

Napperby Project:

ECONOMIC ANALYSIS, PROJECT VIABILITY AND OPTIONS FOR PROJECT OPTIMISATION

INTERNAL MEMORANDUM

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Napperby Project

MARCH 2010

I. Executive Summary

The Napperby project has been analysed under a series of scenarios off the back of the Concept Study Report prepared by URS. Toro has attempted to critically analyse options to improve Napperby on a number of front. The results of these studies are presented below:

	STUDY I	STUDY 2	STUDY 3	3 STUDY 4	
	URS Study	Scaled Plant	Workshop	Flotation	
	(on heap	(with some	Outcome	Leach	
	leach)	optimisation)		Indicative figures	
Grade ppm	333	400	383	383	
Recovery %	70	70	70	81	
Uranium Sold t	7716	7778	8874	10205	
Capital \$M	168	90	134	160	
Operating cost \$M pa	79	42	65	65	
Price Scenario 1: US	\$75/lb U ₃ O ₈				
Opex US\$/lb	53.7	46.6	44.3	40.4	
NPV8 \$M	-20	53	65	89	
IRR %	4%	20.3%	21.0%	24.2%	
Price Scenario 2: US	\$62/lb U ₃ O ₈				
Opex US\$/lb	52.6	44.6	42.5	38.5	
NPV8 \$M	-82	8	9	29	
IRR %	-8%	9.9%	9.6%	13.4%	

Broadly the Napperby uranium project is uneconomic or marginal at or around current long term prices of US\$62/lb U_3O_8 under all development scenarios under consideration. The probability of the project becoming economic is dramatically increased at prices north of US\$75/lb U_3O_8 .

There are some obvious next steps with respect to advancement of the project:

- Undertake further geological modelling of the resource on half metre intervals by uniform conditioning to confirm the increase in grade;
- Prepare a mining plan based on single use leach pads with multiple lifts in order to reduce the haulage cost and rehandling; and
- Prepare a flowsheet for the flotation/agitated leach option and conduct testwork required to
 provide confidence in the concept. This would include but not be limited to mineralogy,
 grinding, flotation and tailings settling tests.

The analysis undertaken for Napperby excludes any purchase consideration for the project. The results therefore represent a reasonable valuation range for the project if a positive long term view on the uranium market was held.

In current market terms the project has a value based perhaps on Scenario 2 (current long term price) and Study 2 or 3 (achievable technical objectives), or A\$8m – A\$9m (this is slightly over A\$1/lb in JORC resource). Assuming the purchaser could secure long term pricing and/or took a strategic view, Napperby may be valued in the range of \$9-\$30m with a midpoint of \$15m (or about A\$2/lb in JORC resource).

On this basis it is recommended that Toro cannot proceed with exercising the Napperby option given it implies a valuation range of A\$4.50 to A\$6/lb.

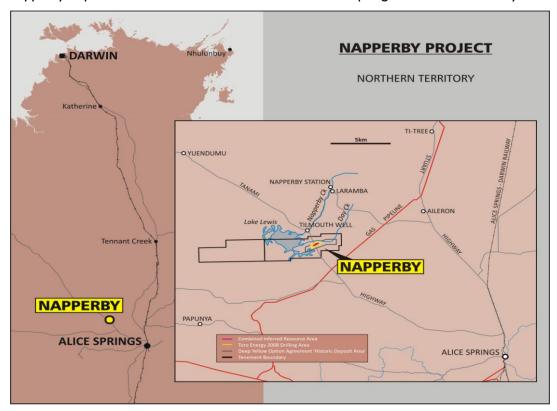
Instead it is recommended that Toro submit this analysis to DYL and restructure the agreement to provide for positive long term outcomes on the project in a transaction structure agreeable to both parties. Given the risk involved in such a project it is likely to take the following form:

- Restructure the agreement into a conventional JV arrangement;
- Toro to continue operating the project and adding its central Australian exploration footprint into the JV (and perhaps DYL may be interested in adding its own exploration footprint in the NT);
- Toro to secure a third party funder for project advancement including a broader exploration Alliance agreement;
- This proposed Northern Territory Alliance will be funded by the third party in two tranches on an annual basis a Napperby project development spend and a regional exploration spend, with both Toro and DYL diluting in the process;
- A key part of the Alliance proposal will be the funding of a prefeasibility study after the follow-up technical studies (described in Section 10) are complete and ultimately a BFS/DFS should the broader uranium market environment improve;
- Final interests in the Alliance (say after a 4 year program) would be 60/20/20, Investor/DYL/TOE, although offtake rights on the project may need to be in excess of the pro-rata share of the investor.

It is recommended that no further work (as per Section 10, below) be done on Napperby until such time as DYL provides a response to the above proposal and an initial "in principal" agreement to the approach outlined above.

2. Introduction

The Napperby deposit is located 175km North-West of Alice Springs, Northern Territory.



