

Thor Mining PLC
Dundas = Tropicana 2 ?

0.875p

6 August 2010

Share Price: 0.875p



12m High: 2.75p
12m Low: 0.75p
Market Cap: £2.9m
Shares in Issue: 336,559,912
 388,228,004 fully diluted

Debt: Nil
Cash at Hand £0.53m
Current Exploration Phase £250,000

LSE Code: THR
Sector: Mining
Market: AIM
Website: www.thormining.com
Broker/NOMAD: Daniel Stewart & Co
Company Contact: John Simpson - 0207 776 6550

Description: Greenfields gold exploration in Australia with a fully permitted tungsten/molybdenum mine ready to finance

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Dual-listed Thor Mining (AIM, ASX:THR) has completed a financing mainly aimed at advancing its Dundas gold exploration project in Western Australia. Geologically this is the same region that is host to AngloGold Ashanti's Tropicana gold resource (5Moz of gold at 2g/tonne). This remote geological province has long been overshadowed by the adjacent greenstone and shear zone gold deposits of the Yilgarn Craton and Tropicana will be its first gold mine. However, similarities to other old orogenic belts mean that there should be prospects, not only for gold but for other metals too.

With steel-making additives and speciality metal prices still recovering the company's Molyhil Mine is now in a holding pattern with management maintaining relationships and permits in good stead ready for the moly and tungsten prices to break through a nominal barrier to resumption. Of course this doesn't mean that the company is closed to new offers, but in reality now that moly is a publicly traded commodity and with China still holding the majority of both supply and demand for tungsten, we are looking to economic fundamentals driving metals prices back up rather than any corporate activity to bring Molyhil into production. We understand that the company is still in contact with CITIC, the Chinese entity that had expressed a desire to off-take the mine's production and that other organizations have also been in contact.

So while moly prices are stagnant in the \$15-20/lb range tungsten prices are now back up to the \$220-250/mtu range and look relatively strong. We should remember that it is natural for tungsten to lead moly as most marginal production is used in industrial tooling as a hard metal. Moly should pick up later in the recovery when steel production for advanced infrastructure picks back up. With three large oil spills recently (two in the US) we fully expect standards to be reviewed for equipment used in North American drilling, completion and pipelines. This may or may not include higher materials specifications and the use of a higher proportion of steel that contains moly, but the punitive damages imposed on BP are likely to encourage the hydrocarbon industry to employ wider margins of safety when specifying new equipment.

For now though focus is on quickly advancing the Dundas gold exploration project. The recent capital raising should provide sufficient funds to fulfill the next stage of obligations as Thor works towards 100% ownership (from the current 51%).

In our review of The Dundas Project we show that Thor has managed to acquire some of the prime land in a 700km long trend and by AngloGold Ashanti's own description looks to be well placed to discover a Tropicana analogue.

Y/E	Group Sales	Declared Profit	Adjusted Profit	Adjusted EPS	P/E ratio	Divi	Yield
	£ 000s	£ 000s	£ 000s	p/sh		p	%
2008A	0	(1,100)	(1,100)	(0.8)	N/A	N/A	N/A
2009A	0	(1,300)	(1,100)	(0.6)	N/A	N/A	N/A
2010E	0	(1,350)	(610)	(0.2)	N/A	N/A	N/A
2011E			No	Estimates			

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Dundas Project

Regional/global geology

The Albany-Fraser Belt (AFB) is thought to represent the remains of the Grenvillian orogenic event, expressed in this part of Australia as the collision between the Yilgarn and Gwalar cratons between 1Ga and 1.3Ga. As cratons migrated around the earth's surface they started to pick up sedimentary rocks around their edges and when they collided these sedimentary wedges were thrust up (and down) to form mountain chains. One of the first and largest of these mountain chains was the Grenvillian Orogeny formed as all the world's cratons and their marginal sedimentary packages collided over the space of 300-400Ma to form the super-continent Rodinia.

Grenville Orogeny 1.0 – 1.4Ga

The Grenvillian orogenic event was an almost global period of mountain building with the remains of a giant semi-continuous mountain chain recognised across Antarctica, Southern Africa, South America, through SE Asia and into South China and Siberia.

