BMO Capital Markets

May 16, 2016

Uranium Sector Report

How to Bake a Yellow Cake: Initiating on Three Uranium Juniors

BMO Research is initiating coverage of Peninsula Energy (PEN), Fission Uranium (FCU) and NexGen Energy (NXE).

1: In our view, there are opportunities to be had in this sector if investors focus on: 1) companies with favourably priced offtake contracts, 2) exploration plays with better-quality deposits, and 3) undervalued growth potential even in a flat price commodity price environment.

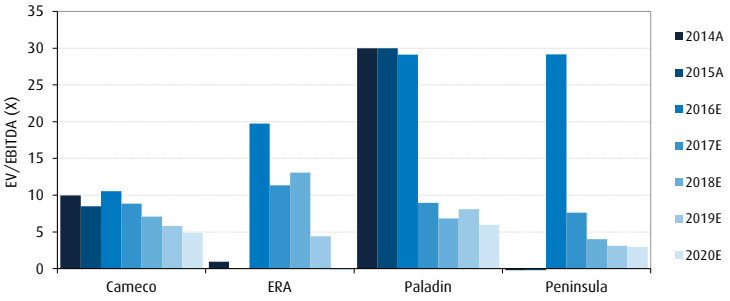
2: Our top pick of the companies in this initiation is Peninsula Energy, due to its favourable contract book, staged production growth, lower risk profile, and attractive multiples (P/NPV 0.6x, 2017E/2018E EV/EBITDA of 10.9x and 5.8x).

3: Separating Fission and NexGen is harder since they both offer high-quality resources with significant expansion potential and clear near-term catalysts. However, due to greater confidence in its resources, relatively better trading multiples, and a superior balance sheet, we prefer Fission at this stage.

PEN.ASX	Outperform (S)
Price: A$0.66	Target Price: A$1.00
FCU.TSX	Outperform (S)
Price: C$0.65	Target Price: na
NXE.TSX-V	Market Perform (S)
Price: C$2.40	Target Price: na

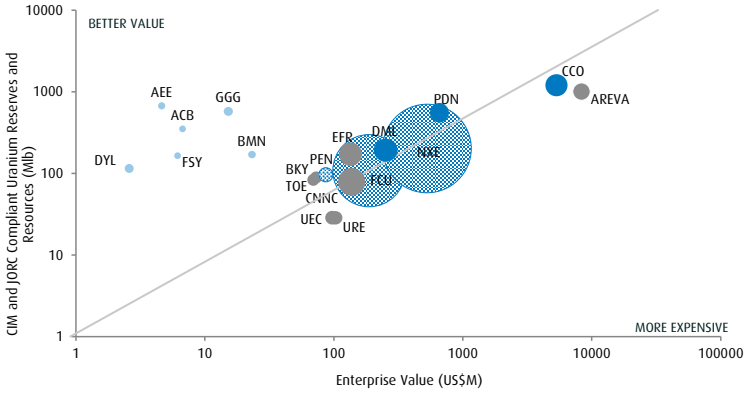
(Prices as of market close on May 13, 2016)

Fig 1: Uranium Producers Calendarised EV/EBITDA (x)



Source: BMO Capital Markets.

Fig 2: EV/lb Global Uranium Resources (Mlb, US$M)



Source: BMO Capital Markets. Bubble size represents grade of uranium.

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1. Investment Summary

We are launching coverage on three junior uranium exploration and development companies: Fission Uranium, NexGen Energy, and Peninsula Energy.

1. **Peninsula (Top Pick) rated Outperform (Speculative); Target Price A$1.00.** Its favourably priced contract book brings with it protection from lower near-term spot uranium prices, with production growth in stages offering the main catalyst, together with attractive trading multiples.
2. **Fission rated Outperform (Speculative).** World-class, high-grade 108Mlb uranium resource with good potential for expansion at PLS. PEA demonstrates economic potential. Cash on hand for the next ~2-3 years of resource drilling. Upcoming catalysts include a technical report and updated resource statement by mid-2017. Offers relatively better trading multiples and lower risk at this stage than other exploration plays.
3. **NexGen rated Market Perform (Speculative).** World-class, high-grade 202Mlb uranium resource with strong potential for expansion at Rook 1. Upcoming catalysts include updated resource statement and potential PEA by year-end. However, the current lack of a technical report combined with inferred only resources and more expensive trading multiples after strong recent share price performance count against it. Having said that, we would look to buy on any pull back in valuation multiples.

Fig 3: BMO Research's Uranium Forecast (US$/lb U_3O_8)

	Q1/15A	Q2/15A	Q3/15A	Q4/15A	Q1/16A	Q2/16E	Q3/16E	Q4/16E	2017E	2018E	2019E	2020E
BMO Uranium Forecast (US$/lb)	37.95	51.44	48.95	36.15	32.77	30.00	32.50	32.50	40.63	46.25	55.00	60.00

Source: BMO Capital Markets.

Framing the Outlook

We believe that the longer-term uranium outlook remains attractive. Reactor construction, led by China, is expected to continue to drive demand. Meanwhile, resource depletion and shuttering of higher-cost operations as higher-priced legacy contracts expire should temper the supply response. We note that as this process continues, the switch of sentiment from oversupply to undersupply could reverse fairly quickly, reflected in a quick ramp-up to our long-term uranium price forecast of US$60/lb from 2020E and beyond.

However, near-term uncertainty means our uranium price forecast is relatively muted out through 2017 and 2018 which, in our view, means investors should look beyond simple commodity price led catalysts in this sector. We believe that there are still attractive opportunities in the sector on the basis of this commodity outlook using the following key themes:

1) Protect Margins Though Contracting

Focus on companies with favourable contracts: Much of the world's uranium supply is contracted between the supplier and utility in advance of delivery, which insulates producers to some degree from fluctuations of the spot price and protects profit margins if higher than spot.

Of the new companies under coverage, PEN offers the more risk-averse investment.

The upside: Margins for the well-contracted companies are relatively well protected, particularly given >50% of the global total cost curve is currently under water at spot price of US$28/lb U_3O_8. On this basis, **Peninsula** and **Cameco** score the best, with both companies generating attractive multiples even in the lower price environment. For this reason, both companies are lower-risk investments than non-contracted companies.

The downside: If mining becomes "in vogue" again, there is a risk of a rotation of capital out of the uranium names into higher-beta stocks in other commodities that offer greater market leverage.

2) Grade Is King

High grade and with critical mass, both FCU and NXE tick the right boxes.

There is nothing like a high-grade deposit to generate interest in an exploration project. Whilst not the be-all-end-all, in the current low price environment, particularly where margins are under pressure, the higher-grade projects are in general more likely to be developed than those with lower grades (albeit low cost in situ leach projects can be exceptions).

On an EV/lb basis FCU appears better value.

Higher-grade projects can absorb higher production and capex costs and still generate attractive returns. **Fission** and **NexGen** have truly world-class discoveries on their hands, which tick the right boxes in terms of grade and critical mass, and are likely to garner interest in any price environment. Currently, Fission does appear to offer better value on an EV/lb basis.

3) Look to the Upside (But Balance the Risk)

PEN's production growth and exploration upside is not fully priced in at this stage

All three companies offer some attractive upside regardless of commodity price. **Peninsula offers production growth**, which should drive higher trading multiples, backed up by its favourable sales contracts, as well as attractive exploration upside, which is not fully reflected in its share price.

Buy FCU at current levels, but NXE on any pullback.

Meanwhile, of the exploration plays, **Fission** and **NexGen** both offer leverage to our forecast of a higher L/T price and **will have technical reports and updated resource statements over the next year or so, which could be significant catalysts, with an increase in resource size and economic confidence likely**.

But, as exploration plays, one must balance the risk therefore with a PEA report in the bag, greater confidence in its resource due to a higher component of indicated resources, proven interest by utilities (CGN), a stronger balance sheet and more attractive valuation multiples – **we believe Fission screens better at this stage. However, we still see significant opportunity to buy on pullback of multiples for NexGen.**

Within the uranium space, in order of preference we prefer Cameco, Peninsula, and Fission.

Target Price Methodology – Our target price of A$1.00 for Peninsula reflects a 75/25 blend of P/NPV (long term – 0.9x) and 2017E EV/EBITDA (short term – 9x) multiples. For exploration plays such and Fission and NexGen, we do not generally ascribe a target price due to the more speculative nature of the investment.

Fig 4: BMO Research Uranium Universe Summary Table

Company	Rating	Share Price	Shares O/S	Market Cap.	Net Present Value	Share Price/ NPV	2016E P/E	2016E EV/ EBITDA	2016E Div Yield	2016E NPAT Growth	2016E Net Debt/ Equity	2017E P/E	2017E EV/ EBITDA	2017E Net Debt/ Equity	Target Price	Total Return	EV/lb Resource
		13-May-16	*M*	*US$M*		*%*	*x*	*x*	*%*	*%*	*%*	*x*	*x*	*%*		*%*	*US$/lb*
Cameco	OP	C$14.97	396	4,223	C$14.61	102%	16.2	10.5	3%	6%	19%	17.2	8.8	18%	C$20.00	36%	$4.43
Denison	Mkt(S)	C$0.65	518	240	C$1.18	55%	n/a	n/a	0%	73%	-7%	n/a	n/a	7%	C$0.70	8%	$1.28
ERA	Und	A$0.34	518	123	A$0.49	69%	n/a	19.8	0%	4%	-89%	n/a	11.3	-98%	na	0%	$0.82
Fission	OP(S)	C$0.65	484	230	C$0.75	87%	n/a	n/a	0%	na	-17%	n/a	n/a	-13%	na	0%	$1.73
NexGen	Mkt(S)	C$2.40	306	535	C$2.09	115%	n/a	n/a	0%	na	-15%	n/a	n/a	-15%	na	0%	$2.61
Paladin	Und	C$0.22	1,712	268	C$0.28	78%	n/a	29.1	0%	na	127%	0	29.1	127%	C$0.15	-32%	$1.25
Peninsula	OP (S)	A$0.66	174	83	A$1.17	57%	n/a	29.2	0%	na	3%	23.8	7.6	7%	A$1.00	52%	$0.90
Total/Average				**5,703**		**98%**	**16.2**	**12.2**	**2%**	**8%**	**15%**	**17.4**	**10.0**	**16%**		**26%**	**2.42***

Source: BMO Capital Markets. Priced as of 13/05/16. All multiples on a calendarised basis. *EV/lb is the estimated global average of uranium companies above US$50M market capitalisation.

Key Pros and Cons

PEN – Rated Outperform (Speculative)

Target Price: A$1.00

Near-term Catalysts:

- **Stage 2 streaming deal in next quarter**
- **Stage 2 Production start (we model FY17)**
- **NYSE MKT ADR Listing**

Peninsula Energy Ltd. (PEN-ASX) - Producing

+ In production and ramping up to Stage 1 of 500–700klbpa U_3O_8 permitted to 3Mlbpa, but plans currently to Stage 3 of 2.3Mlbpa
+ In situ leach mining has a relatively low environmental impact. Staged expansions allow market flexibility. Technically competent management
+ Well contracted production at an average price of US$56/lb covering 75% of the first stage of production, reducing downside risk
+ Could be a regional consolidator
+ Comps well on EV/EBITDA and P/E multiples
– Higher-cost operation in initial phases, but costs more than covered by uranium contract price. Mid costs longer-term
– Limited scalability, beyond 2.3Mlbpa U_3O_8 Stage 3 target at this point without further wellfields
– Funding for Stage 2 expansion contingent on conversion of convertible bond and streaming agreement/additional debt

FCU – Rated Outperform (Speculative)

Target Price: na

Key Catalysts:

- **Updated resource statement by mid-2017**
- **Economic study update by mid-2017**

Fission Uranium Corp. (FCU-TSX) - Exploration

+ Management have a proven track record of resource delivery. A high grade of 1.76% U_3O_8 totalling 108Mlb (72% indicated, 28% inferred)
+ The deposit remains open and has further prospective trends showing mineralisation suggesting upside scalability
+ Recent PEA increases confidence in delivery of an economic project, expected to have low total cost of production in early years of US$25/lb
+ Could be attractive for M&A by an established player, or a company looking for a foothold in the basin
+ Relatively more attractive trading multiples than exploration peers
– High capex of C$1.1B for development is >3x current market cap, and requires construction of a dyke and considerable pre-strip
– Property located on west periphery of Athabasca basin, away from existing uranium infrastructure
– Permitting and construction time frame means PLS is 9–10 years away from production

NXE – Rated Market Perform (Speculative)

Target Price: na

Key Catalysts:

- **Updated resource statement by year-end**
- **Potential PEA update by year-end**
- **Pre-Feasibility study by end-2017**