The deposit has been explored by several companies, including CRA, Uranerz, Deep Yellow and now Toro Energy ("Toro"). Historically Uranerz defined a "resource" of approximately 13.2mlb U₃O₈. The two exploration tenements (EL24246 and EL24060) are currently owned by Deep Yellow ("DYL") who acquired the tenements from Paladin for a 2% gross sales royalty.

After DYL completed several drilling programs during 2005-2006, Toro negotiated an option to purchase 100% of the equity in the project on certain commercial terms but essentially with the right to purchase on a A\$/lb basis. This implied a consideration range of approximately A\$59m (A\$4.50/lb) to A\$79m (A\$6.00/lb). Toro paid A\$2.3m scrip for this option, deductable against the purchase cost, so the current purchase price is A\$57m to A\$77m based on the current commercial arrangements.

Toro's principal activity on the tenements during 2007-08 was resource definition drilling while 2009 involved completion of the URS Concept Study and follow-up engineering studies/workshop. Approximately A\$6.1m in cash has been spent by Toro on the project to date.

The new JORC Resource (using uniform conditioning and a 200ppm cut-off) covering approximately 50% of the surface extent o f the deposit is as follows:

JORC	Mt	Grade, ppm	Contained U₃O ₈ , t
Inferred	9.34	359	3,353

Compare this to the original resource tenor defined by Uranerz:

Non-JORC	Mt	Grade, ppm	Contained U ₃ O ₈ , t
unclassified	15	400	6000

Resource conversion compared against the historical resource has been very good. Toro therefore believes the original estimate of approximately 6000t (13.2m lb) to be a reasonable guide to the ultimate resource in the historic deposit area, albeit at slightly lower grade. Therefore the economic analysis outlined in sections 5-8 assumes a resource base of at least 15mt as per the original Uranerz estimate.

Given the purchase option expires in 2010, Toro needs to clarify the economic viability of the project and frame an offer to DYL that may be acceptable to Toro and DYL.

3. Previous Studies

The first economic studies on Napperby were prepared by Uranerz in the early 1980's which they referred to as an "Economic Orientation Study". At the time the assumed resource was relatively small (8.4mt @ 450ppm U_3O_8 , assuming a 200ppm cut off and SG=1.75, for 3,776t U_3O_8 contained) so 2 rates of production were assessed, 750t and 500t U_3O_8 per annum of product. The former was the equivalent of a 2mtpa plant while the latter was a smaller 1.4mtpa plant. Conventional alkaline tank leach process was assumed.

The study found the Napperby project to be uneconomic at the prevailing uranium price of US\$40/lb U_3O_8 at the time and concluded that a price of US\$65/lb U_3O_8 would be required.

Mining costs were found to only constitute 10% of total costs with the vast bulk of costs due to the alkaline process. Because of the low grade of the deposit, increases to the cut off grade resulted in a rapid reduction in the mineable inventory/ resource. Only if alternative processing options could be developed could the smaller resource be exploited.

It was concluded that 10mt @ 650ppm (6,500t U₃O₈) would be required for a viable project.

4. Assumptions Used in Current Financial Analysis

The financial analysis of all recent studies (and described below in Sections 5, 6, 7 and 8) and development scenarios used the following key assumptions:

	Price	Price
	Scenario I	Scenario 2
Uranium Price, US\$/lb	US\$75	US\$62
AUD:USD FX Rate, US\$	US\$0.75	US\$0.75
Uranium Price, A\$/lb	A\$100	A\$83

Price Scenario I is based on an average of the UxC Composite Mid Point uranium price forward curve as reported in September 2009 (and supplemented by independent and confidential advice by others), and assumes the majority of production occurs from 2014 onwards.

Price Scenario 2 is based on the current long term uranium price as reported by UxC.

The AUD:USD FX rate is based on the 10 year long term average exchange rate and assumes that pricing and exchange rates are correlated in the longer term.

All scenarios also assume the following:

- 2% gross sales royalty payable to Paladin;
- 17% net profits royalty payable to the Federal Government (current proposal in legislation);
- Construction takes I year, 2012, ramp period is minimal and production begins in 2013 (ie: a simplistic production scenario that is likely to represent an aggressive development option);
- NPV calculations use an 8% real discount rate (>12% nominal) and is on an after-tax basis, although tax calculations do not assume any carried forward tax losses.

5. URS Concept Study Results

Toro commissioned a Concept Study to be undertaken by URS and Mining One based on the Inferred Resource and Uranerz data to achieve a 2 Mtpa production rate over 7.5 years and with two treatment processes namely, alkaline heap leach and alkaline agitated leach. The alkaline heap leach option was preferred based on capital spend and economics, with the alkaline agitated leach having a capital cost in excess of A\$300m, which for a project of Napperby scale, is not predicted to be viable under any realistic scenario.

