ASX Release 28 August 2012

Results of Completed Definitive Engineering Study for the Ranobe Mine

World Titanium Resources Ltd (ASX:WTR) is pleased to announce the results of the Definitive Engineering Study (DES) for the Ranobe Mine, which is situated near the south western coast of Madagascar (Figure 1). The Ranobe Mine will be the initial operation of the Toliara Sands Project.

The DES, managed by TZMI with Engineering & Project Management Services as the lead engineering contractor, has been completed. The processing and infrastructure design has been finalised and the capital and operating cost estimates updated based upon vendor quotes for all major equipment items. The mineral resource has been updated, a maiden ore reserve determined and mine plan developed.

The experience of local and international engineering firms, operating in Madagascar, has been incorporated to make sure that the costs used in the project economic model reflect the reality of actual in-country costs. Port specialists, mining and haul road contractors have advised on the proposed design and have provided cost estimates for these activities.

The DES has confirmed that a low capex, low technical risk and simple mineral sands operation can be built using well-proven technology.

Figure 1 – Location map showing the Ranobe Mine within Toliara Sands Project

Ranobe Mineral Sands Operations - Overview

The DES has confirmed that a low capex, low technical risk and simple mineral sands operation can be built using proven technology.

A simplified flow sheet for the mine is shown in Figure 2. It envisages utilising a simple mining and processing route at 8Mt of ore per annum from the second half of 2014.

Two Front End Loaders (FEL) will mine the ore zone in the deposit. FEL mining provides a high degree of flexibility and will be able to selectively sequence and mine the higher-grade parts of the deposit to maximise the project cash flow.

Ore mined by the FELs will be fed to mining units and pumped to the Primary Concentrator Plant (PCP), the Ranobe ore has low slimes content, less than 5%, which should assist the concentration of the ore feed. The concentrator has four stages of spirals and a hydrosizer to produce a heavy mineral concentrate (HMC).

The final HMC, which will have a grade of 92% heavy mineral, will be stockpiled before being fed into the Mineral Separation Plant (MSP). The MSP will use conventional mineral sands separation equipment to produce final products consisting of primary ilmenite, secondary ilmenite and a valuable non-magnetic concentrate containing rutile and zircon.

The ilmenite circuit is a combination of magnetic separators and high tension rolls to produce 326,000 tpa of saleable sulphate Ilmenite and 81,000 tpa of saleable chloride Ilmenite.

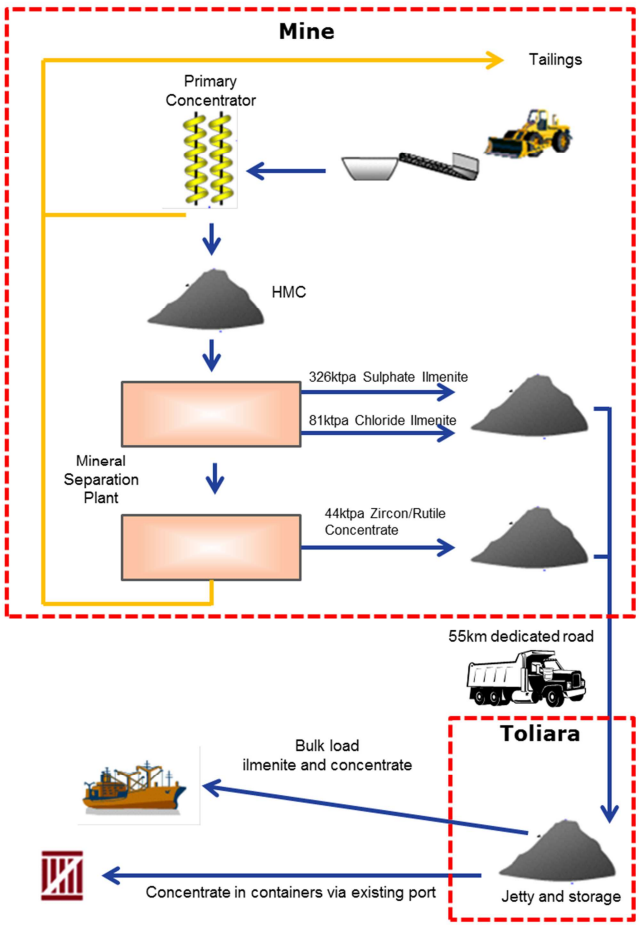


Figure 2 – Simplified Flow Sheet of Ranobe Mine operations.

The non-magnetic circuit will utilise gravity separation (spirals) and magnetic separation to produce 44,000 tpa of saleable zircon and rutile rich concentrate.

All products will be transported, via a planned dedicated 55-kilometre long haul road, to a bulk loading facility, located north of the existing town and port of Toliara.

The Ilmenite products will be bulk loaded via a dedicated bulk-export jetty, which will be established as part of this development. The zircon/rutile concentrate will either be bulk loaded via the same facility or loaded into containers for export from the existing Port of Toliara. The proposed dedicated jetty is sufficiently deep for larger vessels up to Handymax and Supramax size.

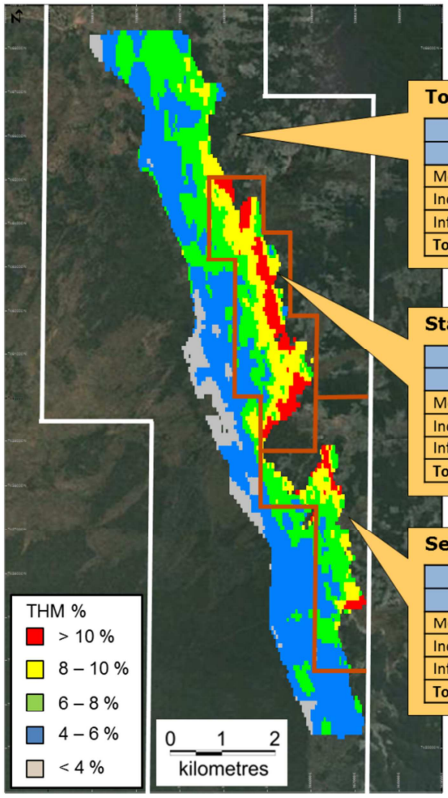
The haul road plus dedicated jetty export option provides inherently expandable infrastructure and maximises the potential to incrementally scale up the operation to fully exploit the 959 million tonnes at 6.10% THM Mineral Resource. Once the starter pit has become well established these expansion options will be progressed.