NexGen Energy Ltd. (NXE-TSX-V) - Exploration

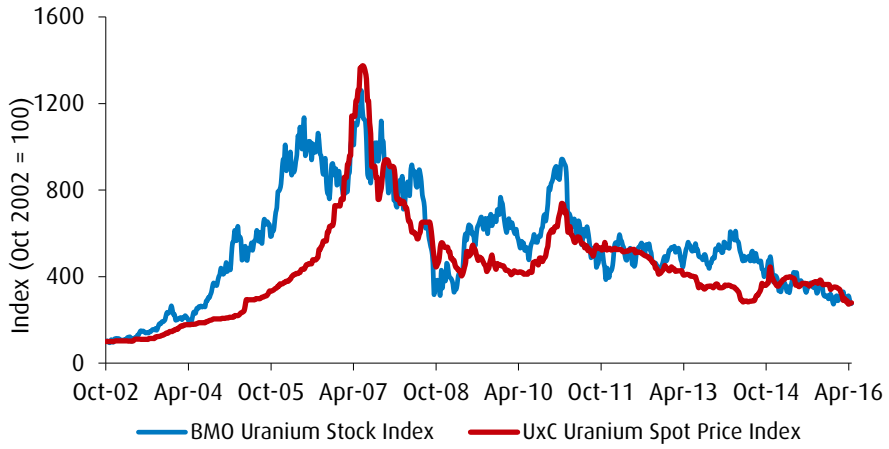
+ Solid management team that have quickly developed a large resource at Rook 1 with 202Mlb of inferred category uranium in in its maiden resource statement
+ Very high average grade resource of 2.63% U_3O_8, which is open in all directions. High grade core of 121Mlb at 13.26% U_3O_8
+ Could be attractive for M&A by an established player, or a company looking for a foothold in the basin
– Early stage, no technical study to demonstrate extraction potential and inferred resource only. We estimate capex to be relatively high at ~C$750M
– Recent share price performance means premium valuation multiples to peers – but could look attractive on any share price pull back.
– Property located on west periphery of Athabasca basin, away from existing uranium infrastructure
– Permitting and construction time frame means production from Rook 1 is 10 years away

2. Market Valuation Multiples

Tracking the Uranium Price

We have created a uranium stock index from the uranium companies under coverage at BMO and plotted it versus the uranium spot price. In the long term, the index appears to lead the spot price slightly, which is in part due to the relatively inefficient physical market.

Fig 5: BMO Uranium Index versus Uranium Price



Source: BMO Capital Markets.

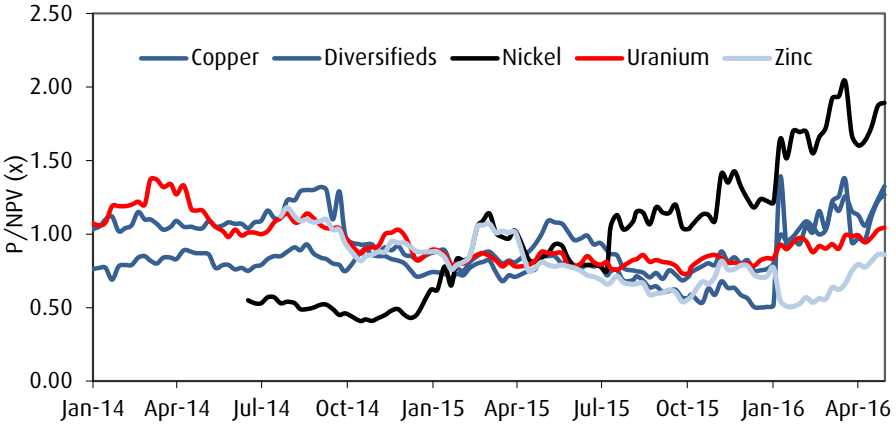
Valuation Multiples

Historically, the uranium sector has traded at a premium to the rest of the non-precious mining sector; however, near-term uncertainty over reactor restarts and an uninspiring commodity price environment has meant the space is trading at relative lows and now sits in the middle of the group.

The uranium sector used to trade near the top of the group on a P/NPV basis.

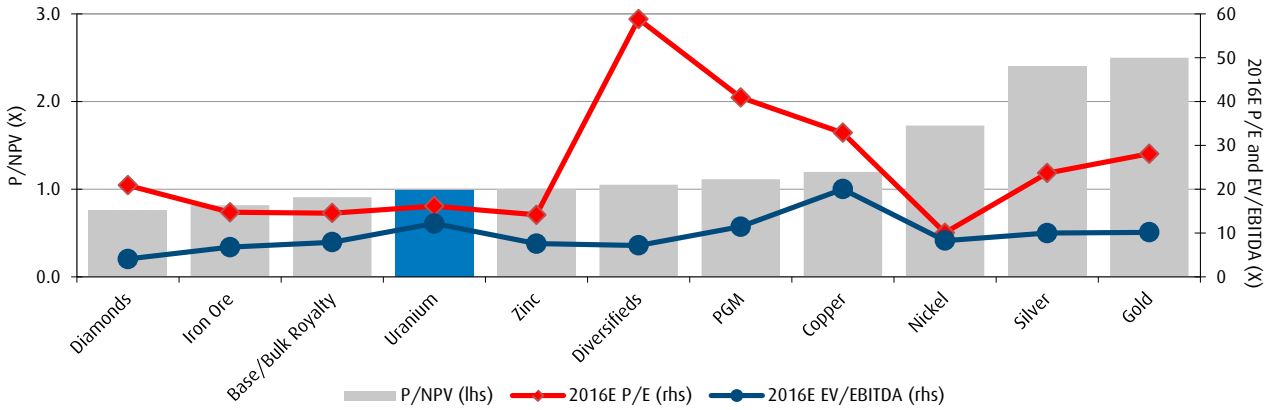
More recently, it has lagged the rest of the non-precious metal sector.

Fig 6: BMO Mining Sector P/NPV History (x)



Source: BMO Capital Markets.

Fig 7: BMO Uranium Universe Vs. Other Commodities. Average P/NPV, 2016E P/E & EV/EVBITDA (x)



Source: BMO Capital Markets.

P/NPV Analysis

The uranium companies under coverage are trading at an average P/NPV of 1.0x on a market cap weighted basis, which is dominated by Cameco. On a simple average this reduces to 0.8x.

Versus the simple P/NPV average, Peninsula is significantly less expensive than most of its peers, trading at a P/NPV of 0.6x, placing it just above Denison. Paladin and ERA are trading slightly below the average. Paladin's net debt is at an uncomfortable level (net debt to EBITDA is ~8x in FY16E) and ERA has a short remaining mine life following Rio Tinto's suspension of Ranger 3 Deeps.

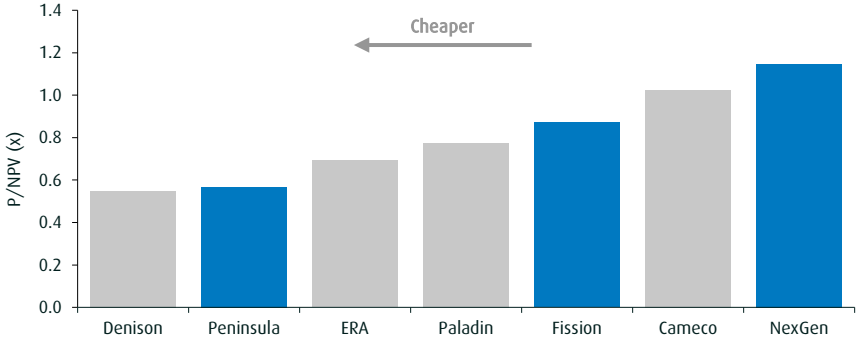
Peninsula is in production; therefore, we believe Cameco and Paladin are more suitable comparisons than the others for analysis. On this basis, Peninsula looks inexpensive versus the most direct peers.

Denison is more comparable to Fission and NexGen in that it is primarily an exploration play. However, in our view, Denison offers less upside potential than both of the other exploration plays at this stage, which is reflected in its valuation multiples. Significantly, for NexGen and Fission, revenues are some 9-10 years hence; therefore, the NPV of the projects are penalized by the timescale.

PEN appears to be one of the least expensive of its peers on a P/NPV basis

FCU screens better than NXE, albeit both companies' NPVs are penalized by the projects' time frame to first production

Fig 8: P/NPV (x)



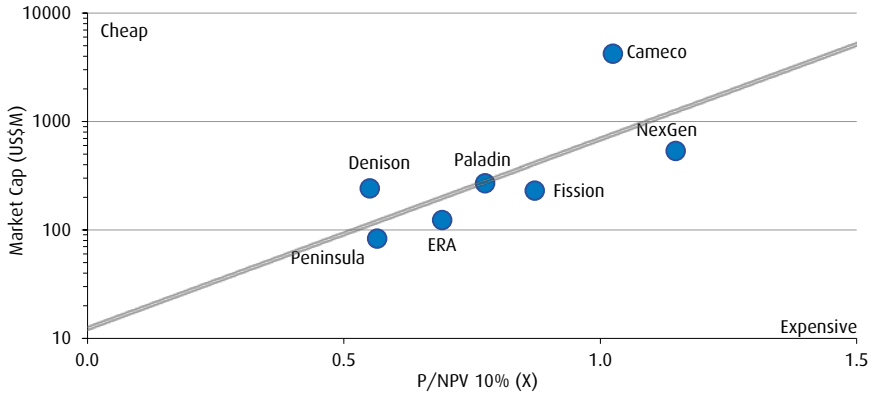
Source: BMO Capital Markets.

Expanding the P/NPV analysis to include market capitalisation takes into account the premiums usually granted to larger companies due to their increased scale and liquidity. On this basis, NexGen and then Fission are slightly more expensive than the average, whilst Peninsula looks relatively well priced.

It is worth pointing out that this chart is somewhat skewed by Cameco, which appears to offer the best value of the group, with its price possibly reflecting an overhang from the CRA dispute.

On a P/NPV vs Market Cap basis, PEN looks broadly in line with the average, whereas FCU and NXE look slightly expensive

Fig 9: Uranium Universe P/NPV Vs. Market Capitalisation (x, US$M)



Source: BMO Capital Markets.

Earnings Multiples

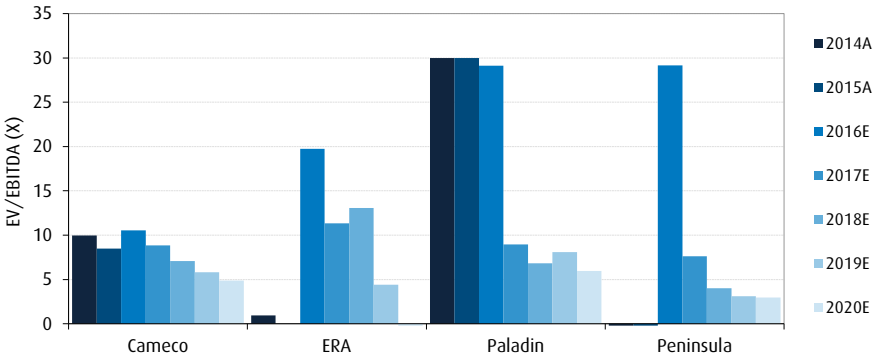
Excluding exploration companies with little or no positive cash flow, on an EV/EBITDA basis, Peninsula compares well versus the rest of the producers under coverage. Its contract book supports a ~50% EBITDA margin at the mine level by calendar 2018 on our forecasts, driving its EV/EBITDA down to ~4x.

Cameco is still consistently amongst the most attractive on this metric, also primarily due to its favourable contract book, which protects it to some degree from the lacklustre near-term uranium forecast.

PEN offers the most attractive EV/EBITDA multiples of the group in the mid-term, with <5x by 2018

Near term, it is in line with the average at just under 10x

Fig 10: Uranium Producers Calendarised EV/EBITDA (x)

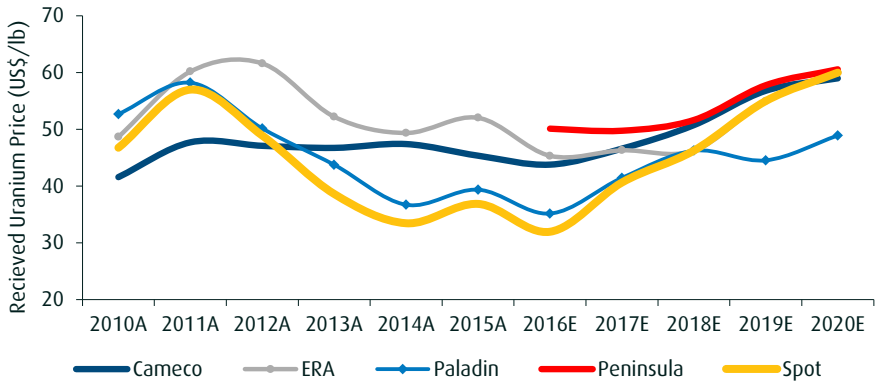


Source: BMO Capital Markets.