The outcome of the study on the alkaline heap leach option was;

Capital cost		A\$168m
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Operating cost,	A\$m per annum	A\$79m
	A\$/lb @ \$0.75 FX Rate	A\$73.09/lb U ₃ O ₈

In detail the URS estimated capital costs were (in A\$m):

Mine and Tailings works	0
Site Works	12.534
ROM handling	10.285
Heap leach	21.730
Leach liquor handling	0.268
First stage ppn	10.998
Second stage ppn	1.751
Drying/packing	7.849
Reagents	5.157
Services	18.540
Total	88.926
EPCM	17.785
Mob/demob	4.446
Gas line	8.000
Camp	13.000
Total installed cost	132.157
Contingency 25%	33.039
Spares 5%	2.530
Insurance 1.5%	1.333
Total Estimate	169.062

Operating costs were estimated as follows, A\$m per annum:

Mining	29.171
Reagents	9.496
Labour	6.266
Consumables	1.347
Power	5.703
Maintenance	7.822
G&A	7.339
Total	62.144
Contingency	12.429
Total Estimate	79.573

The heap leach production scenario developed by URS assumed 15mt ore processed at an average grade of 333ppm at 70% recovery producing 7.7mlb LOM (7.5 years) uranium for sale.

Detailed financial projections for the heap leach option under the URS scenario are included in Appendix A1 and A2 (for the two price scenarios) with the following key results:

	Price	Price
	Scenario I	Scenario 2
LOM Opex, US\$/lb	53.7	52.6
NPV ₈ , A\$m	(19.7)	(81.9)
IRR, %	4%	(8%)

Clearly under the URS concept study base case the Napperby project is uneconomic. It would require considerable additional resource tonnes or a much higher uranium price environment for the project to deliver a reasonable return.

6. Scaled Plant Option (with resource optimisation)

After receiving the Concept Report from URS/Mining One and considering the high capital costs resulting from the 2mtpa plant, Toro consultants revised the estimates based on a smaller scale operation. The aim was to critically look at the large scale operation and see if a smaller throughput on a smaller capital base would result in better economic outcomes.

This scenario also looked to optimise the resource base for higher grade as the global LOM grade of 333ppm was considered too low compared to field geologists observations and Toro's confidence that, with careful grade control (such as being undertaken by Toro at Wiluna), would result in a grade at least as high as the global resource grade, or 400ppm at a minimum.

Therefore, this scenario had the following key characteristics (in contrast to the URS Concept case):

- Smaller 1.2mtpa plant costing ~A\$90m processing 12.6mt of ore over an approximate 10.5 year life of mine;
- The same amount of uranium product is produced (7.7mlb) but at the higher processed grade of 400ppm; and
- Annual operating costs were scaled for the smaller operation (approx \$42m pa).

Detailed financial projections for the scaled plant option are included in Appendix B1 and B2 (for the two price scenarios) with the following key results:

	Price	Price
	Scenario I	Scenario 2
LOM Opex, US\$/lb	46.6	44.6
NPV ₈ , A\$m	52.8	8.4
IRR, %	20.3%	9.9%

While these economic outcomes are a substantal improvement, Toro management believed more could be done to optimise the project by critically reviewing the URS Concept study in detail. In particular, given Toro's target IRR for Napperby of greater than 20% the project was still marginal under the price scenario 1.

To that end Toro looked to develop a more detailed alternative development scenario through a workshop developed option.

7. Workshop Developed Option

A workshop was held with URS and Mining One on 11 November 2009 to discuss the Napperby Concept Report and seek opportunities for improvement.

The conclusion from the workshop was that it may be possible to achieve a target IRR of >20% by the following method;

- If the grade of the deposit can be increased from 333 to 383ppm. This will be achieved with improved modelling on half metre intervals by uniform conditioning and by more selective mining;
- A capital cost reduction from \$168 million to \$135 million is possible by reassessing the
 factors applied to the individual line items, by eliminating the cost of the gas pipeline and
 camp. Gas could be trucked to the site and the camp leased;

Area	URS	Revised	Reason for difference
	Estimate	Estimate	
	\$000	\$000	
Mine/Tailings	0	0	
Site Works	12,534	12,534	
ROM handling	10,285	9,241	Piping and electrical factors reduced from 20% to 10%
Heap leach	21,730	19,524	Piping and electrical factors reduced from 20% to 10%
Leach liquor handling	268	268	
First stage ppn	10,998	10,998	
Second stage ppn	1,751	1,751	
Drying/packing	7,849	7,379	Electrical factor reduced from 20% to 10%
Reagents	5,157	5,157	
Services	18,540	17,599	Piping factor reduced from 20%to 10%
Total	88,926	84,264	
EPCM	17,785	16,852	
Mob/demob	4,446	4,213	
Gas line	8,000	0	Truck gas to site
Camp	13,000	0	Lease camp
Installed cost	132,157	105,331	
Contingency 25%	33,039	26,332	
Spares 5%	2,530	2,530	
Insurance 1.5%	1,333	759	
Total Estimate	169,062	134,953	

Reducing the operating cost from \$79 million to \$69 million per annum by correcting an
error in the power costs, reassessing the factor applied for maintenance and by reducing the
ore mining cost by \$1/t ore as a result of changing to single use, multiple lift leach pads
which would reduce the haul distance and rehandling costs. Also, the waste movement can
be rescheduled to reduce the volume moved in the first four years to later in the schedule.

