

### Fast Facts

Cap Structure	Feb 2011
Issued Shares	428Mil
Market Cap	A\$51Mil

### Directors

Hamish Bohannon	Chairman
Jason Stirbinskis	Managing Dir.
Joe Totaro	Non-Exec Dir.
Andrew Ellison	Non-Exec Dir.
Tony Martin	Non-Exec Dir.

### Company Highlights

- Substantial resource base
- Diversified commodities
- Aggressive exploration
- Proven management



### PRP Resource Base

- 13.9 Mt
- 910,000 oz gold
- 9.9 Moz silver
- 95,200 t copper
- 123,000 t lead
- 74,000 t zinc

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## PHILIPS RIVER DFS INDICATES LONG LIFE OPERATION

### Highlights

- Annual production **800 ktpa**
- **10** year mine life contemplated on current reserve inventory
- Gross revenue Life of Mine (“**LOM**”) - **\$1.05** billion
- Cashflow before tax over LOM – **\$224** million
- Capital Cost - **\$133** million
- IRR- **26%** pretax
- Significant potential to further enhance economics through discovery of additional resources

Tectonic Resources NL (“Tectonic” or “The Company”, ASX:TTR) is pleased to announce the successful completion of the independent Definitive Feasibility Study (DFS) on its 100% owned Phillips River Project demonstrating a viable project, generating over \$1 billion in revenue and \$224 million (pretax) in net cash over a 10 year life of mine.

Managing Director Jason Stirbinskis said “The Company and Board are delighted by the positive outcome. It is important to acknowledge that the DFS only considers our Trilogy and Kundip operations and therefore provides a potentially robust strategic platform for Tectonic and our other deposits in the vicinity. The processing facility allows us to treat a very wide range of ores producing gold dore, copper concentrates and bulk sulphide concentrates. This flexibility of feed and output is the key as it is highly likely that any subsequent gold, copper or base metal discoveries within our highly prospective and considerable holdings in the region (Table 1) will be compatible with our plant. So not only does the DFS create a compelling project, any future discoveries are likely to enhance the economics without substantial additional plant expenditure.

We believe the Phillips River Project will redefine Tectonic as an important gold and copper producer and will be one of the most significant projects in WA’s southern region”.

The company is currently establishing its 12 month strategic path which will include substantial effort directed to Phillips River development balanced against ambitious ongoing exploration.



	Deposit	Tonnes (000)	Au (oz)	Ag (oz)	Cu (%)	Pb (%)	Zn (%)	Comments
DFS RESOURCES Kundip Deposits	Trilogy	6244	0.8	46.5	1.0	2.0	1.2	100% Tectonic
	Harbour View	1855	3.3	3.4	0.6			100% Tectonic, Open at depth
	Kaolin	3303	2.7	1.5	0.2			100% Tectonic, Open at depth
	Flag	1389	3.7	2.8	0.4			100% Tectonic, Open at depth
	<b>Subtotal</b>	<b>12791</b>	<b>2.0</b>	<b>23.9</b>	<b>0.7</b>	<b>1.0</b>	<b>0.6</b>	
NON DFS RESOURCES	Gem Restored	331	5.3	5.0	0.5			100% Tectonic
	Queen Sheeba	451	1.7	3.0	0.0			100% Tectonic
	Mt Desmond	324	0.9	2.2	2.1			100% Tectonic
	<b>Subtotal</b>	<b>1105</b>	<b>2.5</b>	<b>3.3</b>	<b>0.8</b>			
TECTONIC EXPLORATION TARGETS	James Henry	Potential copper , gold mineralisation						100% Tectonic
	Mt Iron	Potential Kundip (Kaolin deposit) type copper, gold mineralisation						Binding HofA in place
	Bandalup Gossan	Potential Gold, zinc, lead mineralisation						Farm-in to 70%
	PLP / FED	Potential copper, gold mineralisation						100% Tectonic
	Gift	Potential copper, gold mineralisation						100% Tectonic
	Railway Deepes	Potential copper, gold mineralisation						100% Tectonic
	No Tree hill	Potential Trilogy type polymetallic mineralisation						100% Tectonic
	Hecla	Potential copper mineralisation						100% Tectonic
Munglinup	Regional geochem survey planned in search of tropicana style mineralisation						Application progression through Authorities	

Table 1 - Summary of Tectonic's regional JORC compliant Resource inventory and exploration targets. Refer to Table 8 for supporting information

## Feasibility Summary

Located on the south coast of Western Australia, the Phillips River Project (PRP) is between Hopetoun and Ravensthorpe, some 180km's due west of the sea port of Esperance.