We estimate that Peninsula is likely to receive the highest uranium price out of the producers under our coverage, remaining at ~US$50/lb or more on our forecast.

PEN is expected to receive the highest average uranium price on our estimates.

Fig 11: Uranium Producers Received Price (US$/lb)

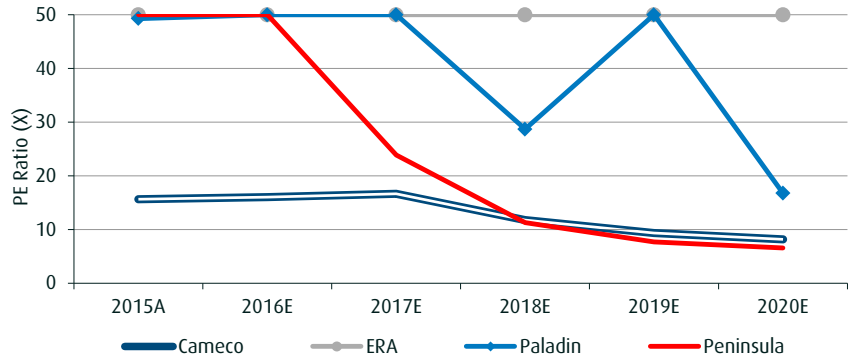


Source: BMO Capital Markets.

Only Cameco and Peninsula offer reasonably attractive P/E ratios amongst the four producers under coverage, in our view. Cameco has the lowest near-term 2016E and 2017E calendarised P/E multiples of 16x and 17x, respectively. Peninsula starts expensive in 2016E, before reducing to a more attractive 11x by 2018E, typical of a company ramping up production, and below Cameco at 12x.

CCO offers the most attractive P/E ratios of the four producing companies under coverage in the near term, before PEN has the lowest by 2018E.

Fig 12: Uranium Producers Calendarised P/E Ratio (x)



Source: BMO Capital Markets.

Implied Pricing

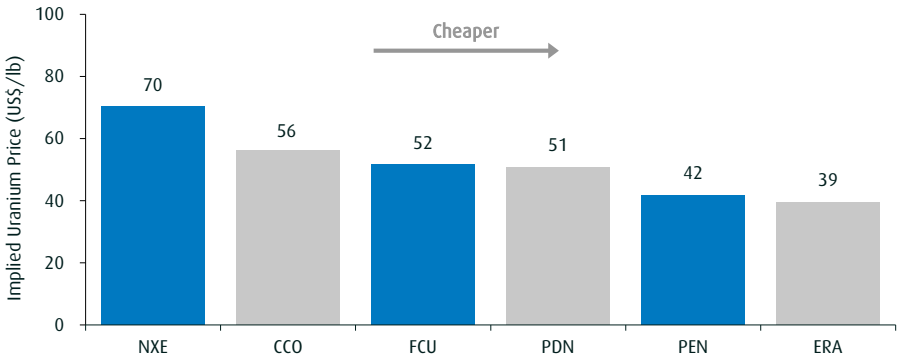
The implied uranium price is the flat uranium price needed forever to force the company's NPV to equal the share price, using a 10% discount rate.

All of the companies are trading at a premium to the current uranium price of US$27.60/lb U_3O_8, with ERA the lowest, reflecting its short remaining mine life. NexGen is trading at a significant premium to current spot at US$70/lb, with Fission trading a touch below Cameco at US$52/lb. Peninsula offers the better value of the three new companies under coverage at an implied price of US$42/lb.

All of the uranium companies imply a uranium price higher than current spot levels… suggesting the market is expecting a recovery at some point.

PEN implies a uranium price of US$42/lb, FCU of US$52/lb, and NXE at the upper bounds US$70/lb.

Fig 13: Implied Uranium Price (US$/lb)



Source: BMO Capital Markets.

Breakeven Pricing

In the following analysis, we have ranked the main projects for the companies by breakeven price – i.e., the uranium price at which the NPV of the project equals zero and using a 10% discount rate. Fission's key project is Patterson Lake South "PLS", NexGen's is Rook 1, and Peninsula has the Lance Projects.

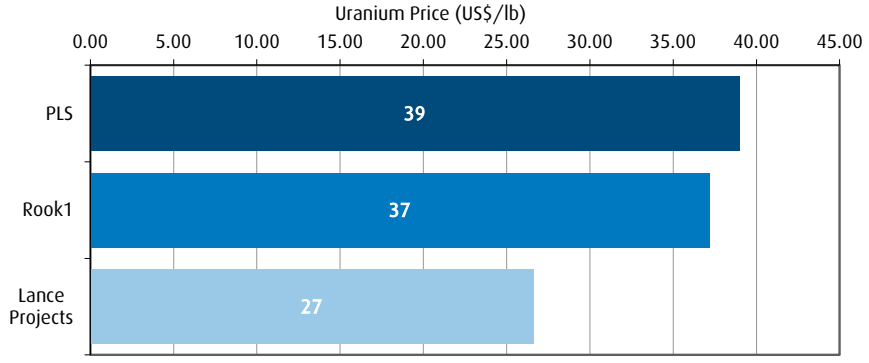
The Lance projects rank the best, at a breakeven uranium price of US$27/lb. This means that to generate a return on investment, the Lance projects require a uranium price of only US$27/lb, which is helped in part by the favourably priced uranium contracts in place. We note, however, that Stage 1 capex (the project is being developed in three stages) has already been spent, therefore putting the project at an advantage over the others.

Both Rook1 and PLS need a relatively high uranium price to break even at US$37/lb for Rook 1 and US$39/lb for PLS; this is partly due to relatively higher capex, but also due to the projected time frame to first production.

PEN's sales contracts reduce the Lance Projects' sensitivity to uranium price.

Whilst FCU's PLS and NXE's Rook 1 projects are high grade and expected to be low cost, capex and time frame increase estimated breakeven prices.

Fig 14: Project Breakeven Uranium Price (US$/lb)



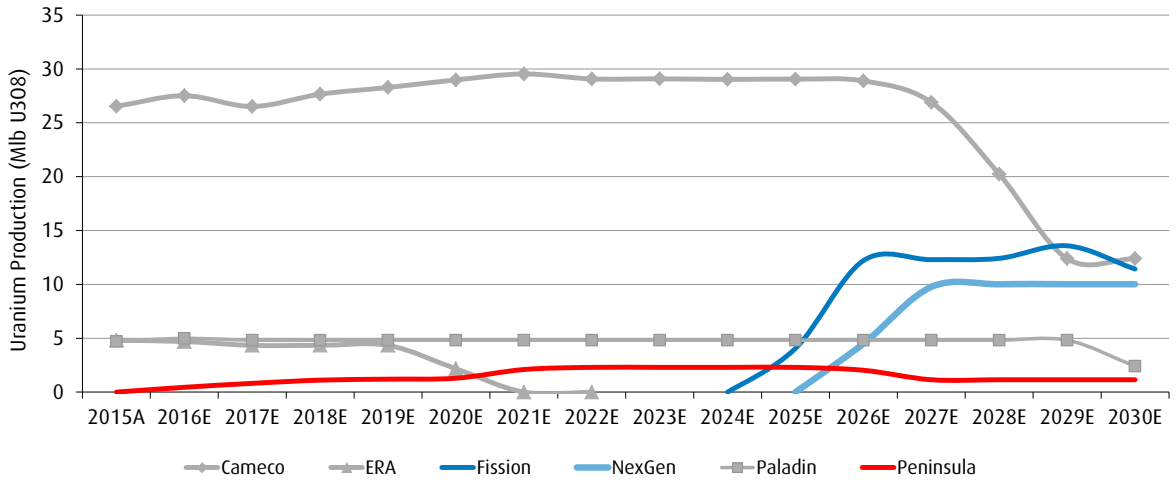
Source: BMO Capital Markets.

3. Production and Costs

The following chart shows attributable uranium production forecasts for the companies under coverage. The sharp drop off in production at Cameco is largely due to reserve exhaustion at Cigar Lake on the current mine plan and more or less coincides with the potential ramp up of production at Fission's PLS and NexGen's Rook 1 project.

Fission's production is expected to reach ~14Mlbpa U_3O_8 for the first five years beginning 2025, before tailing off to a long-term rate of ~3Mlbpa due to grades declining as production moves underground. We have estimated NexGen's production to begin in calendar 2026 at ~10Mlbpa for 12 years. Peninsula reaches a peak of 2.3Mlbpa on our forecasts in 2021.

Fig 15: Uranium Sales by Company 2015A – 2030E (Mlb)



Source: BMO Capital Markets.

Total Costs

In the first three of the following charts, we show total costs, i.e., cash cost plus depreciation (as a measure of capex), SG&A and royalties. This normalises the differential that ISL operations appear to have over conventional mined production. ISL operations typically have lower operating costs but capitalise their well field development costs.

At the current spot price of ~US$28/lb U_3O_8, we estimate that ~70% of the curve would be in negative territory in 2017E.

All three companies are expected to produce uranium in the mid to lower portion of the total cost curve, i.e. including cash cost, SG&A, royalties and depreciation.

In these charts, the Kazakh operations dominate the lower portion of the cost curve, with McArthur River the only Canadian operation in the first quartile on our estimates in 2017E.

The middle of the curve includes the larger Canadian, African, and Australian producers, with the fourth quartile generally smaller producers.

As the only near-term producer of the three companies we are launching on, Peninsula's Lance projects fall just within the second quartile in 2017E, with total cash costs estimated at~US$36/lb. This would position it amongst the lowest cost of the U.S. producers.

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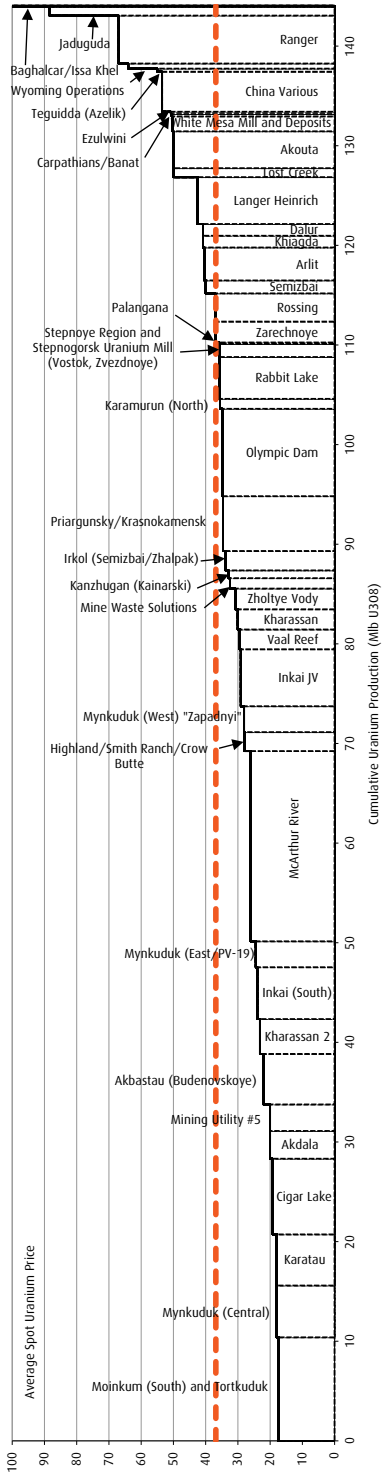
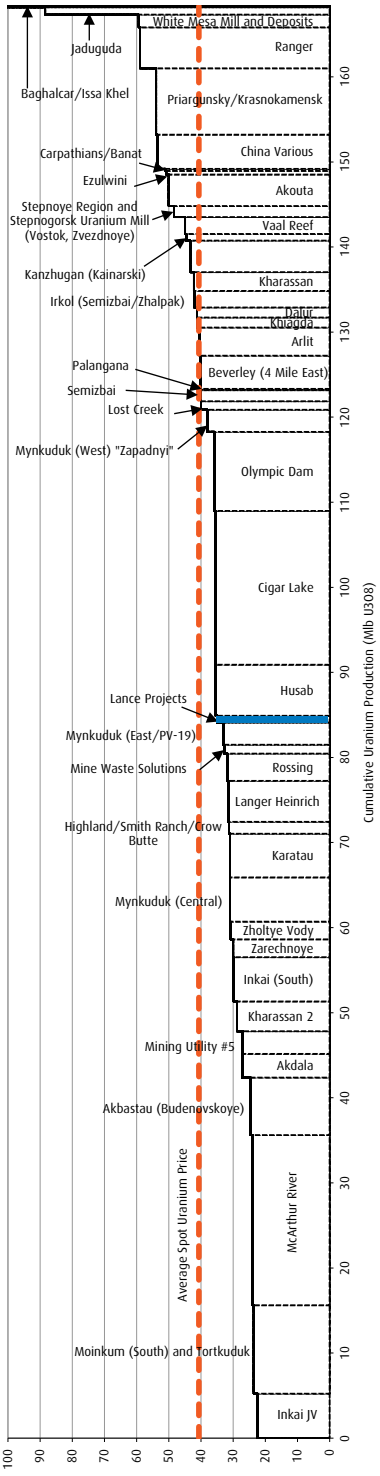
Fig 16: 2015 Total Cost (US$/lb)