Mineral Resources

The estimated Mineral Resource of 959Mt at an average grade of 6.10% THM within the Ranobe licences has the potential to support a mine life of more than 100 years at the expected initial mining rate of 8Mt per annum.

The 'Starter Pit' mining licence (Permis D'Exploitation 37242) (Figure 3) contains an estimated 176Mt Mineral Resource at an average grade of 8.13% THM, most of which is in the Measured category. The second mining licence (Permis D'Exploitation 39130) contains a Mineral Resource of 137Mt, 6.88% average grade THM.

Each of the mining licences has a term of 40 years and may be renewed for one or more additional 20 year terms. The Exploration Licence was renewed for 3 years earlier in 2012.



Total Mineral Resource

	Tonnes	Heavy Minerals		Slimes	Mineral Assemblage (% in HM)		
	Mt	%	Mt	%	Ilmenite	Rutile	Zircon
Measured	209	7.59	15.9	4.01	72.2	2.4	5.6
Indicated	226	6.12	13.8	4.00	71.8	2.2	5.6
Inferred	524	5.50	28.8	4.40	72.3	2.3	5.6
Total	**959**	**6.10**	**58.5**	**4.22**	**72.2**	**2.3**	**5.6**

Starter Pit Mineral Resource (PE 37242)

	Tonnes	Heavy Minerals		Slimes	Mineral Assemblage (% in HM)		
	Mt	%	Mt	%	Ilmenite	Rutile	Zircon
Measured	162	8.05	13.0	4.15	72.3	2.4	5.5
Indicated	14	9.07	1.2	3.69	72.1	2.3	5.4
Inferred	0	10.39	0.0	3.49	73.7	2.4	5.8
Total	**176**	**8.13**	**14.3**	**4.11**	**72.3**	**2.4**	**5.5**

Second Licence Mineral Resource (PE 39130)

	Tonnes	Heavy Minerals		Slimes	Mineral Assemblage (% in HM)		
	Mt	%	Mt	%	Ilmenite	Rutile	Zircon
Measured							
Indicated							
Inferred	137	6.88	9.5	4.03	72.8	2.3	5.7
Total	**137**	**6.88**	**9.5**	**4.03**	**72.8**	**2.3**	**5.7**

Figure 3: Ranobe mining licences and details of the Mineral Resource estimate.

Mining and Ore Reserve

Front end loader (FEL) mining has been selected for this operation as it provides a high degree of flexibility, reduces the risks imposed by mining in close proximity to the limestone basement along the eastern side of the deposit, and is able to selectively sequence and mine the higher grade parts of the deposit to maximise the project cash flow.

The ore zone ranges between 2–30 metres in depth and will be mined by two FELs. Ore mined by the FELs will be fed to mining units and pumped to the wet concentrator plant. Mining operations will be performed by a contract miner.

Based upon the Measured and Indicated Resource in the 'Starter Pit' Licence area a mining schedule has been developed. Mining will commence on the south east corner corresponding to an area of high HM grade.

During the first two years of operations, the mining rate will be 900 tph, increasing to 1,050 tph in Year 3 in order to maintain the ilmenite production at 407,000 tpa. According to the proposed schedule, two concentrator moves are expected during the mine life (Figure 4). The first

concentrator move is expected in Year 9, when the concentrator would be re-located to midway along the deposit. The second move is expected during Year 16.

Over the life of mine of 21 years an estimated 161 million tonnes total ore will be mined.

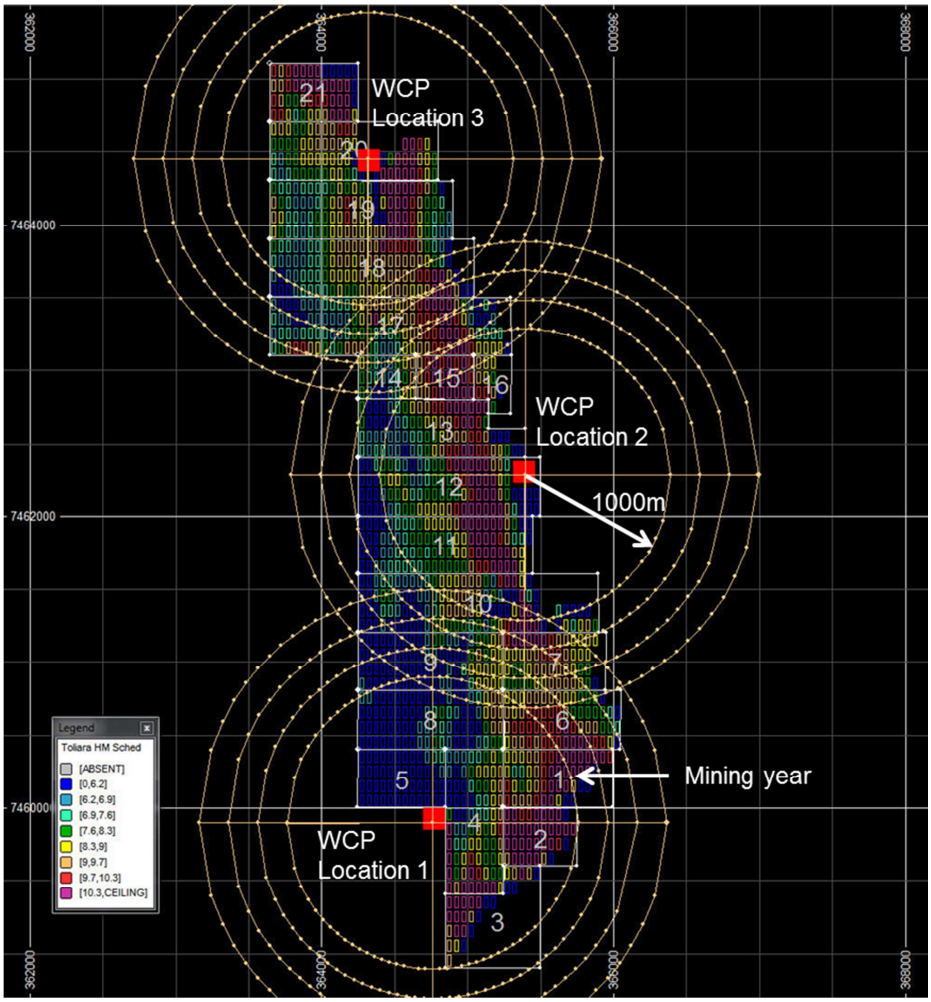


Figure 4: Proposed mine schedule.