Area	URS	Revised	Reason for difference
	Estimate	Estimate	
	\$M	\$M	
Mining	29.171	24.171	Reduction of \$1/t ore mined from single
			use pads
reagents	9.496	9.496	
labour	6.266	6.266	
Consumables	1.347	1.347	
Power	5.703	2.280	Power cost overstated, error corrected
Maintenance	7.822	4.213	Factoring reduced from 15% to 5%
G&A	7.339	7.339	
Total	62.144	55.112	
Contingency	12.429	11.022	
Total	79.573	66.135	
Adjustment*		3.000	Add for camp lease and gas trucking
Total Estimate	79.573	69.135	

^{*}An allowance of \$3 million per annum has been added to allow for owner's costs, trucking of gas, camp lease charges, rehabilitation and other unknown costs.

Essentially this development option was based on the detailed work done by URS, retaining the overall proposal of a 2mtpa plant processing 15mt over 7.5 years, but refining the capital cost down to \$134m and the operating cost down to ~A\$65m pa.

Improved resource utilisation and an assumption that there will be modest expansion in the resource from nearby satellite deposits results in a LOM uranium product stream of 8.9mlb (out of the original 13.2 defined originally by Uranerz), a target that Toro geologists and engineers believed was achievable.

Detailed financial projections for this target scenario are included in Appendix C1 and C2 (for the two price scenarios) with the following key results:

	Price	Price
	Scenario I	Scenario 2
LOM Opex, US\$/lb	44.3	42.5
NPV ₈ , A\$m	65.3	8.5
IRR, %	21%	9.6%

Again, this result is an improvement on previous iterations but is still considered marginal by Toro at this time. Clearly there is the potential to exceed hurdle rates should the uranium price outperform the UxC composite midpoint case (essentially requiring a uranium price in excess of US\$80/lb).

8. Flotation Option

It is possible that grinding and flotation of the ore would result in an improved project. This would be a relatively large grinding and flotation circuit followed by a small concentrate leaching/ uranium extraction circuit. A preliminary evaluation with a target capital cost of \$160 million would result in an improved recovery of around 81% and result in around 10mlb produced LOM.

Detailed financial projections for the Flotation Option scenario are included in Appendix D1 and D2 (for the two price scenarios) with the following key results:

	Price	Price
	Scenario I	Scenario 2
LOM Opex, US\$/lb	40.4	38.5
NPV ₈ , A\$m	89.2	29.0
IRR, %	24.2	13.4

No test work on grinding and flotation has been carried out therefore the deliverability or viability of this concept is unknown at present. However it is Toro's understanding that a similar concept is being proposed and tested at Mega Uranium's Lake Maitland deposit.

9. Summary of Outcomes

The summary results of the studies to date are;

	STUDY I	STUDY 2	STUDY 3	STUDY 4
	URS Study	Scaled Plant	Workshop	Flotation
	(on heap	(with some	Outcome	Leach
	leach)	optimisation)		Indicative figures
Grade ppm	333	400	383	383
Recovery %	70	70	70	81
Uranium Sold t	7716	7778	8874	10205
Capital \$M	168	90	134	160
Operating cost \$M pa	79	42	65	65
Price Scenario I: US	\$75/lb			
Opex US\$/lb	53.7	46.6	44.3	40.4
NPV \$M	-20	53	65	89
IRR %	4%	20.3%	21.0%	24.2%
Price Scenario 2: US	\$62/lb			
Opex US\$/lb	52.6	44.6	42.5	38.5
NPV \$M	-82	8	9	29
IRR %	-8%	9.9%	9.6%	13.4%

It must be noted that for the project to achieve reasonable economic outcomes all of the improvements referred to above must occur. In particular grade must be improved by 15%, capital costs reduced by 20% and operating costs reduced by 10%. If each of these could be delivered there may be the potential for a development project in the right price environment.

Broadly the Napperby uranium project is uneconomic at or around current long term prices of US\$62/lb under all development scenarios under consideration. The probability of the project becoming economic is dramatically increased at prices north of US\$75/lb.

The most promising scenario is also the most poorly defined or developed by Toro: the flotation leach option. There is more confidence in the outcome from the Workshop Study 3 but even this requires delivering on several improvements and securing long term pricing approaching US\$75/lb. Critical to the success of the project will be the deployment of a very competent technical group to work on the next stage of feasibility studies.