Without going into too much geological detail, when the greenstone belts of the Yilgarn (and other cratons) were being formed the Earth's crust was much hotter and thinner (so was unable to support high mountains) and as a consequence was much more chemically homogeneous. With time to cool and increasing amounts oxygen in the atmosphere, global geochemistry changed to favour more lithological differentiation (more rock types) and the crust thickened to allow more geochemical evolution of the new forms of crust.

SE margin of the Yilgarn Craton

So in comparison to the cratonic granites and their greenstone belts as found within the nearby Yilgarn craton, the rocks along the Albany-Fraser Belt are more varied, more comparable with modern lithologies and more structurally complex.

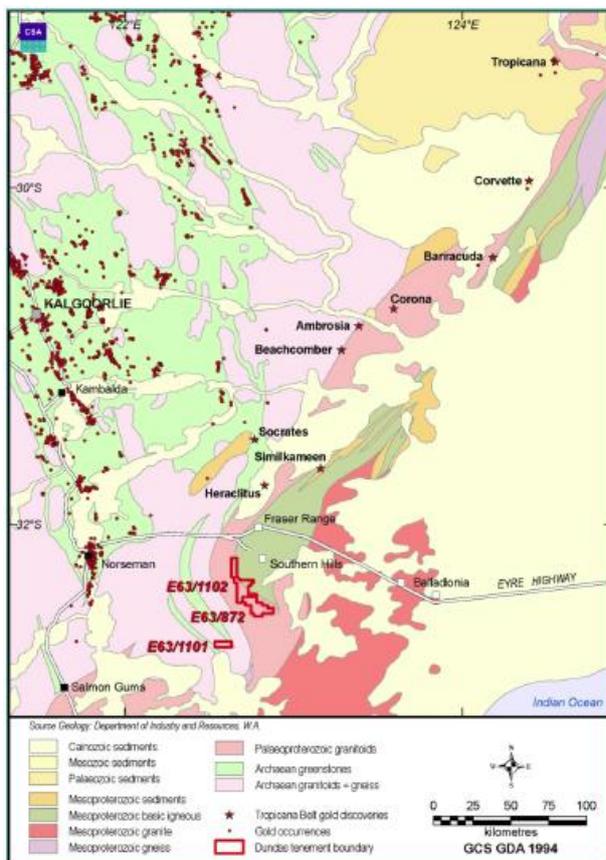


Figure 1: The Albany-Fraser Belt represents a mountain building (orogenic) event along the south-eastern margin of the Yilgarn Craton. It is not the same geological province as the prolific Yilgarn. To the left is the interpreted geology. Sources Thor Mining PLC.