Ore Reserves have been estimated using all available geological, drill hole and assay data, including mineralogical sampling and test work on mineral recoveries and final product qualities. The Ore Reserve estimates are determined by consideration of all the modifying factors in accordance with the JORC Code 2004, and may include but are not limited to, product prices, mining costs, mining dilution and recovery, metallurgical recoveries, environmental considerations, access and approval.

	Tonnes	Heavy Minerals		Slimes	Mineral Assemblage (% in HM)		
	Mt	%	Mt	%	Ilmenite	Rutile	Zircon
Proved	148	8.12	12.0	4.02	72.3	2.4	5.5
Probable	13	9.18	1.2	3.65	72.1	2.3	5.4
Total	**161**	**8.20**	**13.2**	**3.99**	**72.3**	**2.4**	**5.5**

Table 1: Ranobe Ore Reserve Statement.

Rehabilitation

Mining, concentration and tailings disposal will occur as a continuous process. Sand tailings from the PCP will be mixed with tailings from the MSP and pumped back to the mine to fill in the mine void. The surface will be contoured and the topsoil and vegetation that was previously removed will be returned.

Processing

The primary concentrator is typical of mineral sands operations (Figure 5). The concentrator has four stages of spirals and a hydrosizer to produce a heavy mineral concentrate (HMC). The final HMC, which has a grade of 92% heavy mineral, is stockpiled before being fed into the MSP.

The MSP uses conventional mineral sands separation equipment to produce final products consisting of primary ilmenite, secondary ilmenite and a valuable non-magnetic concentrate containing zircon and rutile.

The ilmenite circuit (Figure 6) incorporates a combination of magnetic separators and high-tension rolls to produce 326,000 tpa of saleable sulphate Ilmenite and 81,000 tpa of saleable chloride Ilmenite.

The non-magnetic circuit (Figure 7) utilises gravity separation (spirals) and magnetic separation to produce 44,000 tpa of saleable zircon and rutile rich concentrate.

The three products primary ilmenite, secondary ilmenite and non-magnetic concentrate are all kept dry and up to three months of shed storage capacity is provided for each product. Final products will be loaded into road trains which will haul the final products along a dedicated haul road to product storage sheds near the town of Toliara approximately 55km from the MSP.

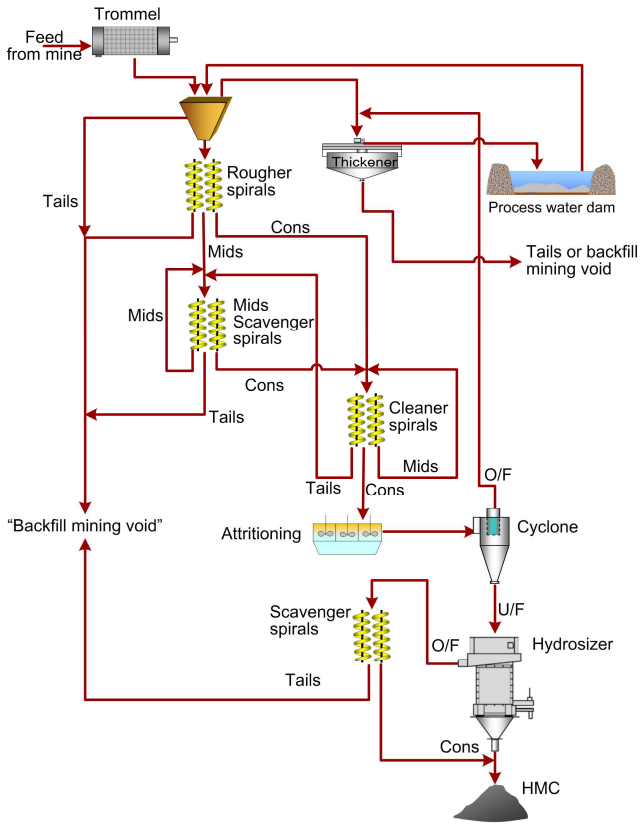


Figure 5: Primary concentrator flowsheet.

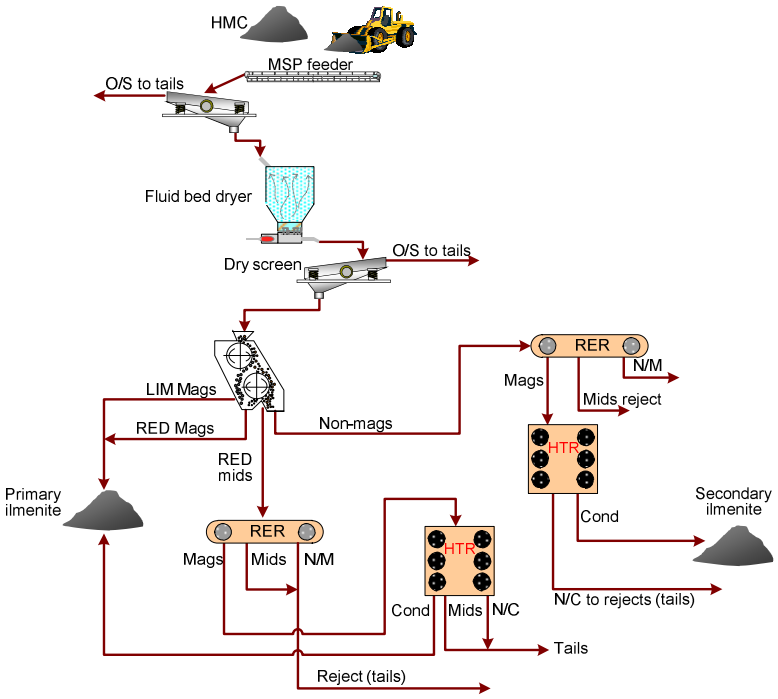


Figure 6: Feed and ilmenite circuit.