10. Next Stage Technical Work

There are some obvious next steps with respect to advancement of the project:

- Undertake further geological modelling of the resource on half metre intervals by uniform
 conditioning to confirm the increase in grade. This requires leaving out the Deep Yellow Im
 data. Comparisons can also be made using 25cm radiometric data to provide an indication if
 mining should be on 25cm flitches;
- Prepare a mining plan based on single use leach pads with multiple lifts in order to reduce the haulage cost and rehandling; and
- Prepare a flowsheet for the flotation/agitated leach option. Identify the testwork required to
 provide confidence in the concept. This would be mineralogy, grinding, flotation and tailings
 settling tests.

Should these studies prove supportive of the project case it may be possible to move into the next stage of development: the prefeasibility study.

It also needs to be remembered that only half of the deposit has been converted to JORC compliant resource. Considerable drilling remains to be done on the property at a basic $200m \times 200m$ density reducing to $100m \times 100m$ in some areas. Given Toro has spent approximately \$6m to this point, mostly on drilling at Napperby, it would not be unreasonable to assume that an additional \$6m drilling budget would be required to complete the resource conversion and close off the mineralisation zone.

II. Recommendation

The analysis undertaken above excluded any purchase consideration for the project. The results above therefore represent a reasonable valuation range for the project if a positive long term view on the uranium market was held.

In current market terms the project has a value based perhaps on Scenario 2 (current long term price) and Study 2 or 3 (achievable technical objectives), or A\$8m – A\$9m (this is slightly over A\$1/lb in current JORC resource).

Assuming the purchaser could secure long term pricing and/or took a strategic view, Napperby may be valued in the range of \$9-\$30m with a midpoint of \$15m (or about A\$2/lb in JORC resource).

On this basis it is recommended that Toro not proceed with exercising the Napperby option given it implies a valuation range of A\$4.50 to A\$6/lb. Instead it is recommended that Toro submit this analysis to DYL and restructure the agreement to provide for positive long term outcomes on the project in a transaction structure agreeable to both parties. Given the risk involved in such a project it is likely to take the following form:

- Restructure the agreement into a conventional IV arrangement;
- Toro to continue operating the project and adding its central Australian exploration footprint into the JV (and perhaps DYL may be interested in adding its own exploration footprint in the NT);
- Toro to secure a third party funder for project advancement including a broader exploration Alliance agreement;

- This proposed Northern Territory Alliance will be funded by the third party in two tranches on an annual basis a Napperby project development spend and a regional exploration spend with both Toro and DYL diluting in the process;
- A key part of the Alliance proposal will be the funding of a prefeasibility study after the follow-up technical studies (described in Section 10) are complete and ultimately a BFS/DFS should the broader uranium market environment improve; and
- Final interests in the Alliance (say after a 4 year program) would be 60/20/20, Investor/DYL/TOE, although offtake rights on the project may need to be in excess of the pro-rata share of the investor.

It is recommended that no further work (as per Section 10, above) be done on Napperby until such time as DYL provides a response to the above proposal and an initial "in principal" agreement to the approach.

APPENDIX A1: URS Base Case on Heap Leach Option with UxC Composite mid-point uranium prices

						A	ssumpt	ions										
			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Uranium Price	US\$/lb		75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
USD:AUD	US\$:A\$		0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Uranium Price	A\$/lb		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
		Nap	perby UF	RS Minii	ng One	Base Ca	se - Av	erage U	xC Com	posite l	Midpoir	nt Pricin	g					
		LOM	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	202
Ore Mined	ktonnes	15,000					2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,000				
Ore Processed	ktonnes	15,000	-				2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,000	•	•	•	
Processed Grade	ppm	333					350	330	310	320	340	340	340	340	•	•	•	
Uranium produced	000'lbs	7,716					1,080	1,019	957	988	1,049	1,049	1,049	525	•	•		
Recovery	%	70%		•	•	-	70%	70%	70%	70%	70%	70%	70%	70%	-	•	•	
Cash costs (incl. roylaties, G&A)	US\$/lb	53.7					56.9	60.1	64.2	60.9	46.4	46.2	47.1	45.3				
Revenue	A\$m	771.6					108.0	101.9	95.7	98.8	104.9	104.9	104.9	52.5				
Royalties	A\$m	(27.7)					(2.8)	(2.0)	(1.9)	(2.0)	(4.7)	(4.7)	(5.2)	(4.3)				
Operating costs	A\$m	(525.1)					(79.1)	(79.6)	(80.0)	(78.2)	(60.2)	(59.9)	(60.7)	(27.4)				
Tax	A\$m	(15.2)					(8.0)				(1.6)	(5.2)	(4.9)	(2.8)				
Capex	A\$m	(168.0)				(168.0)												
Changes in working capital	A\$m	(0.0)					(7.2)	0.5	0.5	(0.3)	(0.8)	(0.0)	0.0	7.3				
Cashflow	A\$m	35.6				(168.0)	18.1	20.7	14.3	18.3	37.6	35.0	34.2	25.2				
Pre-finance cashflow NPV	A\$m	(19.7)																
Project IRR	%	4.0%																