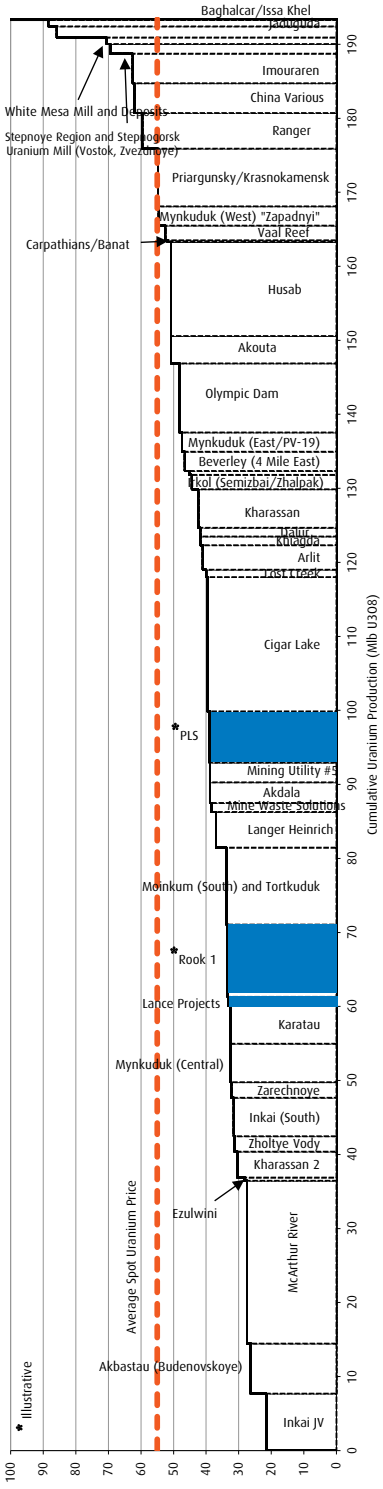
Source: BMO Capital Markets.

Fig 17: 2017E Total Cost (US$/lb)



Source: BMO Capital Markets.

Fig 18: 2019E Total Cost (US$/lb)



Source: BMO Capital Markets.

*Rook 1 and Paterson Lake South shown in 2019 for illustrative purposes.

Peninsula is, however, well contracted, with a total of 7.9Mlb U_3O_8 at an average contract price of ~US$56/lb over the next 10 years. This serves to protect its margin to some degree over the others.

Fission's PLS and NexGen's Rook 1 projects are some 9-10 years from production; however, we have included the projects' average production and cash cost in the 2019E cash cost charts to illustrate how economically competitive we forecast the projects to be. On our estimates, on a total cost basis, both projects are in the second quartile of the curve, at an average of US$39/lb for PLS and US$33/lb for Rook 1.

However, for the first five years of production, the high-grade open pit production at PLS is expected have total costs as low as ~US$25/lb, putting it in the first quartile, before the move underground pushes up average costs later in its life.

Cash Costs

Initially, Lance is in the third quartile in 2017E; however, it is expected to move into the second quartile as it ramps up.

Examining the uranium sector on a cash cost only basis, we estimate that ~25% of the cost curve is in negative territory at current spot uranium price levels. The projects run by companies that we cover span the cost curve, with ERA's Ranger mine towards the top of the curve in 2017E, with Cameco's McArthur River the lowest cost operation in the first quartile.

Peninsula's Lance project is in the lower region of the third quartile of the cost curve in 2017E, but drops into the second quartile by 2019E as the project reaches full production, with estimated cash costs of US$9/lb.

Rook 1 and PLS both comp well on the 2019E costs curve (for comparison only) in the second quartile of producers.

Again, we have included both Rook 1 and PLS in the 2019E costs curve to allow easier comparison. Both projects are expected to have similar cash cost, US$16/lb and US$21/lb for Rook 1 and PLS, respectively, putting them in the second quartile of the curve, with the latter on an average life of mine cost. If plotting PLS using an average the first five years of higher-grade open pit production, this looks even more favourable at <US$10/lb.

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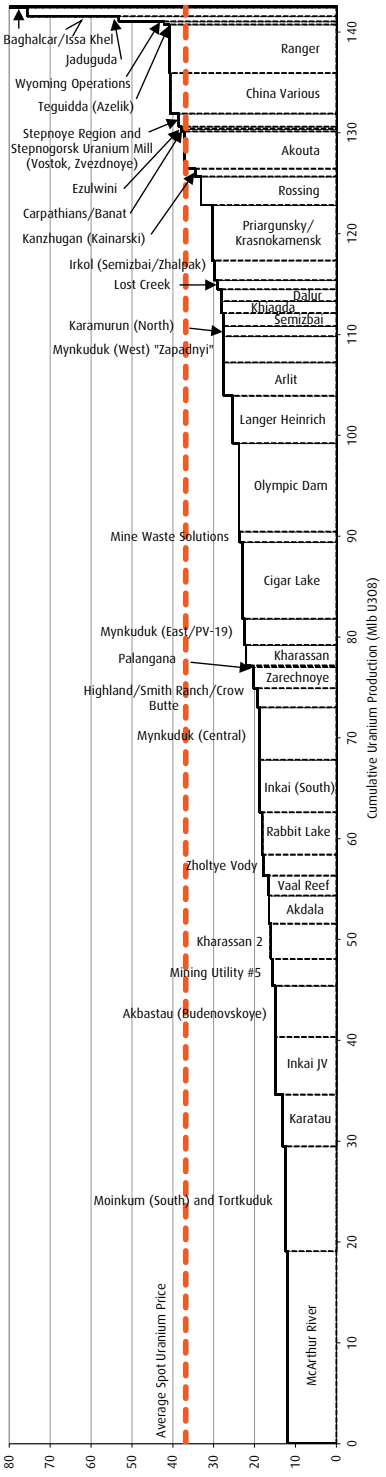
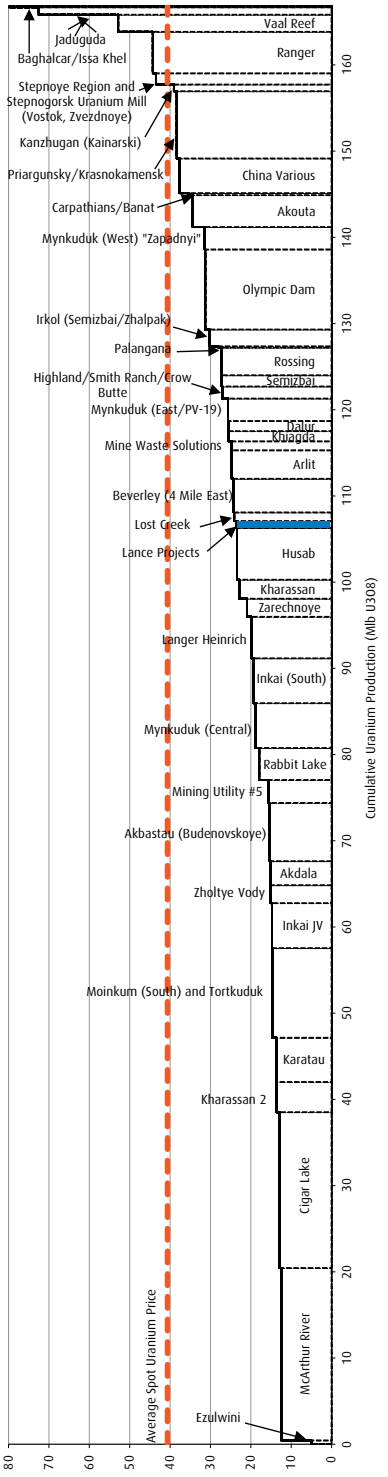
Fig 19: 2015E Cash Cost (US$/lb)



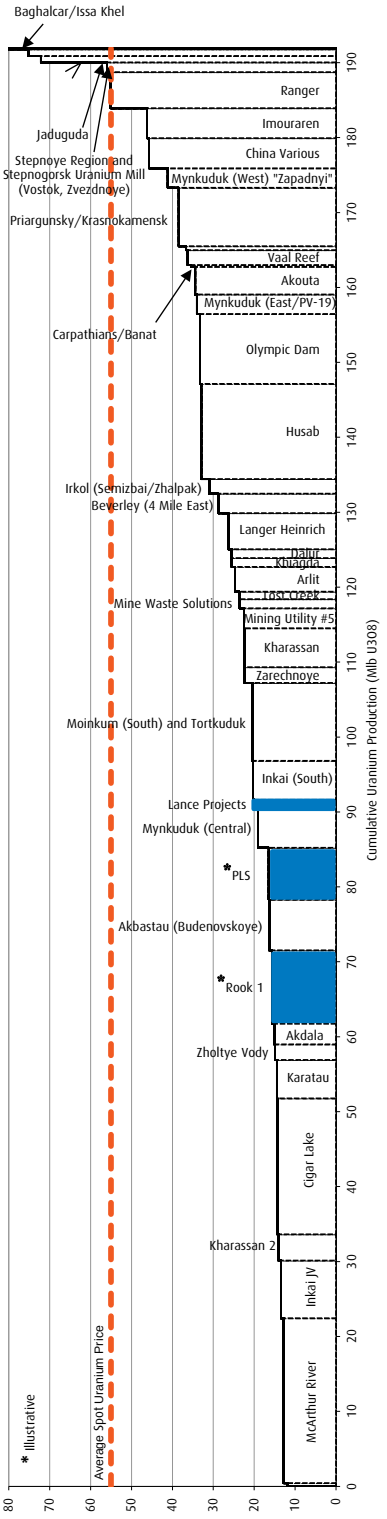
Source: BMO Capital Markets.

Fig 20: 2017E Cash Cost (US$/lb)



Source: BMO Capital Markets.

Fig 21: 2019E Cash Cost (US$/lb)



Source: BMO Capital Markets.

*Rook 1 and Paterson Lake South shown in 2019 for illustrative purposes.

4. Resource Base Analysis

EV/lb Resource Comparison

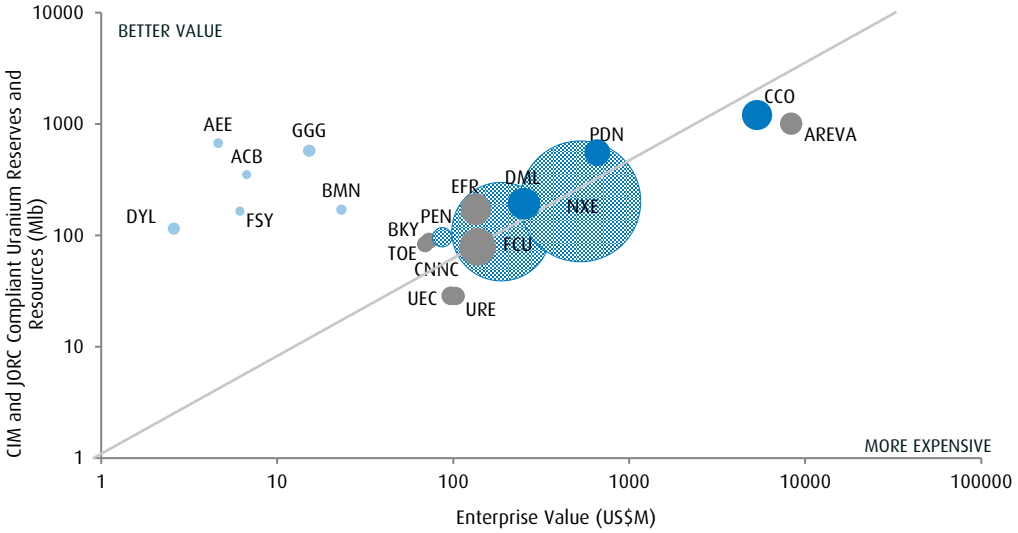
Examining the companies on an EV/lb of total resources is a fairly crude metric as it makes no allowance for the economics of the project, but does incorporate companies with emerging projects of interest.

We have limited our analysis to listed uranium companies with a market capitalisation greater than US$50M (although some of the smaller companies are shown for completeness). The companies in the chart below are trading at an average EV/lb of resources US$2.42/lb.

PEN appears the best value on an EV/lb basis of the three. FCU is less expensive than NXE.

In the first diagram, the size of the bubble represent grade of the resource. Companies plotting above the line could be considered to offer greater value per pound of uranium contained in resources. On this basis, NexGen looks slightly more expensive than the rest of the space (US$2.61/lb), Fission looks like a better value (US$1.73/lb), with Peninsula the best value of the three (US$0.90/lb). This ignores a number of key metrics, including location, mineralogy, expected exploration upside, etc.

