



[Xtract Resources plc](#) - XTR

# Definitive Feasibility Study

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**For immediate release  
28 February 2017  
Xtract Resources Plc  
Results of completed Definitive Feasibility Study**

The Board of Xtract Resources Plc ("**Xtract**" or the "**Company**") are pleased to announce that the Definitive Feasibility Study ("DFS") for the open pit operation of the Company's Manica Fair Bride Gold Project in Mozambique ("**Project**" or "**Fair Bride**") has been completed by Minxcon (Pty) Ltd ("**Minxcon**") and the results of which are summarised below. A copy of the DFS is available from the Company's website, [www.xtractresources.com](http://www.xtractresources.com)

## Highlights:

- After-tax Internal Rate of Return ("**IRR**") of **41.1%** at a gold price of US\$ 1,262 per ounce
- Project life of 7 years with average gold grade of 2.62 g/t producing 215,293 recovered ounces
- Project payback within **2 years**
- Direct cash cost ("**C1**") of **US\$556** per ounce
- All-in sustainable cost (including royalties and capital)("AISC") of **US\$862** per ounce
- Total capital expenditure of **US\$43.68** million
- The Net Present Value ("**NPV**") of **US\$ 42 million** at 8.4% discount rate
- Significant exploration potential in immediate vicinity
- A further 992,000 ounces in resource for additional evaluation and future exploitation
- Considerable exploration potential within the concession and nearby

**Colin Bird, Executive Chairman**, said: "*I am pleased to report that the DFS has produced a robust Project which is neither complex nor capital demanding. The Project has major upside potential which can be exploited later against a fully paid for processing plant. Opportunity exists for hard rock consolidation which we are exploring. The alluvial opportunity is extensive and we are currently discussing and negotiating third party mining contracts. We are already working on reducing capital numbers and introducing practical engineering to further reduce risk and enhance project financial parameters.*"

**Daan van Heerden of Minxcon**, said: "*The Manica study has produced a robust project targeted toward simplicity and predictability. We concur with managements approach to the concession and agree that the previously announced hybrid approach might have led to enhanced capital and operating risk.*"

Further details are available from the Company's website which details the company's project portfolio as well as a copy of this announcement: [www.xtractresources.com](http://www.xtractresources.com)

**Valuation Date**

The effective date of the DFS financial evaluation is 1 January 2017 ("**Valuation Date**") and Minxcon has stated that is not aware of any material changes that occurred between the Valuation Date and 28 February 2017, being the DFS report date ("**Report Date**").

#### Resource Estimate

The Company published on 11 May 2016 the Minxcon independent technical report on the Fair Bride Gold Project issued 15 April 2016 ("**Mineral Resource Statement**"). The DFS was based on, and the reported resources are as set out, in the Mineral Resource Statement. A geological model of the Fair Bride orebody was constructed. These sections were used to create a wireframe for the orebody or mineralised portion.

The Mineral Resource was classified into Measured, Indicated and Inferred Mineral Resource categories as defined in the SAMREC Code based on the kriging efficiency, number of samples and search radii. The Mineral Resource estimation for the Fair Bride open pit is presented in Table 1 below, declared to a depth of 280 m with a resource cut-off of 0.5 g/t. The open pit contains predominantly Measured and Indicated Mineral Resources and is SAMREC-compliant.

**Table 1: Open Pit Mineral Resource as at 4 March 2016**

Mineral Resource Category	Tonnes Mt	Au g/t	Au kg	Au koz
Measured	9.750	1.86	18,130	582.9
Indicated	3.310	1.62	5,368	172.6
Total M&I	13.060	1.80	23,498	755.5
Inferred	0.894	1.17	1,049	33.7
Total Measured Indicated and Inferred	13.954	1.76	24,547	789.2

#### Notes:

1. Source: Minxcon independent technical report on the Fair Bride Gold Deposit, issue date 15 April 2016, and the DFS, Executive Summary.
2. 0.5g/t cut-off.
3. Declared to a depth of 280m.
4. The effective date of the Mineral Resource Statement was 4 March 2016
5. The Inferred Mineral Resources have a large degree of uncertainty as to their existence and whether they can be mined economically or legally.
6. Only Mineral Resources lying within the legal boundaries are reported.
7. Mineral Resources are inclusive of Mineral Reserves.
8. No Geological losses are accounted for.
9. The operator of the Project is Explorator Lda., a wholly-owned subsidiary of Xtract. Gross and Net Attributable resources are the same.

