -                   | 1,053               | 3,822               | 4,869               | 5,667               | 5,934               | 5,829               | 5,669               | 5,570               | 5,647               |
| Lead Oxide                                 |                                  | Tonnes      | 9,662                | -                   | 217                 | 789                 | 1,006               | 1,170               | 1,226               | 1,204               | 1,212               | 1,150               | 1,166               |
| V2O5 Concentrates                          |                                  | Tonnes      | 19,747               | -                   | 400                 | 1,370               | 2,038               | 2,330               | 2,402               | 2,719               | 2,726               | 2,318               | 2,379               |
| <b>Metal in Concentrate</b>                |                                  |             |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Silver                                     |                                  | Oz          | 1,110,554            | -                   | 27,863              | 95,819              | 126,386             | 126,234             | 140,039             | 137,181             | 136,160             | 127,409             | 133,634             |
| Zinc                                       |                                  | tonnes      | 205,183              | -                   | 5,301               | 17,964              | 23,937              | 22,869              | 25,821              | 25,299              | 25,003              | 23,277              | 24,668              |
| Lead                                       |                                  | tonnes      | 50,418               | -                   | 1,132               | 4,050               | 5,295               | 6,041               | 6,351               | 6,375               | 6,405               | 5,965               | 6,081               |
| Vanadium Pentoxide                         |                                  | tonnes      | 3,643                | -                   | 79                  | 271                 | 388                 | 425                 | 448                 | 486                 | 486                 | 424                 | 439                 |
| Silver                                     |                                  | kg          | 34,542               | -                   | 867                 | 2,980               | 3,931               | 3,926               | 4,356               | 4,267               | 4,235               | 4,156               | 4,161               |
| <b>Financial</b>                           |                                  |             |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <b>Revenue (incl Payability)</b>           |                                  |             |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Revenue                                    | Silver                           | USD         | 358,123,301          | -                   | 8,964,841           | 30,743,477          | 40,787,610          | 40,628,723          | 45,080,384          | 44,420,168          | 44,075,882          | 41,042,554          | 43,088,532          |
| Revenue                                    | Zinc                             | USD         | 4,236,420            | 0                   | 95,308              | 346,042             | 440,906             | 513,097             | 537,342             | 527,809             | 531,410             | 504,317             | 511,297             |
| Revenue                                    | Lead                             | USD         | 266,240,275          | 0                   | 6,929,104           | 23,411,163          | 31,237,258          | 29,544,078          | 33,499,350          | 32,788,452          | 32,372,958          | 30,127,757          | 32,002,111          |
| Revenue                                    | Vanadium Pentoxide               | USD         | 87,646,606           | 0                   | 1,940,430           | 6,986,272           | 9,109,447           | 10,571,548          | 11,043,693          | 11,103,907          | 11,171,515          | 10,410,480          | 10,575,124          |
| <b>Mining cost</b>                         |                                  |             | <b>(44,112,096)</b>  | <b>0</b>            | <b>(5,532,480)</b>  | <b>(6,019,744)</b>  | <b>(3,980,944)</b>  | <b>(4,018,528)</b>  | <b>(4,040,496)</b>  | <b>(4,051,568)</b>  | <b>(3,737,312)</b>  | <b>(7,309,360)</b>  | <b>(1,781,664)</b>  |
| Direct Cash Costs                          | Variable Cost                    | USD         | (44,112,096)         | 0                   | (5,532,480)         | (6,019,744)         | (3,980,944)         | (4,018,528)         | (4,040,496)         | (4,051,568)         | (3,737,312)         | (7,309,360)         | (1,781,664)         |
| <b>Plant cost</b>                          |                                  |             | <b>(74,950,038)</b>  | <b>0</b>            | <b>(1,561,853)</b>  | <b>(6,129,960)</b>  | <b>(8,122,342)</b>  | <b>(9,089,490)</b>  | <b>(9,225,462)</b>  | <b>(9,250,743)</b>  | <b>(9,241,025)</b>  | <b>(9,085,874)</b>  | <b>(4,067,984)</b>  |