The local economy is primarily geared to serving the agricultural industry. First Quantum's Ravensthorpe Nickel Mine and Galaxy's Lithium mine are also active in the region. Tectonic has an exploration office located at the project site, an 88 room camp established in Ravensthorpe and other infrastructure located at its nearby decommissioned RAV 8 mine and processing facility.

The PRP comprises two mining regions approximately 10kms apart. An open pit and subsequent underground mine and processing plant will be established at the Trilogy site which is on free hold farming land owned by Tectonic. Material from open pit and underground mining at Kundip (comprising Kaolin, Harbour View and Flag mines) will be transported to Trilogy for processing.

## Geology and Mining

Trilogy is a sed-ex style base metal plus precious metal (Cu-Au-Ag-Pb-Zn) deposit hosted in Proterozoic graphitic shales. There are three closely spaced mineralised lodes which dip moderately to the east and range from 10 to 30m in width. The deposit has two primary styles of mineralisation; Cu-Au, and Cu-Au-Ag-Pb-Zn, which have distinct distribution and are visually apparent.

The Kundip gold project is comprised of three structurally controlled, narrow-vein style deposits hosted in Archaean intermediate volcanics. Mineralisation occurs as Au-Cu in typically 1 to 3m wide



sulphide-quartz veins. Historic underground mining at Kundip was typically restricted to the high grades zones within the oxide horizon. These historic mines have now been extended in depth and along strike as a result of modern exploration.

The DFS has incorporated both open pit and underground mining at Trilogy and Kundip. Trilogy will be developed in the initial phase of the project, using conventional open pit mining methods. A small underground mine will follow at the completion of the open pit and will extract the remaining value in the Trilogy resource. During this phase, the Kundip mining operation, 10km to the north, will produce from open pits at Flag, Harbour View and Kaolin. These pits will be mined using the same style of equipment proposed for Trilogy. As the pits are completed, a small narrow vein underground mine will be developed below the base of each pit. Access to each underground will via portal and decline access near the base of the pit.

The Ore Reserve for Philips River was estimated in accordance with the 2004 Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves (the JORC code). The Ore Reserve for Philips River is given in Table 2.

Mine	Classification	Mt	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)
Trilogy pit	Proved	0.3	2.2	45	0.4	0.2	0.0
Trilogy Pit	Probable	4.04	0.8	57	1.1	2.7	1.6
Trilogy U/G	Probable	0.28	1.0	26	1.3	1.9	1.8
<b>Subtotal Trilogy Ore Reserve</b>		<b>4.63</b>	<b>0.9</b>	<b>55</b>	<b>1.1</b>	<b>2.5</b>	<b>1.5</b>
Flag Pit	Probable	0.21	4.0	3.5	0.50		
Harbour View Pit	Probable	0.20	3.2	1.5	0.38		
Kaolin Pit	Probable	1.27	2.8	1.7	0.18		
Flag U/G	Probable	0.24	5.0	3.5	0.45		
Harbourview U/G	Probable	0.75	3.5	4.0	0.68		
Kaolin U/G	Probable	0.14	4.4	3.2	0.28		
<b>Subtotal Kundip Ore Reserve</b>		<b>2.81</b>	<b>3.4</b>	<b>2.7</b>	<b>0.38</b>	<b>0.00</b>	<b>0.00</b>
<b>Subtotal Proved</b>	<b>Proved</b>	<b>0.30</b>	<b>2.2</b>	<b>45</b>	<b>0.35</b>	<b>0.15</b>	<b>0.01</b>
<b>Subtotal Probable</b>	<b>Probable</b>	<b>7.13</b>	<b>1.8</b>	<b>35</b>	<b>0.82</b>	<b>1.62</b>	<b>0.97</b>
<b>Total PRP Ore Reserve</b>		<b>7.44</b>	<b>1.8</b>	<b>35</b>	<b>0.80</b>	<b>1.56</b>	<b>0.93</b>

Table 2: Philips River Project Reserve

## Processing

The mineralisation at both Trilogy and Kundip displays oxide, transitional and sulphide components, each requiring a similar process route but with slight modifications to optimise recovery. The level of base metal endowment in each category determines whether treatment is by flotation and leaching or leaching only.