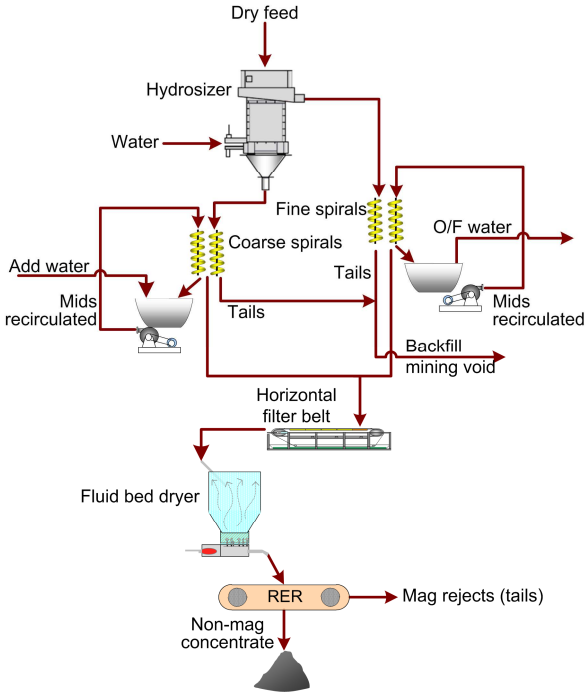


Figure 7: Non-magnetic circuit.

Infrastructure

Standalone jetty selected as preferred export option

A key focus of the DES was selecting an optimal export logistics option; either locating the MSP at the mine site and trucking the final products, via a causeway over the river, to a stand-alone jetty capable of loading bulk vessels directly north of Toliara or trucking HMC to a transfer station located north of the river to a MSP located on reclaimed land next to the existing Toliara port, separating the final products and loading via barges. In both cases containers will be loaded via the existing Toliara port.

The standalone jetty option has a comparable capital cost and lower operating costs. The capital cost assumes that 3 months product storage is built at both the MSP and jetty to enable continuous operation during the wet season when the causeway may be closed for up to 12 weeks depending on the flow of water in the river.

In addition the stand alone jetty option offers other advantages, including:

- A simpler overall operation, as it entails one less operating location, there will be no necessity to return the tailings to site, elimination of the doubling handling required for HMC pipeline to the exiting port, and the elimination of barge transfers; in addition it would be
- More expandable – the haul-road and jetty can handle any expansion case that we can currently envisage; and finally there will be
- Less community interaction – as the jetty is further removed from the city of Toliara.

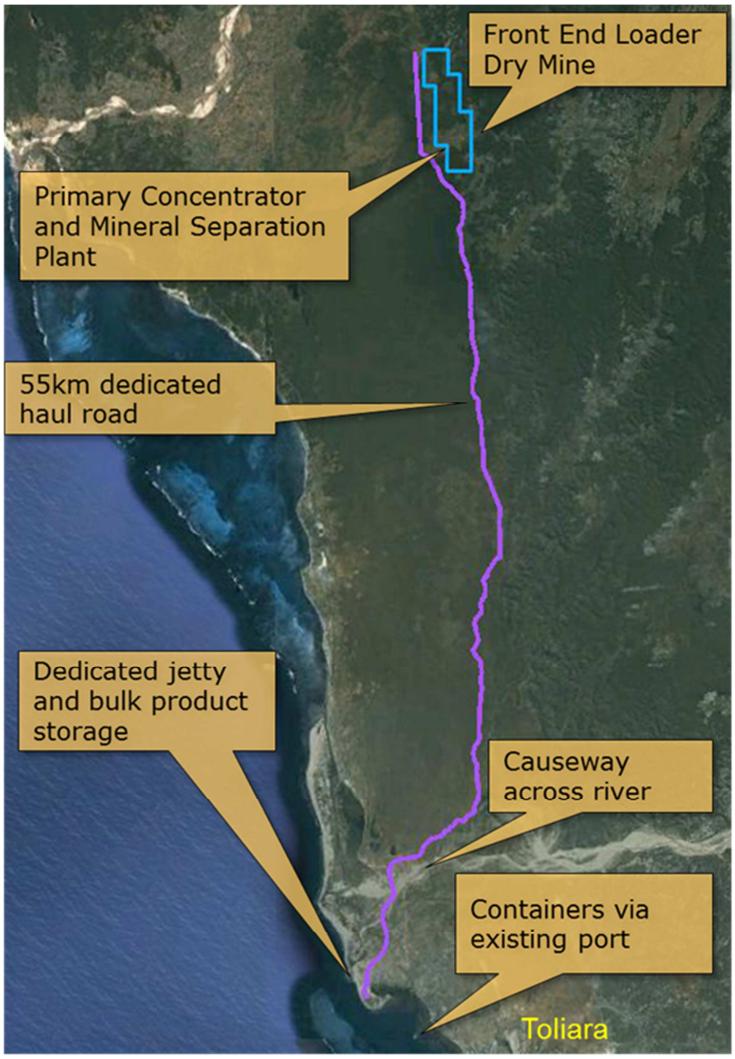


Figure 8 – Key project elements

Additional geotechnical and marine studies are required to finalise the design study for the stand alone jetty. These studies will determine the piling requirements for the jetty. The port consultants quantified the range of possible outcomes for the cost of piling and have determined that they fall within a US$12m range.

Port

A product storage site will be situated on the sand-spit just to the north of Toliara in an area sheltered from off-shore wave swell. The area would allow for the ilmenite and non-magnetic concentrate storage sheds, offices, power generation, weighbridge facilities, truck unloading and truck turning areas.