#### Reserve Estimate

The Mineral Reserve is based on the Mineral Resources Statement and the DFS which includes the appropriate application of Modifying Factors, Minxcon has prepared a SAMREC-compliant estimate of Mineral Reserves as at 27 February 2017 as set out in Table 2 below:

**Table 2: Mineral Reserves as at 27 February 2017**

Mineral Reserve Category	Tonnes Delivered Mt	Delivered Grade g/t	Gold Content koz
Proven	2.90	2.63	245.2
Probable	0.31	2.44	24.3
Total Mineral Reserves	3.21	2.62	269.5

#### Notes:

1. Strategic Ore (Low Grade Material) is not included.
2. Au cut-off of 1.0 g/t.
3. Gold Price of USD1,270/oz.
4. The Competent Person is Daan van Heerden, B.Eng.(Min.Eng), M.Comm.(Bus.Admin.), ECSA, MSAIMM, AMMSA.
5. Tonnes refer to tonnes deliver to the processing plant.

6. The effective date of the Mineral Resource Statement is 27 February 2017
7. The operator of the Project is Explorator Lda., a wholly-owned subsidiary of Xtract. Gross and Net Attributable resources are the same.

## **Project Summary**

### **Mining Method**

The mining method that will be implemented at the Manica Project is Contractor Mining with Conventional Open Pit Mining, using truck and excavator combinations. The mining method requires the removal of topsoil which will be stockpiled. The mining of the harder material is conducted with drilling and blasting activities.

### **Mining Cut-off Grade**

A mining cut-off grade of 0.4 g/t was applied for the open pit project and all material below 0.4 g/t is classified as waste. The economic cut-off grade from the pit optimisation was calculated as 1.05 g/t. All material between 0.4 g/t and 1.0 g/t is therefore classified as low grade material. The Run of Mine ("RoM") ore for this project is ore material with a grade in excess of 1.0 g/t. The RoM material is fed to the processing plant at 42 ktpm.

### **Pit Optimisation**

The objective of open pit optimisation is to determine an open pit shape (shell) that provides the highest value for a deposit. The final pit design and production scheduling are based on the selected pit from the pit optimisation.

### **Diluted Production Schedules**

The production schedule prioritises oxide material early in the Life of Mine to ensure higher initial ore recoveries. The average stripping ratio is 7.6 (strategic ore considered as waste). The production scheduling of the final pit resulted in a life of mine of 7. A smoothed plant feed of 42 ktpm was possible without the need for pre-stripping. Oxide material will be depleted within two years and fresh material will gradually be introduced until year four, thereafter only fresh material will be processed.

### **Processing Strategy**

The material will be crushed in a three stage crushing circuit prior to processing in a ball milling and classification circuit.

### **Engineering and Infrastructure**

The Manica Gold Project is located 3.7 km to the north of the town of Manica. The project can be classified as a greenfield's project with minimal to low infrastructure being available on the project area. In order to establish a fully functional gold mining operation a number of critical infrastructure items are required. These will include reliable power supply infrastructure that has sufficient capacity to serve the mining operation and process plant with the required amenities.

### **Capital Estimation**

A contingency of 10% was added to all the capital. No additional renewals and replacements costs have been included for the mining in the model as this is accounted for in the mining contractor rate. A 6.0% renewals and replacement cost was included for the plant based on the plant operating costs.

The initial (year 0) capital costs and peak-funding requirement amounting to USD44 million. The funding requirement is for contractor mining and excludes the initial fleet cost as the fleet cost is included in the contractor rate. The engineering, procurement, and construction management ("EPCM") cost is included in the capital costs. After the first year the only capital is for Tailings Storage Facility wall expansions.