The Trilogy process plant will use gravity, floatation and leach processes to create a variety of saleable products. Gold and silver bullion generated from the gravity and leach processes will be



sold on the domestic market whereas, the concentrates produced by floatation will be containerised and transported by road to the Esperance port where they will be shipped to overseas markets.

**Infrastructure**

The operations at Trilogy will be supported by an administration and maintenance facility located adjacent to the process plant. The Kundip mining operations will require a separate mining administration and workshop to be constructed in the second phase of the project. Ore mined from Kundip will be trucked to the process plant at Trilogy via a purpose built mine haul road.

In addition to these assets, an integrated waste landform will be constructed for the safe storage of waste rock and process plant tailings. A water storage facility will also be constructed to store ground water generated from the Trilogy pit dewatering bores and provide the process plant with an uninterrupted water supply.

**Mine Production**

The mining program will commence with the development of the Trilogy deposit. A six month pre-production phase will be undertaken to carry out the necessary earthworks for the site infrastructure. The pit will be mined as a three stage process to provide a constant supply of ore to the process plant. The Trilogy pit will be in operation for four years and has a life of mine strip ratio 4.9:1 (waste tonnes to ore tonnes).

During the fourth year of operation the Trilogy pit will be completed. During this phase, the Kundip operation will be established and development of the Trilogy underground will commence. Ore production from Kundip will commence with the mining of the Flag, Harbour View and Kaolin pits. These pits have a collective strip ratio of 9.8:1 and will supply the Trilogy plant with ore for a further five years. Supplemental ore will also be produced from the Kundip underground mines developed at the completion of each pit. The Harbour View underground will be a major contributor in this regard.

The mine production profile is given in Table 3.

Mine	Units	PP	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Trilogy Pit	Mt	0.13	1.50	1.09	0.40	1.23						
Trilogy UG	Mt						0.22	0.06				
Kundip Pits	Mt					0.08	0.28	0.28	0.46	0.30	0.28	
Kundip UG	Mt							0.15	0.29	0.24	0.31	0.14
<b>Total Ore</b>	<b>Mt</b>	<b>0.13</b>	<b>1.50</b>	<b>1.09</b>	<b>0.40</b>	<b>1.31</b>	<b>0.50</b>	<b>0.48</b>	<b>0.76</b>	<b>0.54</b>	<b>0.59</b>	<b>0.14</b>

Table 3: Mine production profile

The life of the project is expected to extend beyond the current Reserve. The leases held by Tectonic have demonstrated to be highly prospective and strategic exploration programs proposed over the life of the project are expected to yield significant additions to the current Reserve.



### **Capital expenditure and Operating Costs**

The Trilogy process plant has been designed to treat a nominal 800 ktpa. The plant comprises a crushing and grinding circuit, a gravity concentration circuit, a two stage sequential float circuit and a counter current decant circuit in combination with Sulphurdization Acidification Recycling and Thickening(SART) process. A Merrill Crowe circuit was selected for gold recovery from the pregnant solution because of its superior ability to cope with any residual silver in the pregnant solution as well as its simplicity of operation.

Other capital items include; the tailings storage incorporated as part of the integrated waste landform, a water storage facility and administration and workshops at Trilogy.

Both the Trilogy pit and underground will be mined under conventional contract arrangement with experienced Australian contractors. No major earthmoving plant will need to be purchased for the initial stages of the project.

The ore at Trilogy is close to surface. As such, no significant pre-strip will be required to enable the project to move into production. A pre-production phase will however be required for the earthworks to construct various installations such as the integrated waste landform and the water storage facility.