The load-out facility will comprise a raised jetty extending out into the deep water channel to enable direct loading of bulk ilmenite and non-magnetic concentrate (via conveyors) products onto waiting vessels. An earlier bathymetric study showed that the deep water zone of the channel leading to the port is sufficiently deep (12–16 metres) for larger vessels up to Handymax and Supramax size (45,500 to 52,500 tonnes).

There appear to be no navigational issues associated with the port development for both the design vessels (Handysize) and maximum vessels (Supramax) based in the following:

- The natural channel widths are three to four times wider than the recommended channel width requirements.
- The ship turning area is two to three times larger than the recommended ship turning area requirements.
- The clearance between a ship at berth and any passing ships is three to five times greater than the recommended ship clearance distance.

Roads

Road trains will be used to transport ilmenite and non-magnetic products from the mine/MSP site to the Toliara storage facility. These vehicles will accommodate up to four trailers, with a combined payload of approximately 110 tonne and will be supplied and operated by the haulage contractor.

The existing road network comprises poorly maintained rural unsealed tracks that serve the local communities. Consequently a purpose built haulage road will need to be constructed by widening and re-surfacing a series of tracks leading from the Fiheranana River to the mine site. The road will be unsealed and built using crushed limestone sourced from a nearby dedicated quarry.

The existing 350 metre long bridge across the Fiheranana is considered unsuitable for 110 tonne road trains. Instead a causeway will be built to safely cross the Fiheranana River.

Water

At steady state the plant will require approximately 4.0 Gl of water per year to be abstracted, the majority of which is returned to the mine pit in the tailings. Mine and processing water requirements will be supplied from a series of boreholes located adjacent to the deposit. Used process water would be passed through a thickener, with cleaned water returned to the process water dam while a stream containing thickened fines would be deposited back in the mine void along with the plant tailings.

Power

The existing Toliara power station does not have sufficient capacity to provide the required power to the mine and MSP. Diesel generated power is therefore considered as the only practical option for the project. Total installed power is estimated at 5.5 MW. The estimated annual fuel requirement for power generation is 6 million litres.

Capital Cost Estimate

A key component of the definitive engineering study was the compilation of the capital cost estimate to further develop the overall project concept and to enable the assessment of the projects financial viability.

The capital estimate covers the design, procurement, management, construction and commissioning of the mining unit, primary concentrator, mineral separation plant, export facilities and infrastructure and is summarised by area in Table 2. The base, low and high cases reflect the geotechnical uncertainty in the piling cost of the jetty ($12m) described above.

Area	Base Case US$M	Low Case US$M	High Case US$M
Mine + Primary Concentrator	19	19	19
Mineral Separation Plant	26	26	26
Road + Port	71	69	77
Other Infrastructure	13	13	13
Indirect + Other	7	7	7
Process Plant and Infrastructure	**136**	**134**	**143**
EPCM (17%)	23	23	24
Contingency (20%)	32	31	33
Total	**192**	**188**	**200**

Table 2: Capital Cost Summary.

Sustaining capital expenditure of less than US$1 million pa and the capital for the concentrator moves planned for years 9 and 16 (US$6 million each move) have been included in the project financial evaluation.

Working capital for operational labour prior to start-up, operating costs prior to the first sales revenue being received and other owners' costs is estimated at US$24 million.

Operating Cost Estimate

Operating cost estimates have been developed over the life of the project. These estimates are based upon information provided by WTR, supplier quotes and cost information from TZMI's database.

Area	Annual Average US$M	Annual Average US$/t product
Mining	16.2	36
Concentrator	8.9	20
Mineral Separation Plant	10.4	23
Product Transport and Handling	8.9	20
Administration and Marketing	5.0	11
Royalties	2.3	5
Total	**51.7**	**116**

Table 3: Operating Cost Summary by Area.

Mining is the largest component of the operating cost estimate, accounting for around 31% of annual operating costs. This cost includes clearing and stripping, contract ore mining and delivery of ore slurry to the wet plant, mine site administration, tailings management as well as rehabilitation.

Area	Annual Average US$M	Annual Average US$/t product
Labour	6.7	15
Power & Fuel	15.6	35
Maintenance	3.0	7
Contract Mining	11.1	25
Contract Haulage	3.8	9
Royalties	2.3	5
Other	9.3	21
Total	**51.7**	**116**

Table 4: Operating Cost Summary by cost driver.

The major operating cost drivers of the annual operating costs over the life of the project are shown in Table 4. Power and fuel account 30% of annual operating costs, based upon a delivered diesel

price of US$1.125 per litre. Annual fuel consumption for the project is estimated at 14 million litres, inclusive of fuel consumed in generating power.

Contract mining is next largest cost component, accounting for 22% of annual project operating costs. If fuel and power costs associated with the mining operations are included, contract mining proportionate share of annual operating costs increases to 29%.

Production Profile

Ore mining and production are scheduled to commence in 2H 2014 with annual volumes over the life of the mine shown in Figure 9. Ilmenite production averages 407,000 tpa and non-magnetic concentrate production averages 44,000 tpa over the life of mine. The split of ilmenite between sulphate and chloride grade product is expected to be 80%/20%.