Power supply to the project area constitutes a risk due to misalignment with the project timeline and the construction timeline of Electricidade de Mozambique ("EDM"). Xtract needs to set up a contact session with the EDM to align timelines for the required installations and upgrades to the power supply network. Capital allowances have been made for these upgrades and installations.

### **Macro-Economic Forecasts**

Macro-economic forecasts and commodity prices in the DFS as set out below in Tables 3 and 4 were used by Minxcon in the DCF. The gold price was sourced from a number of different bank and broker forecasts by Minxcon and reviewed with the Company. The gold price was kept in constant money terms throughout life of mine ("LoM").

**Table 3: Gold Price Used in Financial Model (Real Terms)**

Commodity Unit	2017	2018	2019	2020	Long-term
Gold Price USD/oz	1,283	1,285	1,291	1,257	1,242
Gold Price USD/kg	41,239	41,302	41,497	40,428	39,945

**Source:** DFS Executive Summary

To produce an ounce of gold, mining companies incur not only operating costs, but also spend sustaining capital at the sites and capital on exploration, in order to sustain their long-term future. The cost components described below are broken down into fixed and variable costs. The fixed costs are based on a fixed amount throughout the year, which is independent of production and are shown as a USD input. The variable cost is directly dependant on the Milled tonnes (USD/gold tonne milled) for the plant and the waste or ore tonnes (USD/waste tonne or USD/ore tonne) for the mining.

The operating costs in the financial model and DCF were broken down into different categories:

- (C1) - Direct Cash Cost;
- (C2) - Production Cost; and
- (C3) - All-in Sustainable Cost ("AISC").

Detail about the operating cost and the breakdown of the mining, loading arrangement and other costs are described in the Operating Expenditure Report. The financial cost indicators are displayed per milled tonne as well as per recovered gold ounces. The saleable gold ounces over the LoM amounts to 215,293 ounces. A 10% contingency was included on the mining and plant capital cost. Fair Bride Mine has a direct cash cost of USD37/Milled t and an all-in sustainable cost of USD58/Milled t which equates to C1 costs of USD556/oz and AISC of USD862/oz.

**Table 4: Financial Cost Indicators**

Item	Unit	Amount	
Net Turnover	USD/Milled tonne		85
Mine Cost	USD/Milled tonne		20
Plant Costs	USD/Milled tonne		14
Other Costs	USD/Milled tonne		3
Direct Cash Cost (C1)	USD/Milled tonne		37
Capex	USD/Milled tonne		15
Production Cost (C2)	USD/Milled tonne		53
Royalties	USD/Milled tonne		5
All-in Sustainable Cost (C3)	USD/Milled tonne		58
All-in Sustainable Cost Margin	%	31.7%	
EBITDA*	USD/Milled tonne		42
EBITDA Margin	%	50%	
Gold Recovered	oz		215,293
Net Turnover	USD/Recovered Gold oz		1,262
Mine Cost	USD/Recovered Gold oz		295
Plant Costs	USD/Recovered Gold oz		210
Other Costs	USD/Recovered Gold oz		51
Direct Cash Cost (C1)	USD/Recovered Gold oz		556
Capex	USD/Recovered Gold oz		229
Production Cost (C2)	USD/Recovered Gold oz		786
Royalties	USD/Recovered Gold oz		76
All-in Sustainable Cost (C3)	USD/Recovered Gold oz		862
EBITDA*	USD/Recovered Gold oz		630

**Notes:**

1. Source: DFS Executive Summary

2. \* EBITDA - Earnings before Interest Tax Depreciation and Amortisation and excludes capital expenditure.
3. Numbers may not add up due to rounding.
4. All-in Sustainable Cost Margin = (Net Turnover - All-in Sustainable Cost)/Net Turnover.

### Summary of Discounted Analysis

The higher the IRR on a project and the greater the amount by which it exceeds the cost of capital, the higher the net cash flows to the investor. Table 5 below illustrates the value of the Fair Bride Mine based on the real time model for the orebody. The DFS has a best estimated value of USD42 million at a real discount rate of 8.40% and an IRR of 41.1%.