Fig 22: EV/lb Global Uranium Resources (Mlb, US$M, Bubble Size Represents Resource Grade)



Source: BMO Capital Markets. N.B. Bubble size indicates uranium grade. Dark blue bubbles are under BMO Research coverage, including textured bubbles PEN, FCU and NXE. Light blue bubbles have market caps lower than USD 50M. ERA is not displayed as its EV is negative

Resource Upside Potential

Of the companies under coverage, both Fission's PLS and NexGen's Rook 1 project offer the most near-term upside to existing resources relative to current size, in our view. Both are undergoing intensive drilling programmes, the results of which are expected to be included in updated technical reports within the next year or so.

Peninsula also offers resources upside; however, the company is focused in the near term on production, not resource drilling at Lance. Therefore, the size of the resource is not expected to be expanded to the same degree.

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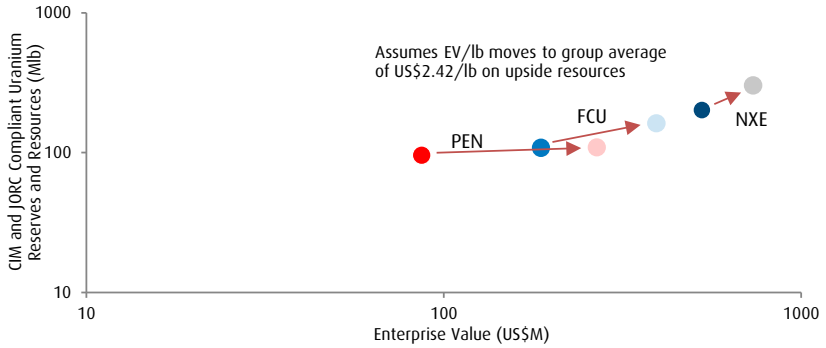
All of the companies have potential for resource upside in our view.

Plotting a 50% resource upside case for Fission and NexGen and +25% for Peninsula's Lance projects on the peer group average EV/lb of US$2.42/lb gives an indication of the potential EVs for these companies should they continue to deliver exploration success. Working backwards from the EV/lb on the expanded resource size gives hypothetical share prices of C$1.16 (+78%) for Fission, C$3.14 for NexGen (+31%), and A$1.67 (+152%) for Peninsula. As an ISL project, however, Peninsula is unlikely to trade on quite the same EV/lb multiple, but it is included here for illustrative purposes.

Fig 23: EV/lb Global Uranium Resource Upside Analysis

If they were to trade on the group average EV/lb and have continued exploration success, PEN and FCU would have the largest increase in EV



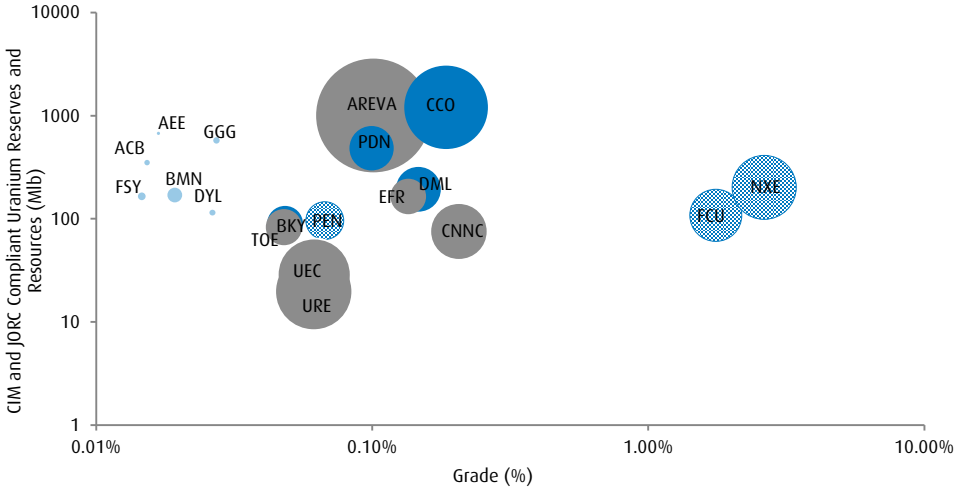
Source: BMO Capital Markets.

Grade Is King

NXE and FCU have the highest average grades of all the companies in this analysis…

NexGen and Fission stand out as easily having the highest-grade resources. Although a rather broad generalisation, high-grade uranium resources are preferable to lower grade (although not without complications from a mining perspective), allowing for a smaller plant, lower capex, and a greater ability to withstand operating cost pressures.

Fig 24: Grade Versus Global Uranium Resources (Mlb, % U_3O_8, Bubble Size Represents EV/lb U_3O_8)



Source: BMO Capital Markets. N.B. Bubble size indicates EV/lb. Dark blue bubbles are under BMO Research coverage, including textured bubbles PEN, FCU and NXE. Light blue bubbles have market caps lower than USD 50M. ERA is not displayed as its EV is negative.

… and are likely to be attractive in any uranium price environment.

Measuring technical risk is harder, particularly given NexGen doesn't have a technical study on its Rook 1 project yet. However, of the three, in our opinion Peninsula offers the least technical risk with its proven ISL technology and with its ramp up under way. Fission's key issue is the proximity of the main deposit to the lake and the corresponding technical and environmental issues this entails.

5. Funding – Debt/Equity/Other

Fission and NexGen need to raise a considerable amount of capital to finance their respective projects. We expect the companies to aim for a combination of debt and equity, which for simplicity's sake we assume is at a 40:60 ratio.

Both FCU and NXE need to raise considerable capital to fund their projects…

Fission and NexGen need to continue to drill out and shore up their resource base as well as undertake further technical studies, which is a cash drain on their balance sheets. We assume near-term cash requirements are fulfilled with smaller equity issues, before the larger project financing is first through equity followed by a draw down in debt as the project construction progresses.

We estimate Fission has adequate cash out to calendar 2018 to fund interim drilling, an updated resource estimate and technical study. To continue to progress the project, we forecast the company will need US$40M in 2018E and a further US$40M in 2020E. The main project financing begins in calendar 2022E, for which we have assumed ~US$520M in equity, followed by debt of ~US$400M in 2024E.

On our estimates, NexGen has adequate capital to fund out until H2/2017E, again covering drilling, updated resource estimate and up to its pre-feasibility study. Thereafter, the company is expected to require ~US$40M in 2017E and US$50M in 2019E, before ~US$350M in equity in 2022E, followed by ~US$295M in debt in 2025E.

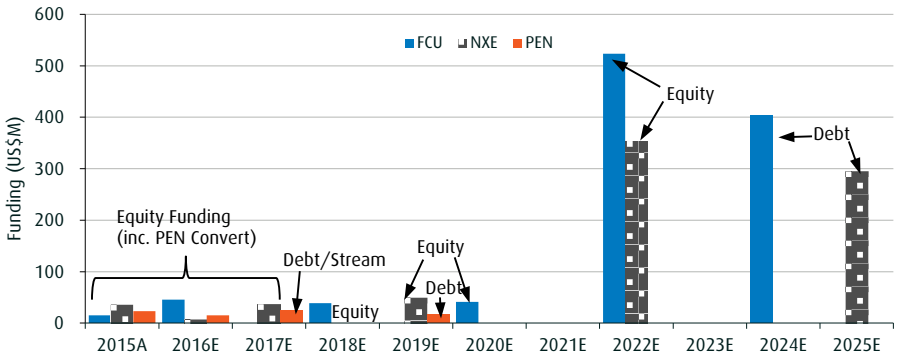
…whereas, PEN's requirements are much smaller, but does require conversion of its convertible debt and/or its streaming deal to go through – otherwise, Stage 2 could be delayed.

Peninsula's capital requirements are much smaller; with its recent convertible debt raising US$15M, we estimate the company needs another ~US$25M for its Stage 2 expansion. The latter could be covered by its proposed US$25M streaming deal. However, until the deal is closed, we assume the company raises debt instead in 2017E although equity should not be ruled out. We anticipate Stage 3 can be covered by internal cash flows and ~US$20M debt.

In our assumptions, we model Peninsula's convertible becomes equity in 2017E thus giving greater headroom for debt. However, if this and the streaming deal do not occur, borrowing the full ~US$40M may prove difficult and delay the second stage.

The chart below shows when we think funding is needed assuming equity and debt funding for the companies.

Fig 25: Forecast Funding Milestones (US$M)



Source: BMO Capital Markets.

6. Potential for Acquisition

FCU and NXE are potential candidates for M&A in our view…

We believe that both Fission and NexGen are potential candidates for takeover. With uranium in the doldrums, but a general consensus of a long-term price at more than double the current level, the next couple of years could be a good opportunity for investors to make strategic acquisitions. Further, due to the strategic nature of the commodity, uranium investors tend to think in multi-decade time frames.

…with FCU already having been a target.

Canada's restriction on foreign-owned enterprises owning majority stakes in producing assets does reduce M&A potential to some degree, although not altogether. As an example of the interest already shown in Fission, CGN Mining (a subsidiary of China Nuclear Power Corporation) recently purchased a 20% stake in the company. But without a waiver from the Canadian government, it will not be able to increase its stake beyond 50%.

Cameco is the logical suitor, but has an attractive pipeline of projects already.

Cameco is the most logical local suitor, in our view, for a large high-grade project in the Athabasca, particularly given its drop off in production in the early 2020s without reserve expansion or extension, but perhaps as a JV partner. However, Cameco has a strong pipeline of development projects within its current portfolio and it may feel no need to chase Fission or NexGen at this stage.

Rio Tinto has the balance sheet and license to buy assets in the current market; however, uranium doesn't appear to fit its current commodity strategy, particularly given the acquisition of Hathor may have reduced its appetite for further uranium plays. AREVA is unlikely to entertain new uranium projects, in our view, given the company has other things to focus on at the moment (balance sheet repair, etc.).

We note with such large capital needs, there may not be room for both projects…

We note that, with a combined >C$1.5B in capex that would need to be funded predominantly through equity, it is highly unlikely that there is enough investor appetite for both projects, particularly given that it is unlikely that two mills would be permitted adjacent to each other.

…but there could be a combination in the future.

One possibility is that the companies join forces for economies of scale with one joint bigger processing plant, or combine resources to provide a longer mine life. However, we see this unlikely to be entertained in the near term.

Fig 26: Recent EV/lb M&A metrics

Transactions	Year	Deal Price	Shares Out (M)	Deal Value (US$M)	Reserves (Mlb)	Deal Value/Reserve lb (US$/lb)	Total Resources (Mlb)	Deal Value/Total Resource lb (US$/lb)	Global Resources* (Mlb)	Deal Value/Global Resource lb (US$/lb)
UraMin by Areva	2007	C$7.50	333	2500			157	15.92	239	10.46
Kintyre by Cameco/Mitsubishi	2008	na	na	495					79	6.24
Failed Forsys bid from George Forrest	2008	C$7.00	79	513	51	9.99	103	4.99	103	4.99
Aurora Energy by Paladin	2010	na	na	261			137	1.90	137	1.90
Mantra by ARMZ	2011			1000	57	17.54	101	9.90	101	9.90
Hathor by Rio Tinto	2011	C$4.70	139	654			57	11.51	57	11.51
Extract by CGNP Consortium	2012	A$8.65	254	2051	205	10.01	367	5.59	367	5.59
28% of Millennium by Cameco	2012	na		150			19	7.95	19	7.95
Yeellirrie by Cameco	2012	na		452					145	3.12
Rockgate by Denison	2013	C$0.23		26			28	0.92	28	0.92
25% Langer Heinrich Stake by CNNC	2014			190	28	6.71	37	5.10	37	5.10
25% Remaining Four Mile Stake by Quasar	2015			54			13	4.30	13	4.30
20% Fission by CGN	2015	C$0.85		59			22	2.73	22	2.73

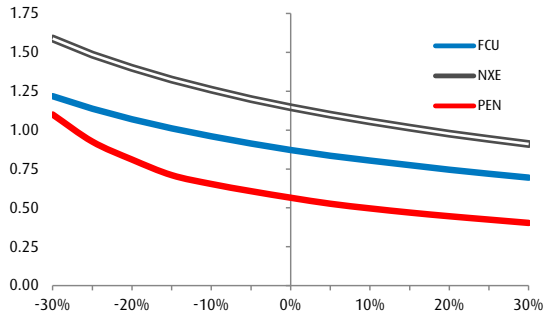
N.B. UraMin deal value and shares out are approximate
**Global Resources include non-code compliant and historical resources*
Source: BMO Capital Markets.