APPENDIX A2: URS Base Case on Heap Leach Option with current long term uranium price

						P	ssumpt	ions										
			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	202
Uranium Price	US\$/lb		62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
USD:AUD	US\$:A\$		0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.7
Uranium Price	A\$/Ib		83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
			N	apperb	y URS I	Mining (One Bas	e Case	at Long	g Term I	Price							
		LOM	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2
Ore Mined	ktonnes	15,000	-				2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,000				-
Ore Processed	ktonnes	15,000	-				2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,000				
Processed Grade	ppm	333	-				350	330	310	320	340	340	340	340				
Uranium produced	000'lbs	7,716					1,080	1,019	957	988	1,049	1,049	1,049	525				
Recovery	%	70%		-	•		70%	70%	70%	70%	70%	70%	70%	70%	-	•	•	
Cash costs (incl. roylaties, G&A)	US\$/lb	52.6					56.2	59.9	63.9	60.6	44.6	44.4	45.0	42.8				
Revenue	A\$m	637.9					89.3	84.2	79.1	81.6	86.8	86.8	86.8	43.4				
Royalties	A\$m	(15.9)					(1.8)	(1.7)	(1.6)	(1.6)	(2.2)	(2.2)	(2.2)	(2.6)				
Operating costs	A\$m	(525.1)					(79.1)	(79.6)	(80.0)	(78.2)	(60.2)	(59.9)	(60.7)	(27.4)				
Гах	A\$m																	
Capex	A\$m	(168.0)				(168.0)												
Changes in working capital	A\$m	0.0					(5.7)	0.4	0.4	(0.2)	(0.8)	(0.0)	0.0	5.8				
Cashflow	A\$m	(71.1)				(168.0)	2.7	3.3	(2.1)	1.6	23.6	24.6	23.8	19.2				
Pre-finance cashflow NPV	A\$m	(81.9)																
Project IRR	%	-8.4%																

APPENDIX BI: Scaled Plant and Project Optimisation with UxC Composite mid-point uranium prices

						A	ssumpt	ions										
			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Uranium Price	US\$/lb		75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
USD:AUD	US\$:A\$		0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Uranium Price	A\$/Ib		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
				Na	pperby	- 1.2mt	oa Plant	& Opti	mised I	Proiect								
		LOM	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	20
		LOW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	20.
Ore Mined	ktonnes	12,600				1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	600		
Ore Processed	ktonnes	12,600				1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	600		
Processed Grade	ppm	400				400	400	400	400	400	400	400	400	400	400	400		
Uranium produced	000'lbs	7,778				741	741	741	741	741	741	741	741	741	741	370		
Recovery	%	70%				70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%		
Cash costs (incl. roylaties, G&A)	US\$/lb	46.6				46.2	46.4	46.6	46.8	47.1	47.1	47.5	48.1	48.7	44.1	40.2		
Revenue	A\$m	777.8				74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	37.0		
Royalties	A\$m	(50.3)				(4.4)	(4.3)	(4.3)	(4.3)	(4.2)	(4.2)	(4.2)	(4.8)	(5.3)	(6.3)	(4.0)		
Operating costs	A\$m	(432.5)				(41.2)	(41.5)	(41.7)	(42.0)	(42.3)	(42.3)	(42.8)	(42.8)	(42.8)	(37.3)	(15.9)		
Tax	A\$m	(61.5)				(6.0)	(5.9)	(5.8)	(5.8)	(5.7)	(5.7)	(5.6)	(5.4)	(5.2)	(6.6)	(3.9)		
Capex	A\$m	(90.0)			(90.0)													
Changes in working capital	A\$m	(0.0)				(5.2)	0.0	0.0	0.0	0.0		0.0	0.0		(0.2)	5.3		
Cashflow	A\$m	143.4			(90.0)	17.3	22.4	22.2	22.1	21.8	21.8	21.6	21.2	20.8	23.7	18.6		
Pre-finance cashflow NPV	A\$m	52.8																
Project IRR	%	20.3%																

APPENDIX B2: Scaled Plant and Project Optimisation with current long term uranium price