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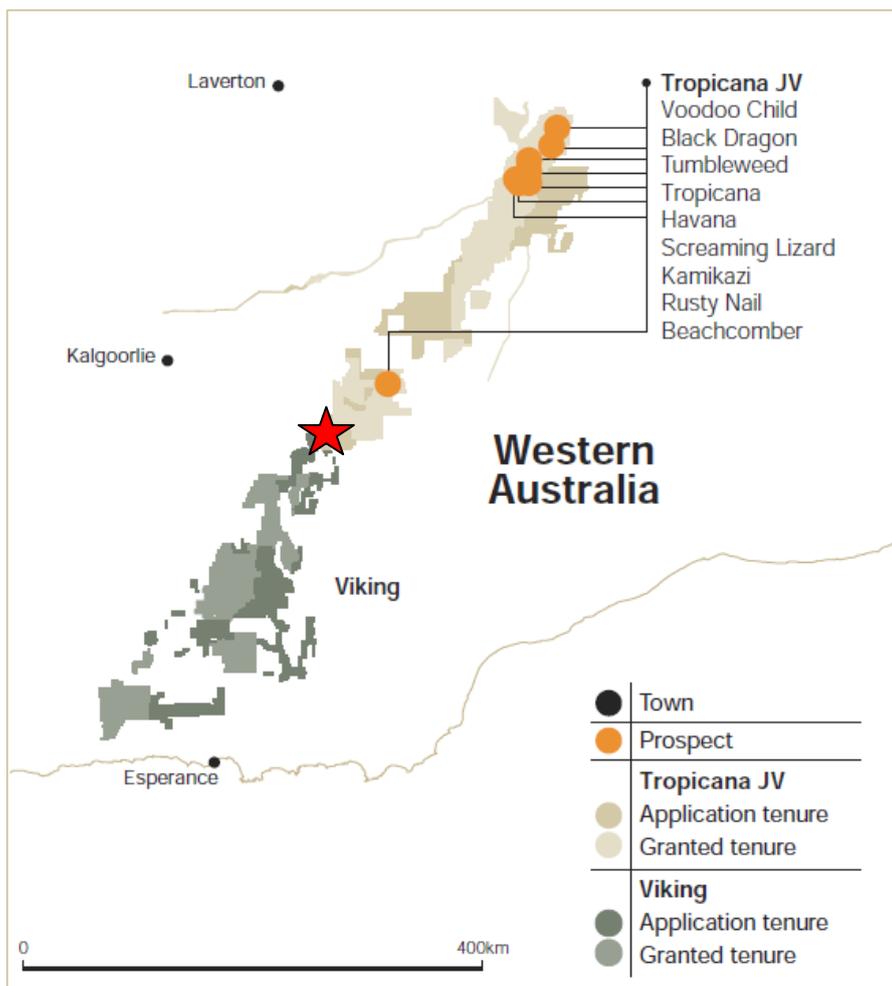
Compared with later orogenic events, the Grenvillian produced mountain belts that were usually wide (>600km), of a generally high metamorphic grade and a long duration (>100Ma). From the point of view of economic geology these are three good reasons to believe that Grenvillian orogenic belts are prospective for a wide variety of minerals, and indeed areas affected by this orogeny such as Eastern Canada, Southern China and Congo are known for their mineral wealth

Local Geology

In a paper by Doyle, Gibbs & Savage of AngloGold Ashanti and Blenkinsop of James Cook University the geology of the Tropicana deposit is described in reasonable field detail and the processes thought to be diagnostic of the mineralisation and its location are described. It is publicly available and we would recommend interested parties to visit the Society for Geology Applied to Mineral Deposits online bookstore (www.e-sga.org) and search for 'Tropicana' to acquire a copy.

Paper by AngloGold Ashanti describes Tropicana deposit

According to Doyle et al to find Tropicana/Havana analogues we should be looking for areas of enhanced permeability, possibly associated with a structural element that is co-incident with the dominant Yilgarn NNW-SSE structural trend. The mineralised lithologies may be metamorphosed to granulite facies, but not necessarily. More crucial seems to be the presence of biotite and amphibole, which is then available to be replaced by sulphide mineralisation and secondary replacement biotite-sericite. Mineralisation is preferentially emplaced as free gold, inclusions in pyrite, electrum or tellurides in micro-shear planes and breccias, within or adjacent to a macro-scale shear zone.



AngloGold Ashanti now holds the majority of land along the Albany-Fraser Range, mainly through JV

Figure 2: AngloGold Ashanti activity on the Albany-Fraser Collision Zone. The red star shows the approximate position of the Dundas project. Source map AngloGold Ashanti Financial Statements 2009.

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From an explorationist's point of view it is interesting to know that Tropicana was discovered through recent sediments up to 15m thick and a lateritic weathering profile of between 40 and 50 meters. The gold anomalies that led to first in place gold were 31ppb (parts per billion) or less. This area has a relatively low sedimentation and erosion rates and has done for many millennia, so that any relatively flat-lying area along the AFB should share a similar erosional and weathering history, implying that a thick laterite may be present over the Dundas properties.