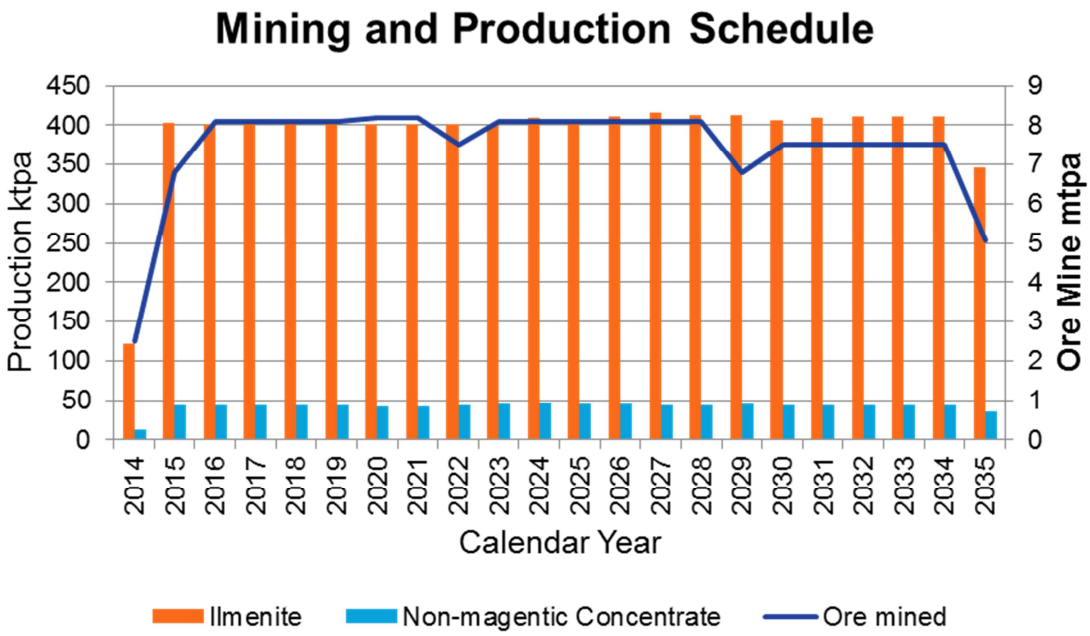


Figure 9: Mining and production schedule.

All three products are within the range of normal quality parameters for equivalent products. During earlier process trials a zircon product with less than 600ppm U +Th was made from this concentrate using standard mineral sands processes. This is within the range of zircon products currently in the market.

Prices and Revenue

WTR price forecasts for ilmenite and non-magnetic concentrate from the Ranobe mine are shown in Figure 10. All figures are expressed in 2012 terms on an FOB basis. The non-magnetic concentrate price assumes 75% of the contained value of the zircon and rutile reflecting a processing discount.

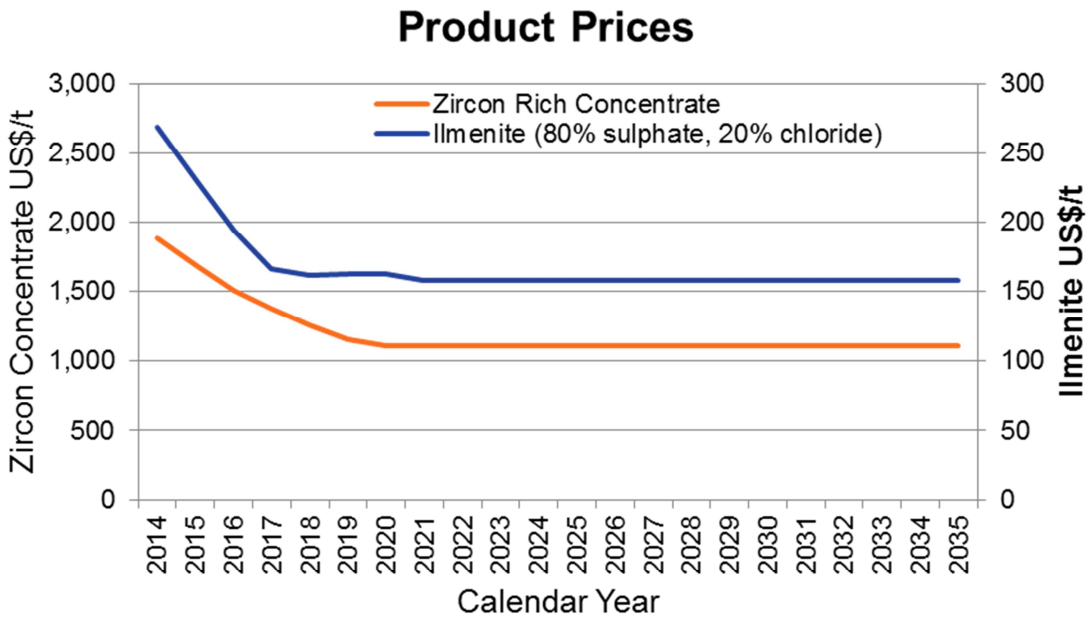


Figure 10: Product Price Assumptions.

The revenue over the life of mine is shown in Figure 11. The non-magnetic concentrate contributes around 44% of the revenue despite being only 10% of the production reflecting the high forecast value of the contained zircon and rutile.

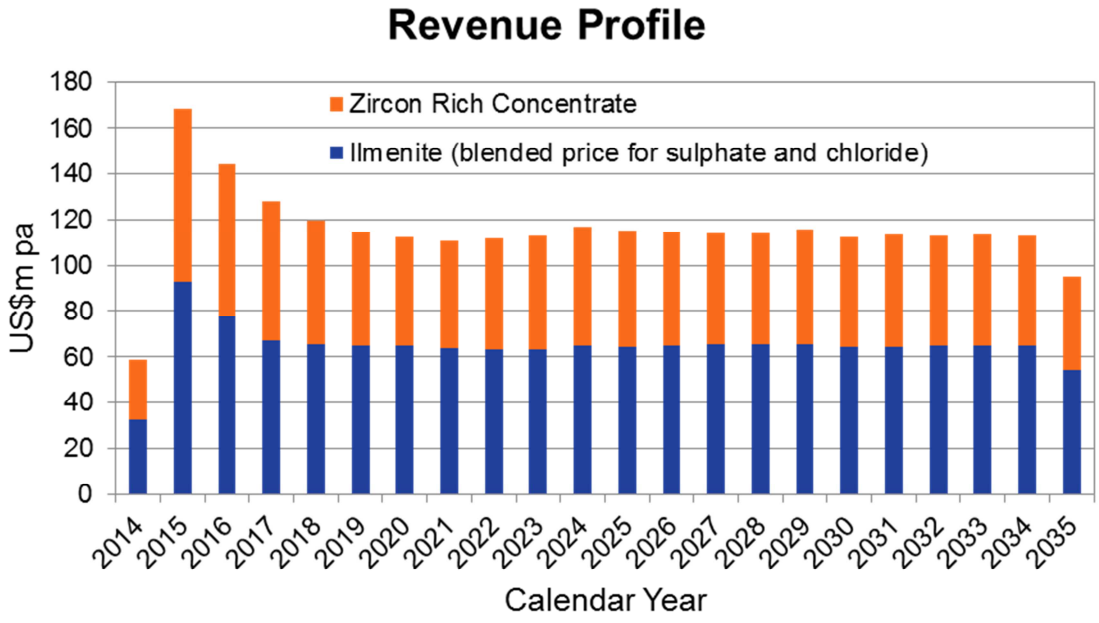


Figure 11: Projected Annual Revenue by Product.