| Direct Cash Costs                          | Variable Cost                    | USD         | (74,950,038)         | 0                   | (1,561,853)         | (6,129,960)         | (8,122,342)         | (9,089,490)         | (9,225,462)         | (9,250,743)         | (9,241,025)         | (9,085,874)         | (4,067,984)         |
| <b>Other Costs</b>                         |                                  |             | <b>(64,590,389)</b>  | <b>0</b>            | <b>(1,582,305)</b>  | <b>(5,447,907)</b>  | <b>(7,259,094)</b>  | <b>(7,386,012)</b>  | <b>(8,115,518)</b>  | <b>(8,077,862)</b>  | <b>(8,030,670)</b>  | <b>(7,436,754)</b>  | <b>(7,773,876)</b>  |
| Direct Cash Costs                          | Other Costs Variable             | USD         | (64,590,389)         | 0                   | (1,582,305)         | (5,447,907)         | (7,259,094)         | (7,386,012)         | (8,115,518)         | (8,077,862)         | (8,030,670)         | (7,436,754)         | (7,773,876)         |
| <b>Direct Cash Costs</b>                   | <b>Total C1</b>                  |             | <b>(183,652,522)</b> | <b>0</b>            | <b>(3,144,158)</b>  | <b>(17,110,347)</b> | <b>(21,401,180)</b> | <b>(20,456,447)</b> | <b>(21,309,350)</b> | <b>(21,343,821)</b> | <b>(21,332,980)</b> | <b>(24,055,091)</b> | <b>(24,169,109)</b> |
| Production Costs                           | Initial Capital expenditure      | USD         | (49,746,935)         | (17,950,074)        | (31,796,862)        | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   |
| Production Costs                           | SB                               | USD         | (4,700,011)          | 0                   | (466,498)           | (565,683)           | (522,817)           | (527,753)           | (530,638)           | (532,092)           | (664,733)           | (655,809)           | (233,986)           |
| <b>Production Costs</b>                    | <b>Total C2 (Includes C1)</b>    | <b>USD</b>  | <b>(238,099,469)</b> | <b>(17,950,074)</b> | <b>(34,941,019)</b> | <b>(17,576,844)</b> | <b>(21,966,864)</b> | <b>(20,979,264)</b> | <b>(21,874,103)</b> | <b>(21,874,459)</b> | <b>(21,865,073)</b> | <b>(24,719,825)</b> | <b>(24,824,919)</b> |
| Fully Allocated Costs                      | Revenue Royalty 1                | USD         | (8,805,987)          | 0                   | (221,476)           | (758,867)           | (1,005,855)         | (997,281)           | (1,108,946)         | (1,090,269)         | (1,081,356)         | (1,009,440)         | (474,322)           |
| <b>Fully Allocated Costs</b>               | <b>Total C3 (Includes C1+C2)</b> | <b>USD</b>  | <b>(246,905,456)</b> | <b>(17,950,074)</b> | <b>(35,162,495)</b> | <b>(18,335,712)</b> | <b>(22,972,719)</b> | <b>(21,976,545)</b> | <b>(22,964,429)</b> | <b>(22,964,429)</b> | <b>(22,946,429)</b> | <b>(25,727,999)</b> | <b>(25,884,358)</b> |
| EBITDA                                     |                                  | USD         | 165,664,792          | 0                   | 5,599,207           | 12,874,263          | 18,380,574          | 19,174,996          | 22,662,088          | 21,986,078          | 21,661,546          | 15,979,288          | 17,859,983          |
| EBIT                                       |                                  | USD         | 111,217,845          | (17,950,074)        | (26,197,655)        | 12,407,766          | 17,814,891          | 18,652,178          | 22,134,335          | 21,455,440          | 21,129,453          | 15,314,555          | 17,204,174          |
| Taxation                                   |                                  | USD         | (40,347,165)         | 0                   | 0                   | 0                   | (474,080)           | (8,296,251)         | (8,047,128)         | (7,924,269)         | (5,776,300)         | (6,465,914)         | (3,363,222)         |
| Income after tax                           |                                  | USD         | 70,870,681           | (17,950,074)        | (26,197,655)        | 12,407,766          | 17,814,891          | 18,178,098          | 13,838,084          | 13,408,312          | 13,205,184          | 9,538,255           | 10,738,259          |
| Working capital changes                    |                                  | USD         | 1                    | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   |
| <b>Cash Flow</b>                           |                                  |             |                      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Net Cash Flow                              | Annual cash flow                 | USD         | 70,870,681           | (17,950,074)        | (26,197,655)        | 12,407,766          | 17,814,891          | 18,178,098          | 13,838,084          | 13,408,312          | 13,205,184          | 9,538,255           | 10,738,259          |
| Cumulative Net Cash Flow                   | Cumulative cash flow             | USD         |                      | (17,950,073)        | (44,147,727)        | (31,739,962)        | (13,925,071)        | 4,253,028           | 18,091,111          | 31,499,423          | 44,704,607          | 54,242,862          | 64,981,121          |