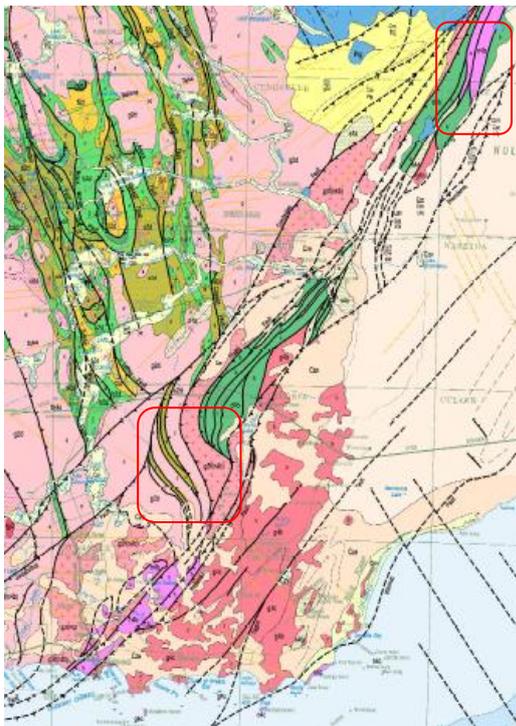


Figure 3: Geology map of the Albany-Fraser Range. The NW quadrant is the Yilgarn Craton showing the dominant NNW-SSE structural trend. The two boxes show the Tropicana area (top right) and the Dundas area. (bottom left). These show the kink in the Albany-Fraser structure towards a common orientation with the Yilgarn greenstone belts cited as a possible influence on mineralisation. Source WA Geological Survey. Overlay from Hardman & Co.

Both Structural and lithological similarities between Tropicana and Dundas

Thor's choice of land packages located over a set of curvilinear thrusts at roughly 90° to the large Cundelee and Fraser Faults is notable, since there is only one other part of the Albany-Fraser Belt known to show similar meso-structure at surface, though there is much of the belt that is poorly explored and exposed. At the extreme northern end of the AFB a lithological package of gneisses known by the WA Geological Survey as 'n4b' has been mapped and seen to abut packages of alkaline igneous rocks such as dolerites and gabbros. Much of Thor's land lies over a package that has been identified

stratigraphically as 'n4b', (but it has also been identified as 'g3f' - a package of granites lithologically). The location also has a similar spatial association to packages of alkaline igneous lithologies, so that both lithologically and stratigraphically there are close parallels to the Tropicana deposit.

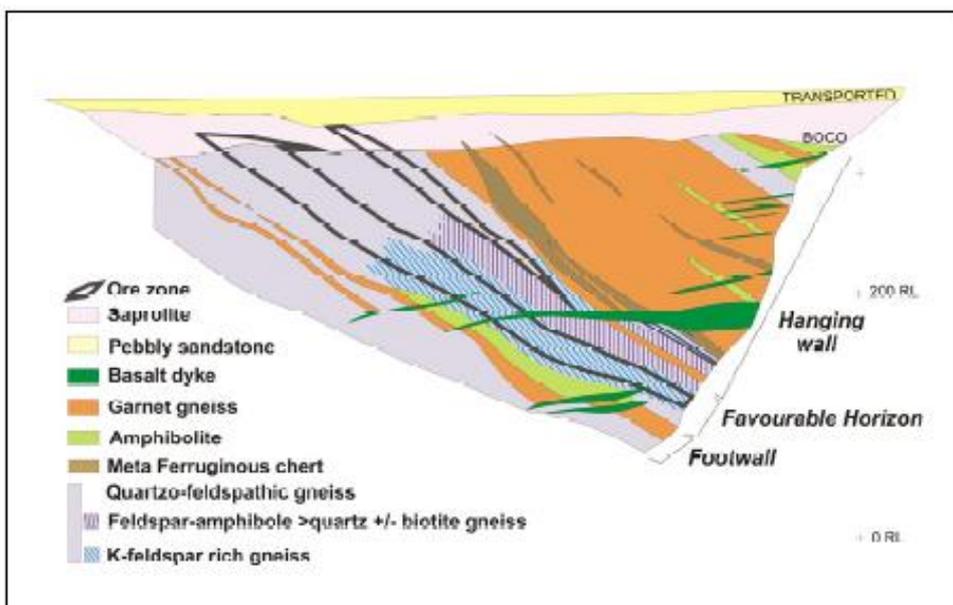


Figure 4: Cross section through the Havana deposit (the southern portion of the Tropicana resource). Source Doyle et al The Geology of the Tropicana Deposit, WA (2007)