7. Sensitivities

A 10% increase in uranium price results in a:
14% increase in PEN NPV
9% increase in NXE NPV
9% increase in FCU NPV

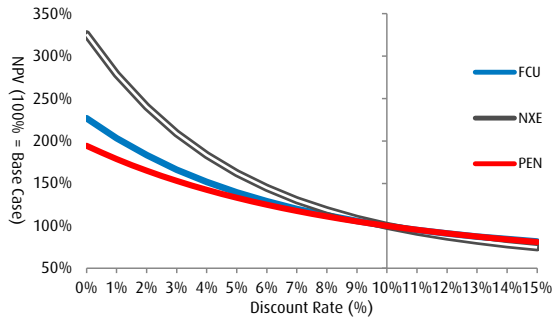
Looking at P/NPV versus changes in our uranium price forecast shows the relative sensitivity of the stocks. Peninsula exhibits the greater sensitivity here, with NexGen and Fission relatively insensitive. The majority of this difference is likely due to the time value of money effect on both NexGen's and Fission's cash flows, which are some 9-10 years hence.

Fig 27: P/NPV Sensitivity to Uranium Price (x)



Source: BMO Capital Markets.

Fig 28: NPV Sensitivity to Discount Rate (%)

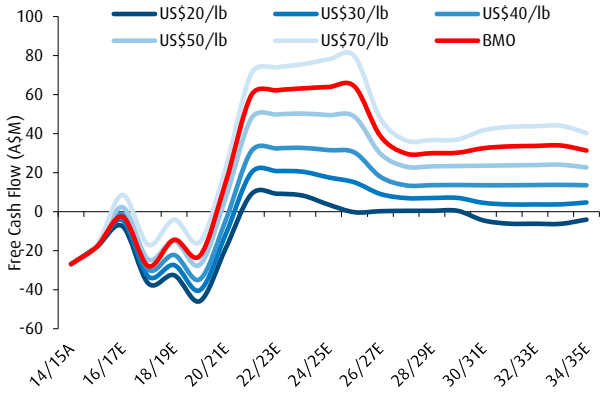


Source: BMO Capital Markets.

NexGen has the greatest sensitivity to the discount rate, a result of the assumption that its cash flows are relatively more back-end weighted than both Fission and Peninsula.

Due to its contract book, Peninsula is protected to some degree from variations in the uranium spot price in the early years of production. However, from ~FY20 as a smaller percentage of production is contracted sensitivity increases, with a US$10/lb U_3O_8 resulting in a ~A$10M change in free cash flow. BMO's price deck begins at US$32lb/ U_3O_8 in 2016E, before increasing to US$60/lb U_3O_8 by 2020E.

Fig 29: PEN FCF Sensitivity to US$/lb Uranium Price (A$M)

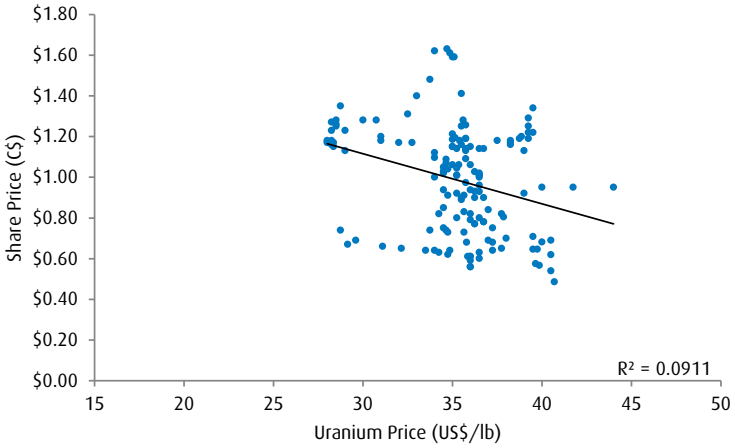


Source: BMO Capital Markets.

In its early years, PEN is relatively insensitive to uranium price moves due to its uranium contract book

The following three charts show the correlation between the companies' share price and uranium. Peninsula's data shows a stronger correlation, which is to be expected given it is now in production. Fission and NexGen's share price both show minimal correlation and are more likely led by exploration results.

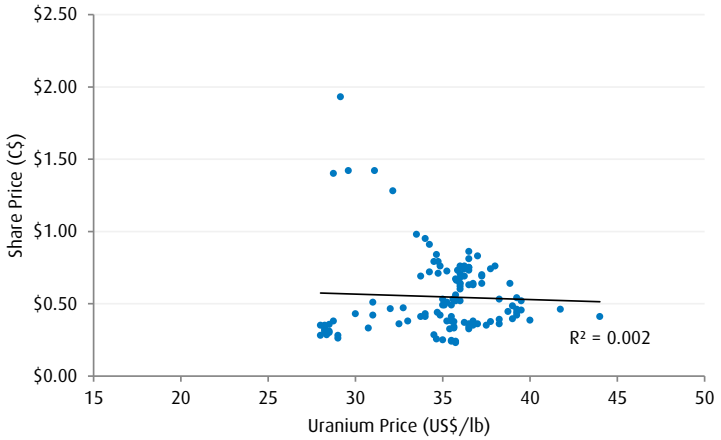
Fig 30: FCU Share Price Versus Uranium Price 2013-Present (C$/sh, US$/lb)



Source: BMO Capital Markets.

An R^2 of only 0.09x suggests a fairly low correlation between FCU's share price and the uranium price.

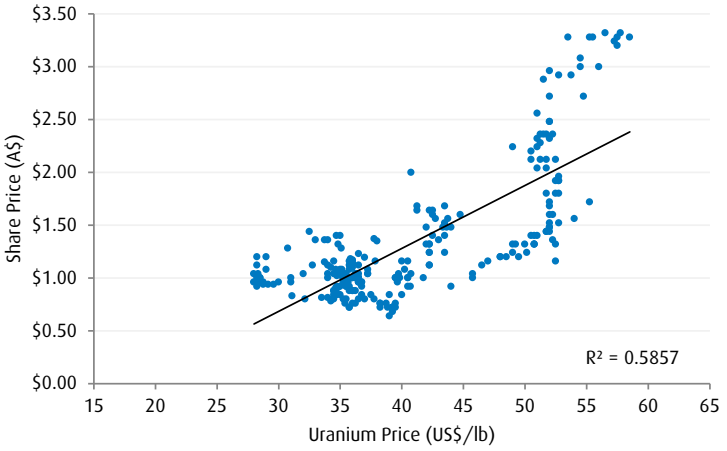
Fig 31: NXE Share Price Versus Uranium Price 2013-Present (C$/sh, US$/lb)



Source: BMO Capital Markets.

An R^2 of only 0.002x is the lowest here. Again, this isn't surprising given NexGen's share price is more likely driven by exploration success

Fig 32: PEN Share Price Versus Uranium Price 2011-Present (A$/sh, US$/lb)



Source: BMO Capital Markets.

PEN's correlation is relatively higher with an R^2 of 0.59x.

The company has a contract book, which is likely to reduce correlation to some degree.

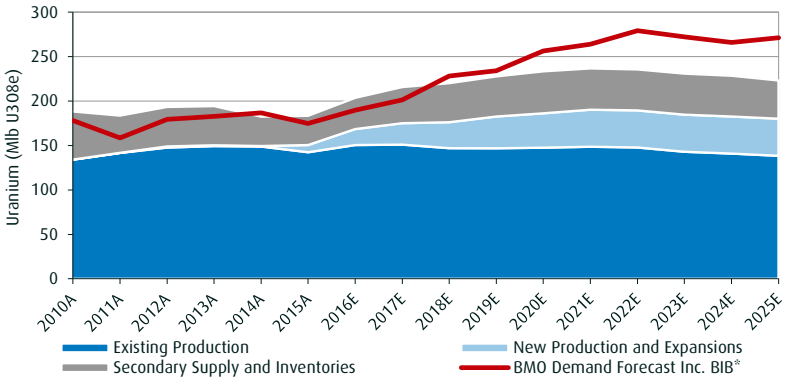
8. Uranium Outlook

Uranium was relatively stable over 2015 and was one of the few commodities in the mining sector that finished the year pretty much as it started, at US$34.25/lb. This year, however, uranium has started with uranium getting progressively weaker, and spot prices have hovered around US$28.00/lb now for the last few weeks.

At these prices, >50% of primary supply is under water on a total cost basis. Nevertheless, the supply response has been stickier than expected, with some respite for producers coming from weaker local currencies, which has resulted in reduced support for the USD-denominated uranium price as well as higher-priced legacy contracts.

Fig 33: BMO Research's Uranium Forecast (US$/lb U_3O_8)

The long-term outlook is attractive in our view, with a supply/demand deficit expected.



Source: BMO Capital Markets. *BIB = Buffer Inventory Build.

Near term, we don't expect to see significant price changes: we forecast US$30.00/lb in Q2/16E and an average of US$31.95/lb for the full year.

Our mid-to-long-term thesis is that uranium prices need to go above current levels to stimulate supply, forecasting a long-term uranium price of a US$60/lb.

Fig 34: BMO Research's Uranium Forecast (US$/lb U_3O_8)

	Q1/15A	Q2/15A	Q3/15A	Q4/15A	Q1/16A	Q2/16E	Q3/16E	Q4/16E	2017E	2018E	2019E	2020E
BMO Uranium Forecast (US$/lb)	37.95	51.44	48.95	36.15	32.77	30.00	32.50	32.50	40.63	46.25	55.00	60.00

Source: BMO Capital Markets.

We forecast that the majority of demand growth is expected to come out of China, which is expected to increase its consumption by ~160% to 2021 (vs. 2015). At that point, China would consume ~25% of total global demand, which would put it on par with the U.S. and Europe in terms of scale.

Whilst China remains the major area of demand growth and appears to be on track to meet its targets, Russia has signed a number of deals to supply reactors on a vendor-financed basis to a number of emerging nuclear nations.

However, near-term uncertainty means that prices could remain muted for the next couple of years

There are risks to this element of the demand growth: a) the weakness of the Russian rouble and low oil prices may hinder Russia's ability to deliver on these commitments, and b) political disagreements, such as with Turkey, could lead to some of these proposed reactors being delayed or cancelled. Russia has already cancelled a nuclear training program with Turkey, but appears to be pushing ahead with the reactors, for the time being.

Additionally, we note that uncertainty over the pace of reactor restarts in Japan as well as the country holding significant amounts of inventory suggests the country is unlikely to play a big part in uranium demand in the near-term.

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Fig 35: Uranium Supply Demand Forecasts (Mlb U_3O_8)