Economic Analysis

A discounted cash flow ("DCF") analysis has been under taken on the Ranobe mine project using the capital costs, operating costs and revenue assumptions described above. The key results are summarised in Table 5. A terminal value has been included to reflect the likelihood of an extended mine life utilising the remaining 80% of the Ranobe Mineral Resource.

	Unit	Value
NPV (at 10% discount rate)	US$ M	257
Including terminal value	US$ M	49
IRR	%	27
Capital Payback Period	Years	3
Average annual free cash flow	US$ M per annum	47
Life of Mine Free Cash Flow (post-tax real)	US$ M	1033

Table 5: DCF Results.

The net annual project cash flow to shareholders is illustrated in Figure 12. This demonstrates the very robust operating cash flows that continue throughout the mine life of the Starter Pit'.

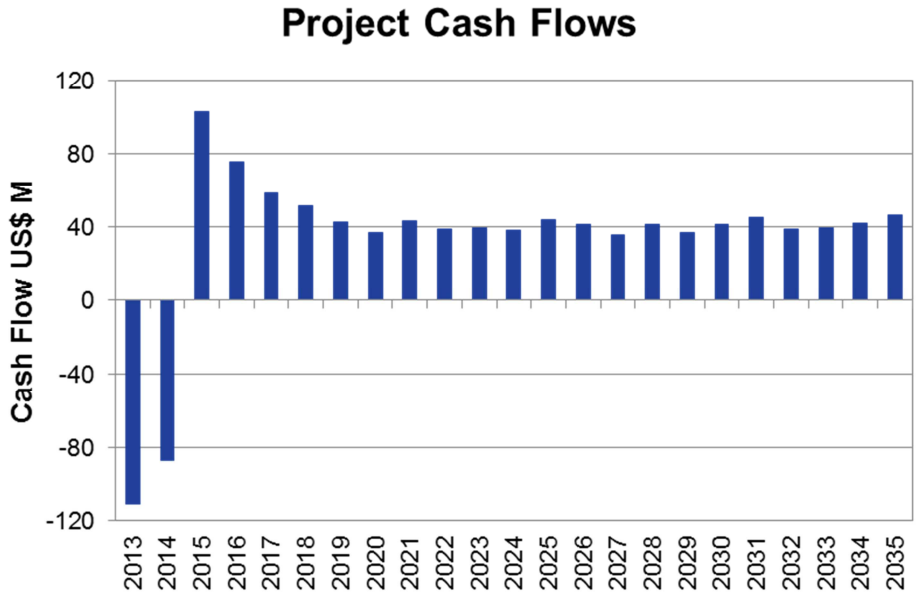


Figure 12: Projected Annual Project Cash Flows.

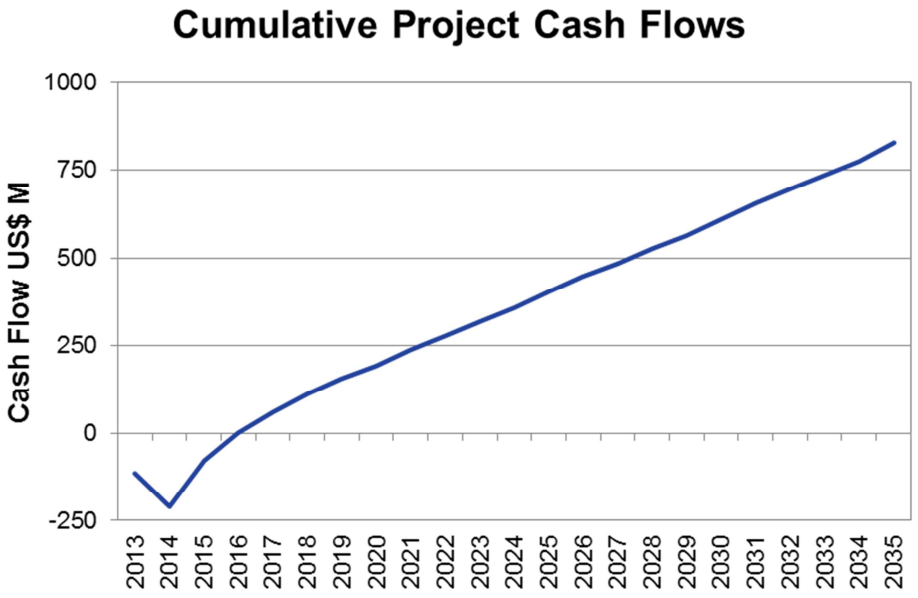


Figure 13: Projected Cumulative Project Cash Flows.

A sensitivity analysis was undertaken for to quantify the influence of key variables on the NPV valuation. Each variable has been adjusted from the base case analysis and the impact on the NPV is shown in Figure 14.