						A	ssumpt	tions										
			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Uranium Price	US\$/lb		62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
USD:AUD	US\$:A\$		0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Uranium Price	A\$/lb		83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
		r	lapperby	- 1.2m	tna Plai	nt & On	timised	Project	at Curr	ent Lor	ng Term	Price						
											_							
		LOM	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	202
Ore Mined	ktonnes	12,600		_		1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	600		
Ore Processed	ktonnes	12,600				1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	600		
Processed Grade	ppm	400				400	400	400	400	400	400	400	400	400	400	400		
Uranium produced	000'lbs	7,778				741	741	741	741	741	741	741	741	741	741	370		
Recovery	%	70%				70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%		
Cash costs (incl. roylaties, G&A)	US\$/lb	44.6				44.4	44.6	44.8	45.0	45.3	45.3	45.7	46.0	46.2	41.6	37.8		
Revenue	A\$m	643.0				61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	30.6		
Royalties	A\$m	(29.6)				(2.6)	(2.6)	(2.5)	(2.5)	(2.5)	(2.5)	(2.4)	(2.7)	(2.9)	(3.8)	(2.7)		
Operating costs	A\$m	(432.5)				(41.2)	(41.5)	(41.7)	(42.0)	(42.3)	(42.3)	(42.8)	(42.8)	(42.8)	(37.3)	(15.9)		
Tax	A\$m	(27.2)				(2.7)	(2.6)	(2.5)	(2.5)	(2.4)	(2.4)	(2.3)	(2.2)	(2.1)	(3.5)	(2.3)		
Capex	A\$m	(90.0)			(90.0)													
Changes in working capital	A\$m	(0.0)				(4.1)	0.0	0.0	0.0	0.0		0.0	0.0		(0.2)	4.3		
Cashflow	A\$m	63.6			(90.0)	10.6	14.6	14.5	14.3	14.1	14.1	13.8	13.7	13.5	16.5	13.9		
Pre-finance cashflow NPV	A\$m	8.4																
Project IRR	%	9.9%																

APPENDIX CI: Workshop "Target" Scenario with UxC Composite mid-point uranium prices

						A	ssumpt	tions										
			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	202
Jranium Price	US\$/lb		75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
USD:AUD	US\$:A\$		0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Uranium Price	A\$/Ib		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
							_											
					1	Vapperl	y - Targ	get Scen	ario									
		LOM	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	20
Ore Mined	ktonnes	15,000				2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,000					
Ore Processed	ktonnes	15,000				2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,000		•	•	•	
Processed Grade	ppm	383				403	380	357	368	391	391	391	391		•	•	•	
Uranium produced	000'lbs	8,874				1,242	1,171	1,100	1,136	1,207	1,207	1,207	603		•	•	•	
Recovery	%	70%				70%	70%	70%	70%	70%	70%	70%	70%					
Cash costs (incl. roylaties, G&A)	US\$/lb	44.3				43.6	45.9	48.6	50.0	42.0	41.9	42.3	36.7					
Revenue	A\$m	887.4				124.2	117.1	110.0	113.6	120.7	120.7	120.7	60.3					
Royalties	A\$m	(51.7)				(7.3)	(6.4)	(5.5)	(5.4)	(7.4)	(7.5)	(7.4)	(4.9)					
Operating costs	A\$m	(472.0)				(65.0)	(65.4)	(65.8)	(70.4)	(60.2)	(60.0)	(60.7)	(24.6)					
Гах	A\$m	(68.8)				(9.9)	(8.3)	(6.6)	(6.2)	(10.4)	(10.5)	(10.3)	(6.5)					
Capex	A\$m	(134.4)			(134.4)													
Changes in working capital	A\$m	0.0				(8.7)	0.6	0.6	(0.2)	(0.7)	(0.0)	0.0	8.5					
Cashflow	A\$m	160.5			(134.4)	33.3	37.7	32.7	31.5	41.9	42.7	42.3	32.8					
re-finance cashflow NPV	A\$m	65.3																
Project IRR	%	21.0%																

APPENDIX C2: Workshop "Target" Scenario with current long term uranium price

						A	ssumpt	ions										
			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Uranium Price	US\$/lb		62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
USD:AUD	US\$:A\$		0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Uranium Price	A\$/Ib		83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
				Nama	ubse To	unat Can	mania a	t Common	. t. l. a. a. a. a.	Town Dr	ica							
				марре	rby - Ta	rget Sce	nario a	Currer	it Long	rerm Pr	ice							
		LOM	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	202
Ore Mined	ktonnes	15,000				2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,000					
Ore Processed	ktonnes	15,000				2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,000					
Processed Grade	ppm	383				403	380	357	368	391	391	391	391					
Uranium produced	000'lbs	8,874				1,242	1,171	1,100	1,136	1,207	1,207	1,207	603					
Recovery	%	70%				70%	70%	70%	70%	70%	70%	70%	70%					
Cash costs (incl. roylaties, G&A)	US\$/lb	42.5				41.8	44.1	46.8	48.2	40.2	40.1	40.5	34.9					
Revenue	A\$m	733.6				102.7	96.8	91.0	93.9	99.8	99.8	99.8	49.9					
Royalties	A\$m	(30.3)				(4.3)	(3.6)	(2.8)	(2.6)	(4.5)	(4.6)	(4.5)	(3.5)					
Operating costs	A\$m	(472.0)				(65.0)	(65.4)	(65.8)	(70.4)	(60.2)	(60.0)	(60.7)	(24.6)					
Tax	A\$m	(29.0)				(4.4)	(3.0)	(1.7)	(1.1)	(5.0)	(5.1)	(4.9)	(3.8)					
Capex	A\$m	(134.4)			(134.4)													
Changes in working capital	A\$m	0.0				(7.0)	0.5	0.5	(0.2)	(0.7)	(0.0)	0.0	6.9					
Cashflow	A\$m	67.8			(134.4)	22.0	25.3	21.1	19.6	29.4	30.1	29.7	24.9					
Pre-finance cashflow NPV	A\$m	8.5																
Project IRR	%	9.6%																