The mining operations at Kundip will require the construction of mine office and workshop. A dedicated haul road will be constructed between Kundip and Trilogy to enable ore to be transported to the Trilogy process plant. A service water pipeline will also be installed adjacent to the haul road which will enable surplus water to be transported between the two operations as required.

The open pits at Kundip will be mined under conventional contract. No major earthmoving plant will need to be purchased and capital expenditure will be limited to minor assets such as light vehicles, lighting towers and pit dewatering pumps.

The underground mines at Kundip will be managed and operated by Tectonic. A small fleet of underground mining equipment comprising of drills, loaders and trucks will be purchased to develop and stope the economic portions of the resource. Other minor assets such as ventilating fans and pumps will also be required.

The capital costs and operating costs estimated in the DFS for the life of mine are given in Table 4 and Table 5 respectively.



Description	Capital (A\$M)
Trilogy process plant	76.0
Tailings storage	5.6
Water storage	1.7
Mine infrastructure and other	9.9
EPCM	19.5
<b>Stage 1 Development</b>	<b>112.6</b>
Site infrastructure	4.7
Raw water pipeline	0.9
Haulroad	1.2
Mine plant and equipment	5.9
<b>Stage 2 Development of Kundip</b>	<b>12.7</b>
<b>Total Capital Expenditure</b>	<b>125.4</b>
Contingency	7.2
<b>Total Including Contingency</b>	<b>132.6</b>

Cost Centre	(A\$/t) Processed
Mining	25
Processing	36
Mine & Gen Admin	19
Marketing and Sales	13
<b>Total opex</b>	<b>92</b>

Table 4: Capital costs for LOM.

Table 5: Operational Costs on a per tonne ore processed basis.

NOTE Incorporates both open pit and underground costs.

## Financial Analysis and assumptions

The DFS financial models generate over \$1Billion in revenue of LOM based on current Reserves for a pre-Tax IRR of 26% and NPV of \$72.4. The key outputs and assumptions are summarised in Table 6 and Table 7 respectively.

Financial Analysis	
Capital cost	~\$133M
Total Revenue	~\$1.05Billion
Life of Mine (LOM)	10 years
Gross operating cost over LOM	\$589M
Cashflow before tax over LOM	\$224M
NPV (8%)	\$72.4M
IRR pretax	26%
IRR after tax and gearing	22.4%
Payback	5 years
Development time	15 months

Key Assumptions	
Gold price over LOM	1350/oz
Silver price over LOM	25/oz
Copper price over LOM	9800/t
Zinc price over LOM	2400/t
Lead price over LOM	2300/t
Assumed debt	\$40M
Assumed equity / hedging	\$100M
USD / AUD Exchange rate	1.00
Diesel power generation	
Shipping of cons via Espearance port to Asian/Chinese smelters	

Table 6 and 7: Key inputs and outputs of the Philips River Project DFS financial model

The profile of payable metal over LOM (table 8) reflects the progression through mining of ore domains and the transition from Trilogy to Kundip mines. Higher copper production in the first half of LOM results in considerable positive cashflows in early years to offset upfront capital demands. The transition to Kundip in year 6 sees a dramatic increase in gold production and corresponding drop in base metal production.



Payable Metal		vr 1	vr2	vr3	vr4	vr5	vr6	vr7	vr8	vr9	vr10	vr11	Total
Silver	'000'oz	106	1,172	791	573	560	330	299	37	39	50	2.1	3,960
Gold	'000'oz	5.46	16.9	7.99	6.11	10.0	7.76	73.4	70.3	65.0	61.5	6.49	331.0
Copper	'000't	5.0	5.16	5.77	6.49	5.19	6.98	3.48	1.37	2.10	2.45	0.5	39.0
Lead	'000't	-	2.73	5.82	6.29	3.58	3.83	1.12	-	-	-	-	23.4
Zinc	'000't	-	2.60	6.31	8.28	4.64	5.77	2.66	-	-	-	-	30.3

Table 8: Payable metal over LOM

### Contributors

Original Resource modeling was conducted by *Cube Consulting* with *Mining And Cost Engineering* completing mine designs, mine opex and capex and Reserve calculations. *GR Engineering* completed all GA and plant design, detailed drawings and associated costings with *Optimum Capital Pty Ltd* providing expertise in developing the DFS financial model. Metallurgical testwork was completed at *Ammtec's* Burnie facilities in Tasmania with additional expert advice from Peter Munro. *Auscorp* provided detailed metals market commentary and parameters.