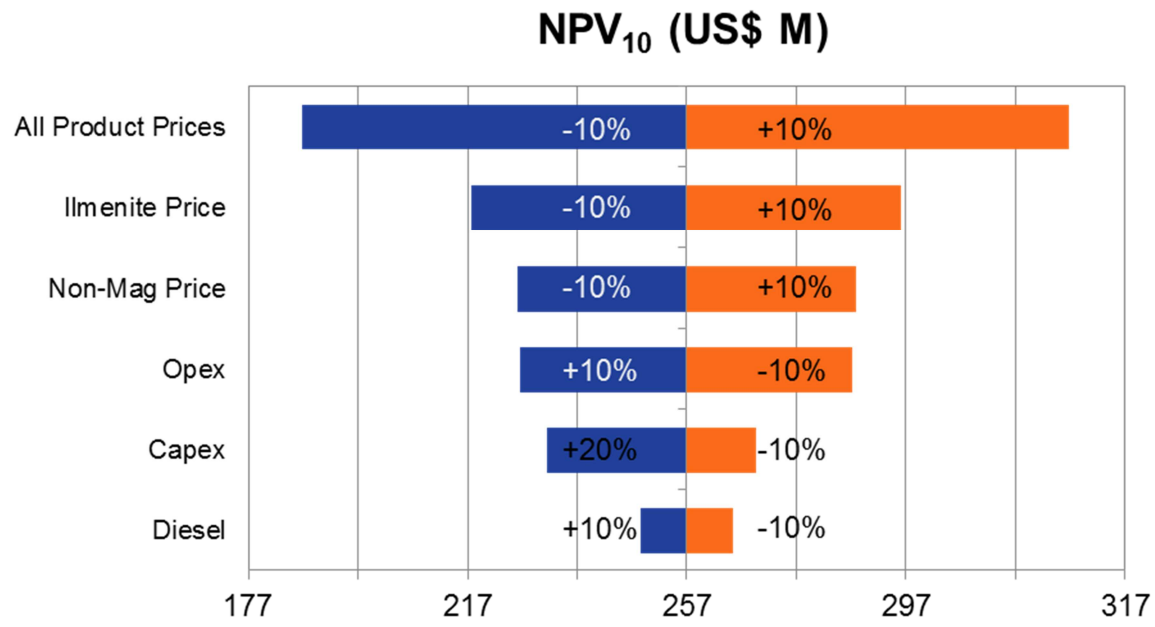


Figure 14: Sensitivity Analysis.

Expansion Options

The initial 'Starter Pit' development is valuable in its own right. Importantly, the infrastructure to support this development has been designed to facilitate options to expand production, extend the life, and add value to the products. Once the 'Starter Pit' is well established, these options will be progressed.

Expansion

The FEL mining operation is 'low intensity' with only 2 FEL's operating to maintain the initial production rate. This mining operation could be readily duplicated to expand production.

The port and haul road have latent expansion capacity, which would allow a significant increase in production, for modest capital expenditure.

The PCP and MSP would need to be expanded to handle increased production.

Value add

A dry plant, to separate zircon and rutile products form the non-magnetic concentrate, would add value to these products.

Life Extension

The starter pit utilises only 17% of the 959 million tonnes at 6.1% THM Mineral Resource at Ranobe.

A modest amount of in-fill drilling would enable more of the Mineral Resource to be upgraded to the Measured and Indicated categories and therefore be added to the Ore Reserve.

The 'Starter Pit' utilises just 3% of the total exploration target of more than 4.7 billion tonnes for the Toliara Sands Project[1].

[1] *Ranobe ~1,400Mt @ 6-7% THM, including 959Mt @ 6.1% Mineral Resource, Ankililoaka ~365 @ 5-6% THM, Basibasy ~445Mt @ 4.5-5.5% THM and Morombe 2500Mt @ 1-3% THM. These Exploration Targets are at an early stage of evaluation, and the potential quantity and grade remain conceptual in nature. At his stage there has been insufficient*

Execution plan to first production

Minor engineering work will continue until October 2012 with the focus on preparing the tender for project engineering, procurement, construction and management (EPCM).

Additional geotechnical and marine studies required for the detailed design of the jetty will commence immediately to ensure that results are available before the end of the first quarter of CY2013 prior to the commence of Front End Engineering and Design.

The Environmental and Social Impact Report (ESIR) and Social and Environmental Management Plan (SEMP) are currently being drafted. Following a public consultation process later this year they will be submitted for approval. Final environmental approval is currently expected to be received in the first quarter 2013.

The development execution plan assumes a 6 month engineering and procurement phase followed by 12 months of construction. Assuming the development phase commences during Q2 2013 then commissioning and first production should be achieved in Q4 of CY2014.

Funding

The Company is continuing to explore customer pre-payment and strategic partner investment, at both the asset and the corporate levels, to partially fund the development capital.

The balance of funding is expected to come from an equity raising later in 2012 or early 2013 but will only be undertaken once the capital requirement and funding from other sources has been defined.

At the end of June 2012 the company had $9.9 million in cash, sufficient to fund all pre-development activities and to maintain the Company's presence in Madagascar and corporate activities until at least the end of 2013.

Bruce Griffin

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World Titanium Resources

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exploration to define Mineral Resources and it is uncertain if further exploration will result in the determination of Mineral Resources greater than that already defined

About World Titanium Resources

World Titanium Resources (ASX:WTR) is an Australian listed mineral sands company that owns 100% of the Tier 1 Toliara Sands Project in Madagascar, which includes a current Mineral Resource of 959Mt grading 6.10% total heavy mineral (THM) at Ranobe.

Phase 1 will focus on mining a 161Mt Mineral Reserve at an average grade of 8.20% THM. Phase I is estimated to produce 407,000 tonnes of ilmenite and 44,000 tonnes of zircon/rutile concentrate per annum over an initial 21 year mine life.

The Mineral Resource at Ranobe could potentially sustain a ~100 year mine life at the initial planned production rates. The Toliara Sands Exploration permits at Ranobe, Ankililoaka, Basibasy and Morombe contain a total exploration target in excess of 4,700Mt of mineralisation[2].

Competent Person Statement

The information in this report that relates to Mineral Resources and Ore Reserves is based on information compiled by Diederik Speijers who is a Fellow of The Australasian Institute of Mining and Metallurgy and is employed by independent consultants, McDonald Speijers. Mr Speijers has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Speijers consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

[2] *These Exploration Targets are at an early stage of evaluation, and the potential quantity and grade remain conceptual in nature. At his stage there has been insufficient exploration to define Mineral Resources and it is uncertain if further exploration will result in the determination of Mineral Resources greater than that already defined.*