**Table 5: Project Valuation Summary**

Real Discount Rate	Unit	Value
Undiscounted Real Cash flow	USDm	69
NPV @ 5.0%	USDm	51
NPV @ 8.4%	USDm	42
NPV @ 10.0%	USDm	38
NPV @ 15.0%	USDm	28
NPV @ 20.0%	USDm	20
Internal Rate of Return (IRR)	%	41.1%

Notes:

### 1. Source: DFS Executive Summary

Based on the real cash flow calculated in the financial model, Minxcon performed single-parameter sensitivity analyses to ascertain the impact on the NPV. For the DCF, the gold price and grade have the most significant impact on the sensitivity of the Project. The Project is not capital sensitive.

### Enquiries:

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### Qualified Person

In accordance with AIM Note for Mining and Oil & Gas Companies, June 2009 ("Guidance Note"), Colin Bird, CC.ENG, FIMMM, South African and UK Certified Mine Manager and Director of Xtract Resources plc, with more than 40 years experience mainly in hard rock mining, is the qualified person as defined in the Guidance Note of the London Stock Exchange, who has reviewed the technical information contained in this press release.

### Competent Person

Daan Van Heerden B Eng (Min.), MCom (Bus. Admin.), Pr.Eng., FSAIMM, AMMSA and Director of Minxcon is the competent person as defined in the Guidance Note of the London Stock Exchange, who has reviewed the technical information contained in this press release and has confirmed that the information which has been extracted from the DFS is accurate, balanced and complete and not inconsistent with the DFS.

### Forward Looking Statements

Certain statements in this announcement are, or may be deemed to be forward looking statements. Forward looking statements are identified by their use of terms and phrases such as "believe" "could" "should" "envisage" "estimate" "intend" "may" "plan" "will" or the negative of those variations or comparable expressions including references to assumptions. These forward looking statements are not based on historical facts but rather on the Directors' current expectations and assumptions regarding the Company's future growth results of operations

performance future capital and other expenditures (including the amount, nature and sources of funding thereof) competitive advantages business prospects and opportunities. Such forward looking statements reflect the Directors' current beliefs and assumptions and are based on information currently available to the Directors. A number of factors could cause actual results to differ materially from the results discussed in the forward looking statements including risks associated with vulnerability to general economic and business conditions competition environmental and other regulatory changes actions by governmental authorities the availability of capital markets reliance on key personnel uninsured and underinsured losses and other factors many of which are beyond the control of the Company. Although any forward looking statements contained in this announcement are based upon what the Directors believe to be reasonable assumptions. The Company cannot assure investors that actual results will be consistent with such forward looking statements.

### Inside Information

This announcement contains inside information for the purposes of Article 7 of EU Regulation 596/2014.

### Glossary of technical terms

Unit	Definition
%	Percentage
Au	Gold
g/t	Gram per tonne
km	Kilometre
ktpm	Kilotonnes per month
m	Meter
m <sup>3</sup>	Cubic meters
Mt	Million tonnes
t	Tonne
CIL	Carbon in Leach
DFS	Definitive Feasibility Study
LoM	Life of Mine
RoM	Run of Mine

#### Indicated Resource

That part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed

#### Inferred Resource

That part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and sampling and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that may be limited or of uncertain quality and reliability

#### Measured mineral resource

That part of a mineral resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity

#### Mineral resource

Concentration or occurrence of diamonds, natural solid inorganic material or natural fossilized organic material including base and precious metals, coal, and industrial

minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge

Mineral Reserve

A Mineral Reserve is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

Probable Mineral Reserve

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

Proved Mineral Reserve

A Proved Mineral Reserve is the economically mineable part of a Measured Mineral Resource. A Proved Mineral Reserve implies a high degree of confidence in the Modifying Factors.

"SAMREC"

South African Code for Reporting of Mineral Resources and Mineral Reserves

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