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### Competent Person's Statement

The information in this Ore Reserve statement that relates to Mineral Resource estimates defined as part of the June 2010 Mineral Resource are based on information compiled by Mr Bruce Armstrong, who is a Member of The Australasian Institute of Geoscientists. Mr Armstrong is a full time employee of Tectonic, and has sufficient experience which is relevant to the style of mineralisation under consideration 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'.

The information in this Ore Reserve statement that relates to Metallurgical factors and assumptions are based on information compiled by Mr Bill Gosling, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Gosling is a Senior Process Engineer for GR Engineering Services Pty Ltd and has sufficient relevant experience 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'.

The information in this Ore Reserve statement that relates to Ore Reserve estimates is based on information compiled by Mr Geoff Davidson, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Davidson is a Principal Consultant and Director of Mining and Cost Engineering Pty Ltd and has sufficient relevant experience 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'.

The Competent Persons have consented to the inclusion in the report of the matters based on their information in the form and context in which it appears.

TECTONIC RESOURCES GLOBAL RESOURCE TABLE: FEB 2011						
GOLD AND COPPER RESOURCE TABLE: KUNDIP PROJECT AND OTHERS*						
CATEGORY	Mt	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)
MEASURED	0.00	0.00	0.0	0.0		
INDICATED	4.39	3.41	2.5	0.4		
INFERRED	3.26	2.48	2.4	0.5		
<b>SUB TOTAL</b>	<b>7.65</b>	<b>3.01</b>	<b>2.5</b>	<b>0.4</b>		
BASE METAL RESOURCE TABLE: TRILOGY PROJECT**						
MEASURED	0.31	2.4	41	0.3	0.1	0.0
INDICATED	5.75	0.7	48	1.1	2.1	1.3
INFERRED	0.18	0.6	12	0.8	0.2	0.2
<b>SUB TOTAL</b>	<b>6.24</b>	<b>0.82</b>	<b>47</b>	<b>1.0</b>	<b>2.0</b>	<b>1.2</b>
GLOBAL RESOURCE TABLE: GRADE						
MEASURED	0.31	2.4	41.2	0.3	0.1	0.0
INDICATED	10.14	1.9	28.3	0.8	1.2	0.7
INFERRED	3.45	2.4	3.0	0.5	0.0	0.0
<b>GRAND TOTAL</b>	<b>13.90</b>	<b>2.03</b>	<b>22.3</b>	<b>0.7</b>	<b>0.9</b>	<b>0.5</b>
GLOBAL RESOURCE TABLE: CONTAINED METAL						
	Mt	M Oz	M Oz	t (000)	t (000)	t (000)
MEASURED	0.31	0.02	0.41	0.9	0.4	0.0
INDICATED	10.14	0.62	9.21	78.1	122.5	73.9
INFERRED	3.45	0.26	0.33	16.1	0.3	0.3
<b>GRAND TOTAL</b>	<b>13.90</b>	<b>0.91</b>	<b>9.95</b>	<b>95.2</b>	<b>123.3</b>	<b>74.3</b>

Table 8 Global Resource

\*- Based on wire-framing to drill holes on a 1.0g/t Au cut-off for shallow resource, and 3.0g/t Au. for deeper mineralisation, and reporting to a 1g/t Au cut-off.

\*\* -Based on wire-framing to drill holes on a 0.5% Cu equivalent cut-off and reporting to a 1% Cu equivalent cut-off.

Oxide Cu eq. = (Au ppm \* 9775) + (Ag ppm \* 150.4) + (Cu ppm):

Sulphide Cu eq. = (Au ppm \* 4720) + (Ag ppm \* 75.5) + (Cu ppm) + (Pb ppm \* 0.2384) + (Zn ppm \* 0.1925)