APPENDIX DI: Workshop Flotation Option with UxC Composite mid-point uranium prices

						A	ssumpt	ions										
			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Uranium Price	US\$/lb		75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
USD:AUD	US\$:A\$		0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Uranium Price	A\$/Ib		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
				Nap	perby \	Norksh	op Scen	ario - Fl	otation	Option								
		LOM	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	202
Ore Mined	ktonnes	15,000					2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,000				
Ore Processed	ktonnes	15,000					2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,000				
Processed Grade	ppm	383					403	380	357	368	391	391	391	391				
Uranium produced	000'lbs	10,205					1,429	1,347	1,265	1,306	1,388	1,388	1,388	694				
Recovery	%	81%					81%	81%	81%	81%	81%	81%	81%	81%				
Cash costs (incl. roylaties, G&A)	US\$/lb	40.4					39.1	41.1	43.4	44.9	37.4	37.3	40.8	39.1				
Revenue	A\$m	1,020.5					142.9	134.7	126.5	130.6	138.8	138.8	138.8	69.4				
Royalties	A\$m	(69.3)					(9.5)	(8.4)	(7.4)	(7.3)	(9.6)	(9.6)	(10.1)	(7.4)				
Operating costs	A\$m	(480.3)					(64.9)	(65.4)	(65.9)	(70.9)	(59.6)	(59.4)	(65.4)	(28.9)				
Tax	A\$m	(93.4)					(13.8)	(11.9)	(10.0)	(9.6)	(14.3)	(14.4)	(12.5)	(6.7)				
Capex	A\$m	(159.6)				(159.6)												
Changes in working capital	A\$m	0.0					(10.2)	0.7	0.7	(0.2)	(0.9)	(0.0)	0.2	9.7				
Cashflow	A\$m	217.8				(159.6)	44.4	49.6	43.9	42.6	54.3	55.3	51.1	36.2				
Pre-finance cashflow NPV	A\$m	89.2																
Project IRR	%	24.2%																

APPENDIX D2: Workshop Flotation Option with current long term uranium price

						A	\ssumpt	ions										
			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Jranium Price	US\$/lb		62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
JSD:AUD	US\$:A\$		0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Jranium Price	A\$/lb		83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
		N	lapperby	Worksl	nop Sce	nario - I	Flotatio	n Optio	n & Cur	rent Lo	ng Term	Price						
		LOM	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	20
Ore Mined	ktonnes	15,000					2.000	2 000	2.000	2 000	2.000	2.000	2.000	1,000				
Ore Processed		*		•			2,000	2,000	2,000	2,000	2,000	2,000	2,000	*			•	
Processed Grade	ktonnes	15,000 383		•			2,000 403	2,000 380	2,000 357	2,000	2,000 391	2,000 391	2,000 391	1,000 391			•	
Processed Grade Jranium produced	ppm 000'lbs	10,205		•	•		1,429		1.265	368				591 694			•	
•	%	81%		•	•		81%	1,347 81%	81%	1,306 81%	1,388 81%	1,388 81%	1,388 81%	81%		•	•	
Recovery	76	81%		•			81%	81%	81%	81%	81%	81%	81%	81%			•	
Cash costs (incl. roylaties, G&A)	US\$/lb	38.5					37.3	39.3	41.6	43.1	35.6	35.5	38.7	36.7				
Revenue	A\$m	843.6					118.1	111.4	104.6	108.0	114.7	114.7	114.7	57.4				
Royalties	A\$m	(43.5)					(6.0)	(5.2)	(4.3)	(4.1)	(6.3)	(6.3)	(6.2)	(5.1)				
Operating costs	A\$m	(480.3)					(64.9)	(65.4)	(65.9)	(70.9)	(59.6)	(59.4)	(65.4)	(28.9)				
īax .	A\$m	(48.0)					(7.4)	(5.9)	(4.4)	(3.7)	(8.1)	(8.2)	(6.4)	(3.8)				
Capex	A\$m	(159.6)				(159.6)												
Changes in working capital	A\$m						(8.2)	0.5	0.5	(0.2)	(0.7)	(0.0)	0.2	7.9				
Cashflow	A\$m	112.1				(159.6)	31.5	35.4	30.6	29.0	39.9	40.8	37.0	27.5				
Pre-finance cashflow NPV	ASm	29.0																
rre-imance cashnow NPV	ASIII	29.0																