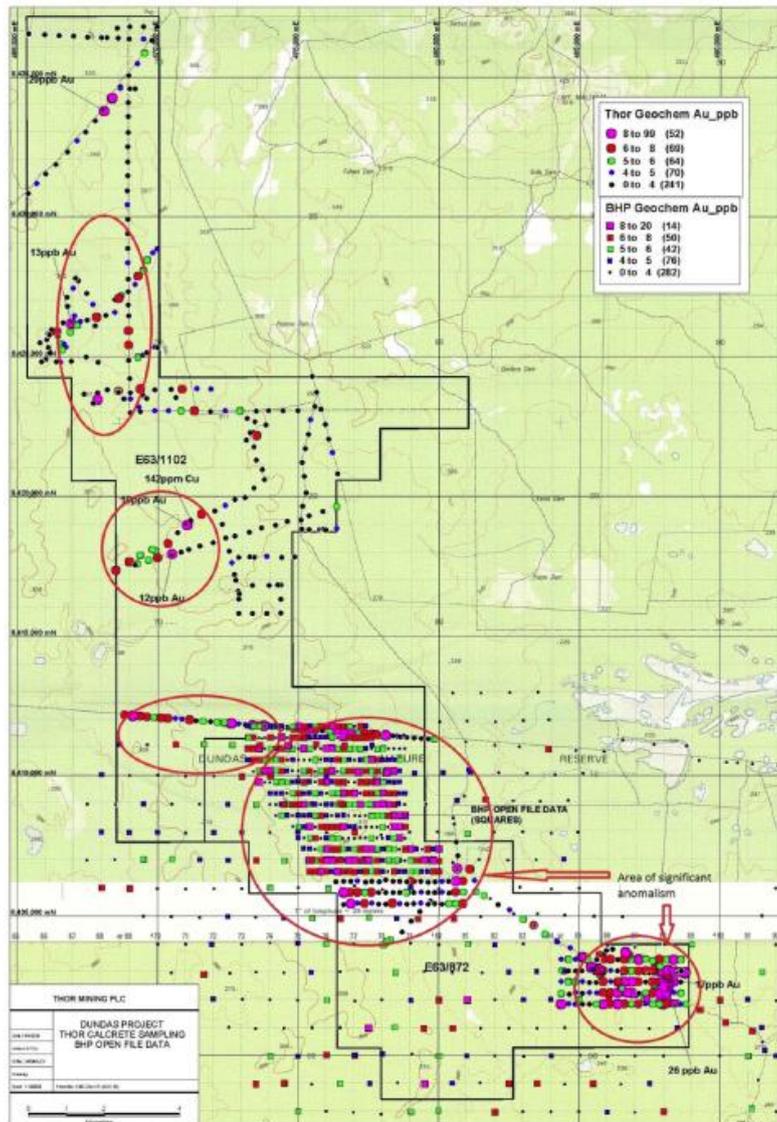


Figure 5: Shallow calcrete sampling. Recent data is combined with historic BHP data. Areas seen to show historic gold anomalies have been resampled and additional targets generated. Source Thor Mining PLC.

An analysis of the data so far

Based upon the information released by AngloGold Ashanti, the regional geology that is in the public domain and the results seen so far by Thor Mining, Hardman & Co believe that the Dundas Project is in as good a location as can be found along the Albany-Fraser Belt to discover an analogue of the Tropicana deposit.

The regional structures are in place (multiple large shears and thrusts along the AFB allowing mineralising fluid flow) coupled with a 'kink' to bring local smaller-scale dilation into broad parallelism with the dominant trend in adjacent greenstone belts containing known gold mineralisation (at Norseman).

The same or very similar lithologies are in place as at Tropicana, implying that a similar metamorphic grade will apply (Grenvillian orogenic belts are wide and usually high grade). This should mean that the same biotite and amphibolites crystals are available to be replaced by later mineralising fluids and the possibility of a similar paragenetic sequence to that seen at Tropicana.

Local structure aligned with Norseman gold structure and parallel to Tropicana

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Thor's calcrete sampling is showing anomalous gold up to 26ppb (Tropicana's discovery anomaly peak was 31ppb). However, we don't yet know the overburden or lateritic profile thickness, so until some shallow drilling has taken place we can't confirm local subcrop of underlying gold-bearing lithologies, but given the aerial extent of the known anomalous gold (6km²) at 2g/t there is ample space for a significant gold resource to be found.