BMO URANIUM MARKET OUTLOOK		2010A	2011A	2012A	2013A	2014A	2015A	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Primary Supply Forecast																	
Australia	Mlb U_3O_8	16.6	21.5	16.5	16.4	16.0	13.6	17.0	18.0	16.7	16.7	16.7	17.6	17.6	12.8	12.8	12.8
Canada	Mlb U_3O_8	23.6	23.1	24.3	24.1	23.3	30.9	40.3	41.8	40.2	40.1	40.1	39.9	39.3	39.3	39.3	39.3
Kazakhstan	Mlb U_3O_8	43.9	47.2	54.9	58.0	59.1	58.7	60.0	59.0	61.4	62.4	62.7	61.9	61.3	61.3	59.2	56.7
Namibia	Mlb U_3O_8	12.9	10.6	12.0	11.1	9.8	7.5	10.4	14.0	13.8	17.5	17.5	17.5	17.5	17.5	17.5	17.5
Niger	Mlb U_3O_8	10.9	11.1	12.2	11.5	12.1	10.9	10.6	10.6	12.6	14.6	17.6	21.6	21.6	21.6	21.6	21.6
Russia	Mlb U_3O_8	6.8	7.8	8.4	8.1	7.5	7.9	9.0	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
Other	Mlb U_3O_8	19.4	20.5	20.7	21.1	21.6	21.1	21.1	21.5	21.3	21.0	21.4	21.6	22.0	22.0	22.0	22.0
PRIMARY SUPPLY TOTAL	Mlb U_3O_8	134.2	141.8	149.0	150.3	149.4	150.5	168.5	175.1	176.2	182.6	186.2	190.3	189.5	184.7	182.6	180.1
Uranium From Inventories and Secondary Supply																	
Russian HEU Deal	Mlb U_3O_8e	23.4	23.4	23.4	20.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Western Tails Re-Enrichment and Underfeeding	Mlb U_3O_8e	5.2	5.2	6.4	6.6	6.7	6.3	5.9	5.5	5.2	4.8	4.4	4.4	4.3	4.3	4.2	4.2
DOE Surplus Uranium Sales	Mlb U_3O_8e	6.2	6.4	7.3	8.0	7.7	7.2	6.2	6.2	6.2	6.2	6.2	6.2	5.9	5.9	5.9	5.9
Reprocessed Uranium/MOX	Mlb U_3O_8e	8.7	8.5	8.4	8.0	8.0	8.1	8.6	9.0	9.5	10.0	10.5	10.8	11.2	11.6	12.0	12.3
Russian Underfeeding, Tails Re-Enrichment and Other	Mlb U_3O_8e	10.6	12.3	10.7	11.7	20.5	18.7	18.2	17.9	17.7	17.4	17.4	17.4	17.4	17.4	17.4	17.4
Japan Inventory Adjustments	Mlb U_3O_8e	0.0	-13.9	-11.8	-10.4	-9.9	-7.4	-3.7	2.0	5.4	6.8	8.8	7.7	7.2	7.0	6.3	3.2
INVENTORY AND SECONDARY SUPPLY TOTAL	Mlb U_3O_8e	54.1	41.9	44.4	44.0	33.1	32.9	35.1	40.7	43.9	45.2	47.2	46.5	46.1	46.2	45.9	43.0
TOTAL SUPPLY	Mlb U_3O_8e	188.3	183.7	193.4	194.3	182.5	183.5	203.6	215.8	220.2	227.8	233.5	236.7	235.6	230.9	228.5	223.2
Demand Forecast Including Buffer Inventories																	
USA and the Americas	Mlb U3O8e	57.6	53.4	53.6	51.9	54.3	54.2	54.9	54.2	59.4	60.8	58.6	57.8	58.8	64.0	59.3	61.1
Europe	Mlb U3O8e	66.5	57.5	59.7	57.0	58.4	55.8	61.8	56.5	59.5	56.9	58.0	61.9	65.5	62.2	63.9	57.4
China	Mlb U3O8e	9.5	10.8	27.2	32.4	35.9	23.7	29.0	42.1	55.2	55.8	56.7	63.4	63.7	63.1	60.5	64.4
India	Mlb U3O8e	2.4	1.8	3.0	5.6	4.1	4.3	4.6	4.9	7.0	7.8	9.1	8.6	13.0	11.2	14.3	18.6
Japan	Mlb U3O8e	17.3	8.1	4.7	0.6	0.0	0.3	1.8	5.3	8.7	10.1	12.1	12.1	12.1	12.1	12.1	11.8
Russia	Mlb U3O8e	10.2	12.0	15.1	15.6	16.7	16.4	17.1	15.5	14.8	18.6	29.8	23.3	29.6	26.8	23.6	25.2
Rest of Asia	Mlb U3O8e	12.8	12.5	14.4	17.7	15.7	16.3	15.9	17.3	17.5	18.1	22.6	24.3	21.2	19.9	19.9	19.9
Other	Mlb U3O8e	2.0	2.4	1.8	1.8	1.7	4.0	4.6	5.7	6.0	6.2	9.5	12.5	15.4	13.1	12.4	12.9
BMO Demand Forecast Including Buffer Inventories	Mlb U_3O_8e	178.2	158.6	179.6	182.7	186.9	175.0	189.6	201.5	228.1	234.3	256.4	263.8	279.3	272.4	266.0	271.3
Supply/Demand Imbalance	Mlb U_3O_8e	10.0	25.1	13.8	11.6	-4.4	8.5	14.0	14.3	-8.0	-6.5	-23.0	-27.1	-43.7	-41.5	-37.5	-48.1
BMO Demand Forecast Excluding Buffer Inventories	Mlb U_3O_8e	181.8	158.2	159.3	171.4	176.9	174.0	175.4	187.6	205.0	224.6	235.7	250.9	262.6	272.3	267.3	253.9
Supply/Demand Imbalance	Mlb U_3O_8e	6.5	25.5	34.1	22.9	5.6	9.5	28.3	28.2	15.1	3.1	-2.3	-14.2	-27.0	-41.4	-38.8	-30.7

Source: UxC, WNA, BMO Capital Markets

9. Peninsula Energy (PEN-ASX)

Market Cap: US$83M

Rating: Outperform (S)

Price: A$0.66

Target: A$1.00

(Price as of market close on May 13, 2016)

Medium-cost producer, but good contract book

Peninsula is an ASX-listed uranium producer with assets in the U.S. and South Africa and a focussed and technically experienced management team. The company's primary asset is its 100%-owned Lance project, an in situ leach operation located in Wyoming in the U.S, but also has a 74% stake in an exploration play in Karoo, South Africa.

Peninsula offers investors exposure to a company that has recently transitioned from an exploration and development play into fully fledged producer that is ramping up Stage 1 production to 500-700klbpa. Its favourably priced contract book brings with it protection from lower near-term spot uranium prices, with production growth in stages offering the main catalyst together with attractive trading multiples.

For the Stage 2 expansion to 1.2Mlbpa, we anticipate a further ~A$34M is required in ~FY17, which may be through debt or a streaming deal. Stage 3 to 2.3Mlbpa needs an additional ~A$20M, which we assume is debt funded in FY21.

Cash costs for the operation are estimated at ~US$41/lb (all-in-sustaining) for Stage 1; however, as final processing is brought in-house from Stage 2, costs are expected to drop closer to US$30/lb, which are perfectly acceptable.

Positives and Negatives:

+ In production and ramping up to Stage 1 of 500-700klbpa U_3O_8 permitted to 3Mlbpa, but plans currently to Stage 3 of 2.3Mlbpa
+ In situ leach mining has a low environmental impact. Staged expansions allow market flexibility. Technically competent management team
+ Well contracted production at an average price of US$56/lb covering 74% of the first stage of production, reducing downside commodity price risk
+ Could be a regional consolidator
+ Comps well on EV/EBITDA and P/E multiples
– Higher-cost operation in initial phases, but costs more than covered by uranium contract price
– Limited scalability beyond 2.3Mlbpa U_3O_8 Stage 3 target at this point, without further wellfields
– Funding for Stage 2 expansion contingent on conversion of convertible bond and streaming agreement/additional debt

Initiating at Outperform (Speculative); A$1.00 Target Price

We estimate an NPV of A$1.17/share, or US$0.94/share, using a 10% discount rate and long-term uranium price of US$60/lb. Our target price of A$1.00 for Peninsula reflects a 75/25 blend of P/NPV (long term – 0.9x) and calendar 2017E EV/EBITDA (short term – 9x) multiples.

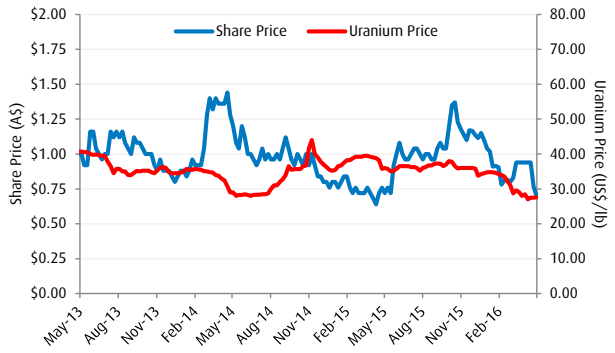
Near-Term Catalysts/ Key Risks:

- **Technical Prowess:** Achieving nameplate Stage 1 capacity of 700klbpa U_3O_8 is needed to prove up the company's technical ability. This is expected in early calendar 2017.
- **Funding:** Funding for Stage 2 is currently a combination of the convertible debt and additional debt/streaming. Stage 3 also requires a further ~A$20M in debt. The expansions are dependent on this funding.

How to Bake a Yellow Cake
May 16, 2016

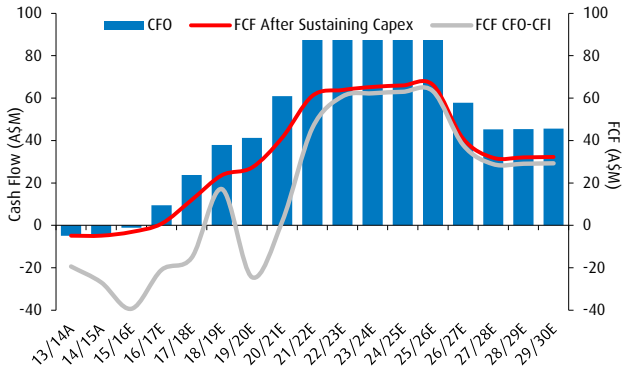
- **Breakeven Price:** As with any mining project, the company needs prices to remain above a certain level for the project to remain viable. We estimate an NPV breakeven uranium price of US$27/lb for Lance.
- **Secondary NYSE MKT ADR Listing:** The company is seeking a secondary listing of ADRs on the NYSE MKT, which could improve liquidity and increase U.S. investor interest.

Fig 36: Share Price (A$)



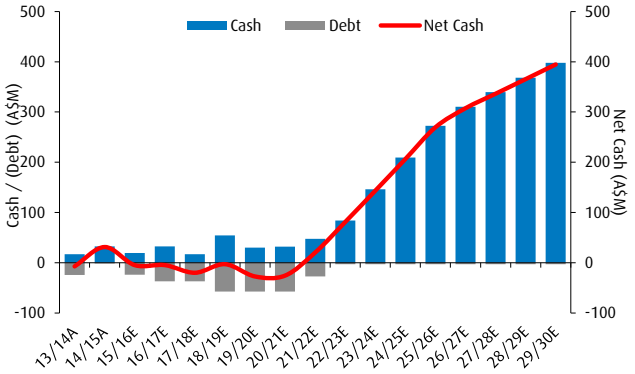
Source: BMO Capital Markets

Fig 37: Free Cash Flow (A$M)



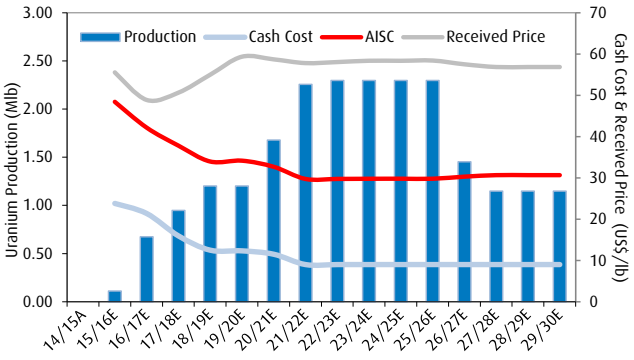
Source: BMO Capital Markets

Fig 38: Net Cash/Debt (A$M)



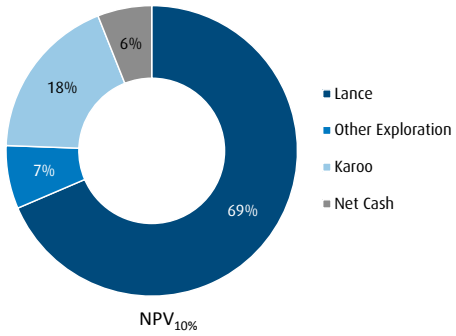
Source: BMO Capital Markets

Fig 39: Uranium Production & Cash Cost (Mlb, US$/lb)



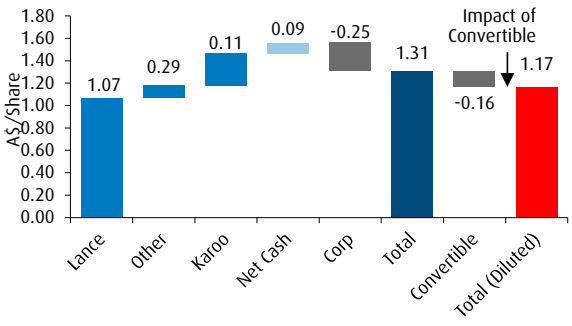
Source: BMO Capital Markets

Fig 40: NPV by Asset (%, 10% Discount)



Source: BMO Capital Markets

Fig 41: NPV by Asset (A$/share, 10% Discount)

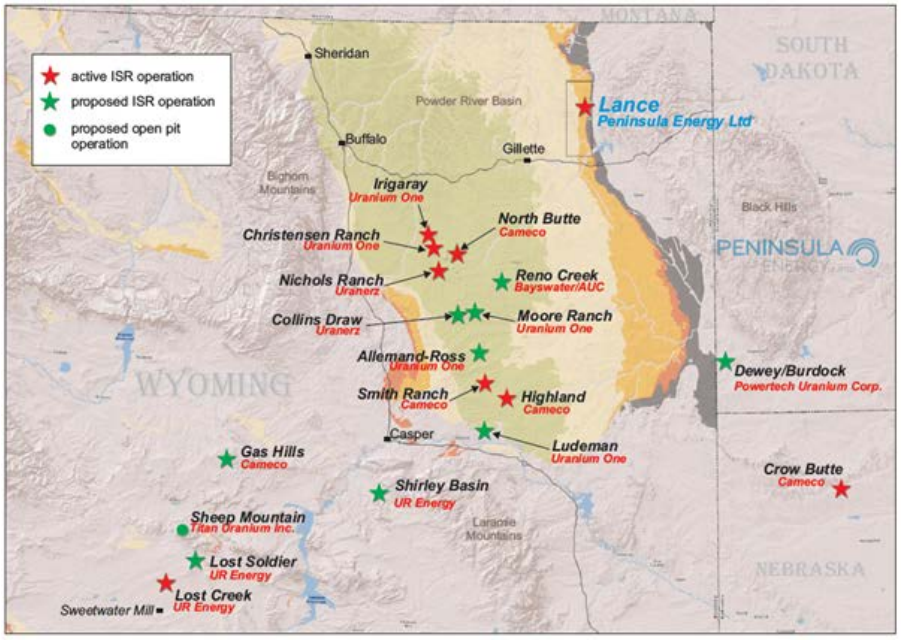


Source: BMO Capital Markets. Convertible treated as cash here.