Gold anomalies similar intensity to Tropicana

The presence of several distinct areas of anomalous gold in calcrete is also consistent with the cluster of resources now being discovered at the other end of the AFB. In fact more than one of those anomalies are of a size that could indicate a significant resource with economic potential and it goes without saying that multiple resources sharing a common mineralogy can also share a common processing plant, so driving down relative costs and increasing overall economic potential.

Multiple gold anomalies large enough to be drill targets

Conclusions

We can understand and share the enthusiasm that Thor has for this project. It is well worth pursuing its potential, but it is still a very early stage project and we shouldn't get carried away by a new gold province in a mining friendly country. In fact we shouldn't really be calling it a gold province when only one mine has reached Bankable Feasibility. It may be that other deposit types are more common along the roots of this old mountain chain and we would certainly not rule out a surprise or two along the way as Australian geos get their teeth into a new bit of the outback.

Very interesting new gold prospects along the AFR

However, given that an area of land some 700km long by 100km wide, only 100km from well known historic gold and nickel fields, can still turn up a 5Moz gold deposit (as well as multiple others with million ounce potential) that can be taken from discovery in 2005 to production in 2012/13 perhaps it is worth sitting up and taking notice. AngloGold certainly have and including the Tropicana and Viking JV's it has bagged the vast majority of available ground along the whole 700km strike. Thor did well to find a way in, and did exceptionally well to get a package of land that we consider highly analogous to that which is host to the discovery deposits of Tropicana and Havana South.

Thor has done well to grab a prime land package

While Molyhil must remain to the core value of Thor for now (it is a fully permitted mine after all), the Dundas Project should be seen in a much better light than the recent capital raising would suggest. However those that did take part will hope to see shallow drilling by the end of 2010 since what was raised was sufficient to fulfil the next stage in obligations.

Dundas still early stage but very interesting

BP appears to be continuing to do its very best to encourage the moly price to rise. Market watchers will remember that a failure due to corrosion led to a spill from a pipeline from BP Prudhoe fields in Alaska was one of the primary reasons for an increased use of moly in the 2003-4. Further oilfield equipment failures can only re-enforce the regulator's view on safety margins, which may ultimately lead to an increase uptake of moly-rich steel alloys. However it is still early days in that process and we have yet to see any significant market or corporate moves towards operational risk aversion covering the hydrocarbon sector as a whole.

Of course newer sectors such as desalination and solar power may also supplement existing demand for moly from the steel industry. In June Desjardines Securities estimated that 23lbs of moly is needed for every 100m³ of desalination capacity and in July Platts quoted Chinese sources as seeing a 14% increase in Chinese 2010 moly demand being supported by its use as an electrode in CIGS solar panels. So while moly prices may still be about half their peak, we don't see that lasting forever.

So whether Thor strikes it lucky finding a Tropicana analogue on its Dundas Project or we see the predicted moly price recovery back through \$25/lb and Molyhil bursting into life, the company looks well placed to take advantage of economic recovery and gold price rise.

Gold upside with a mine in the bank

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Management		Major Shareholders	
Non-Exec Chairman	Mick Billing	Western Desert Resources Ltd	47,217,974 14.03%
CFO/Secretary	Laurie Ackroyd	Vidacos Nominees Ltd	17,721,452 5.27%
Non-exec Director	Michael Ashton	TD Waterhouse Nominees (Europe) Ltd	9,980,508 2.97%
Non-exec Director	Norman Gardner	ANZ Nominees Ltd	8,629,786 2.56%
Non-exec Director	Greg Durack		
Non-exec Director	Trevor Ireland		
Exploration Mgr	Stuart Till		
Key Dates		Key Milestones for 2010	
Quarterly Reports	31/03, 30/06, 30/09, 31/12	-	Sept/Oct 2010 Shallow Drilling at Dundas
Half Yearly Report	31/12	-	Dec/Jan 2010/11 Assay Results
Annual Report	30/06		
Full Year Results	30/09		

Table 1: Key company data.

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