Lance Projects – 100%-Owned

The company's Lance projects are located to the northeastern edge of the Powder River basin, an established uranium mining district in the U.S. Existing operations in the area include Cameco's North Butte, Smith Ranch and Highland mines; therefore the area is well connected by infrastructure.

Fig 42: Lance Projects Shown Within the Powder River Basin, Wyoming.



Source: Peninsula Energy

The Lance projects were originally explored in the 1970s in a JV between Nuclear Dynamics Inc., Bethlehem Steel Corporation, and Pacific Power & Hydro – (NuBeth JV). The JV identified 13 zones of uranium mineralisation and extensive system of roll fronts. The Lance area covers >120km^2, with 305km of stacked roll fronts.

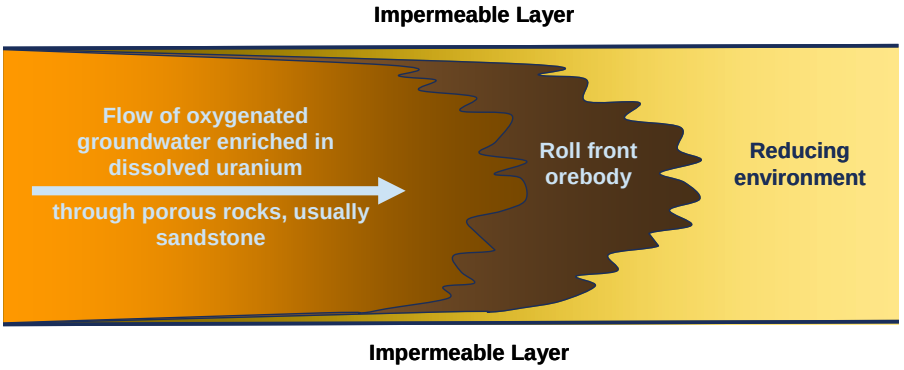
Geology

The uranium bearing material at the Lance projects are either roll front or tabular within permeable sandstone horizons interspersed with impermeable mudstone and siltstone layers, mostly Cretaceous-Tertiary in age.

The sandstones were deposited in a fluvial-marine environment as channel sand or overbank deposits, in thick, tabular sheets. Uranium mineralisation generally occurs within the Fox Hills or Lower Lance formations that were deposited in more reducing conditions.

Roll front mineralisation forms in porous sediments where oxygenated ground water enriched in uranium from primary sources (usually igneous rocks such as granite) encounter a reducing environment, which causes the uranium to precipitate out. The redox front of the orebody gradually 'rolls' downstream with the direction of the flow of ground water, forming long sinusoidal mineralized trends. In cross section, the orebody forms a crescent shape.

Fig 43: Simplified Roll Front Schematic



Source: BMO Capital Markets

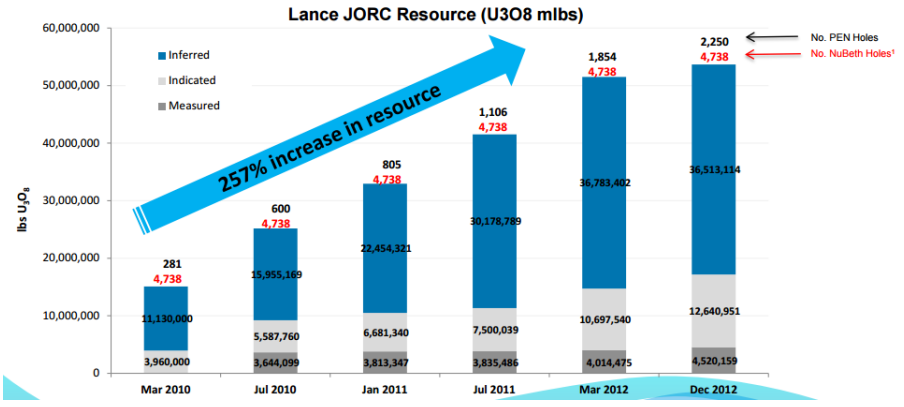
The primary uranium-bearing mineral at Lance is uranite, with vanadium, selenium and arsenic also occurring alongside the mineralisation.

Resources

The company's most recent JORC compliant resource from 2012 includes a total of 53.7Mlb of contained U_3O_8 in 51.2Mt of ore at an average grade of 476ppm (0.05%).

The resource data was built on 4,700 historical drill holes from the original NuBeth JV, combined with 2,250 recent drill holes undertaken by Peninsula. No resources have been converted to reserves at this stage; however, we note that reserves are not generally created for ISL operations until after two to three years of production.

Fig 44: Resource Development



Source: Peninsula Energy

The company has made significant progress on its resource statement to date and has previously indicated that it has an exploration target of 158-217Mlb of U_3O_8, including the existing 54Mlb resource.

Whilst this is by no means certain, we note that on success to date there is certainly potential to add to the life of mine, or increase the production rate from localized finds. But, at this stage, in our view, the company does not need to increase its resource base – rather, focus on ramping up production from its existing facilities is more prudent.

Fig 45: Lance Resources

Classification	Tonnes	Grade (ppm U3O8)	eU3O8 (lbs)	Mineability factor	eU3O8 (lbs)	Recovery factor	Recovered U3O8 (lbs) 50.4%
Measured	4,142,950	495	4,520,159	0.8	3,616,128	0.8	2,892,902
Indicated	11,532,135	497	12,640,951	0.8	10,112,761	0.8	8,090,209
M+Ind	**15,675,085**	**497**	**17,161,110**	**0.8**	**13,728,888**		**10,983,111**
Inferred	35,478,033	467	36,513,114	0.6	21,907,868	0.8	17,526,295
Total	**51,153,119**	**476**	**53,674,224**		**35,636,757**		**28,509,405**

Source: Peninsula Energy

Fig 46: Incremental Exploration Target

Exploration Target	Tonnes (million)		Grade (ppm eU_3O_8)		eU_3O_8 (mlbs)	
Range	From	To	From	To	From	To
Total	117.10	134.70	400	550	104	163

Source: Peninsula Energy

The Ross area, which has been developed first, has the greatest level of confidence with a total resource of 9.8Mt at 518ppm U_3O_8, of which 89% is measured and indicated. The Kendrick permit area contains the largest resource within the Lance permits, at 28.2Mt and 476ppm U_3O_8; however, only 16% is within measured and indicated categories (4.4Mt at 498ppm U_3O_8). Barber has 13.1Mt of resources at 445ppm U_3O_8, 19% of which is in measured and indicated categories.

Only measured and indicated resources are theoretically able to be converted into reserves. However, it would be remiss to ignore the possibility of some success from the inferred category. We assume 80% of measured and indicated resources are converted into reserves and 60% of inferred resources.

Development Plans

Peninsula reconfigured its development plans in 2014 in order to reduce capital outlay, whilst maintaining the ability to increase production through internally generated cash flows if possible. The revised plan now envisages three stages: Stage 1 production from 500klbpa to 700klbpa U_3O_8; Stage 2 production of 1.2Mlbpa U_3O_8, and Stage 3 production of 2.3Mlbpa U_3O_8.

Using this staged approach, the Ross, Kendrick and Barber permit areas are to be brought on in sequence to reach the final production target of 2.3Mlbpa of U_3O_8 over five years. Production from the Ross area began in December 2015, and is ramping up to the designed Stage 1 production rate using In Situ Leach "ISL" mining.

Taking a Staged Approach

Stage 1 – 500-700klbpa U_3O_8 – US$33M

- Seven header houses
- Six ion exchange columns in the Central Processing Plant (CPP)
- Uranium transported at the Resin stage to Irigaray
- Already ramping up production
- All-in-sustaining cash cost target of US$41/lb

Stage 1 involves processing to the resin phase; hence, the lower initial capex outlay of US$33M (now spent). The resin then requires transportation to Irigaray, Uranium One's processing plant ~50km away, via truck.

Whilst the phased construction plan has reduced the capex burden for initial production, toll treating and extra rehandle/transportation costs do add to the operating costs. Therefore Stage 1 is expected to cost ~US$10/lb more than the following expanded stages at US$41/lb U_3O_8 (all-in-sustaining).

Stage 1 production is now under way; indeed, we note that early indications suggest that flow rates are better than expected in the orebody, with uranium concentrations increasing in line with the company's projections, whilst recovery in the IX columns is ahead of forecasts.

Fig 47: First Drum of Uranium Produced From Lance

Source: BMO Capital Markets

We assume Stage 1 reaches the top end of guidance – i.e., 700klbpa of U308 by mid-calendar 2017.

Stage 2 – 1.2Mlbpa U_3O_8 – US$35M

- Doubling of header houses to 14
- Six additional Ion Exchange columns (12 total)
- Elution, precipitation, drying, and packaging installed at the central processing plant
- CPP building expansion to accommodate additional processing
- All-in-sustaining cash cost target of US$30/lb

Stage 2 brings the back end of the plant in-house, with the addition of elution, precipitation, and drying circuits as a bolt on to the existing plant. There will also be an expansion of six additional IX columns to take the expanded production rate. Costs are expected to fall, with more in-house processing, taking all-in sustaining costs to US$30/lb U_3O_8, a very competitive cost base.

We assume development of Stage 2 begins in H1/FY18, with first production by the end of the year. This allows around six months of operating the existing facilities at full production proving operational capability and reducing operational risk.

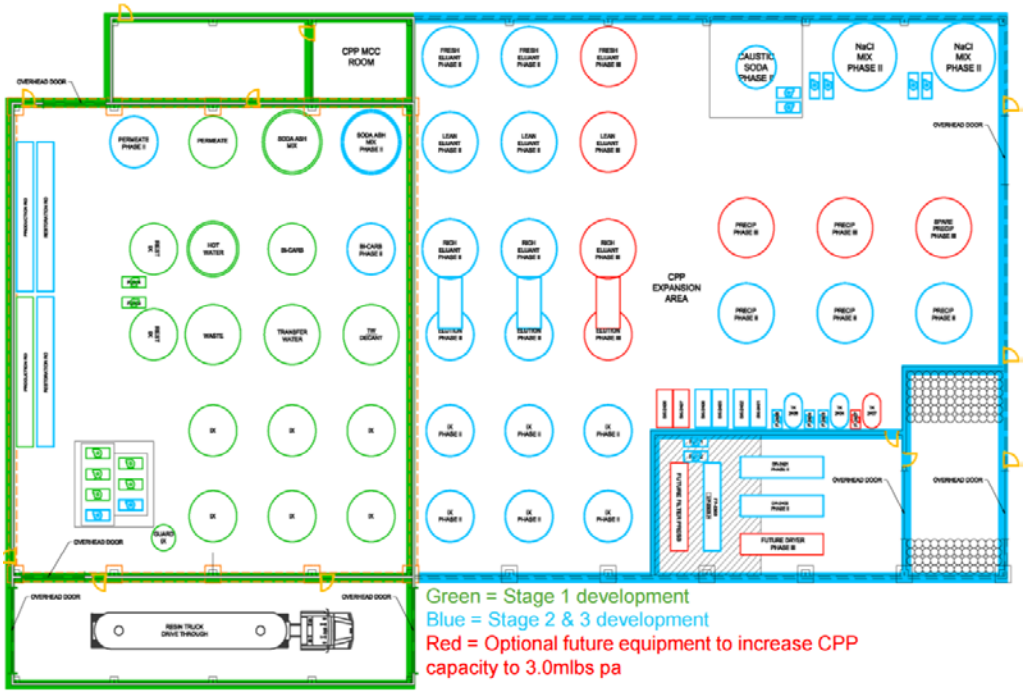
Stage 3 –2.3Mlbpa U_3O_8 – US$78M

- 14 header houses developed in Barber permit area
- Satellite plant comprising 12 ion exchange columns and reverse osmosis module at Barber
- Loaded resin trucked to CPP
- All-in-sustaining cash cost target of US$29/lb

The third stage of production to 2.3Mlbpa U_3O_8 requires an additional satellite plant in the Barber permit area, as well as some expansion of the back end of the main plant. The Barber processing plant will process as far as the Resin phase (similar to the current set up for Stage 1) and the resin will be trucked back to the main plant for final processing.

The cost of the expansion is significant, at US$78M. On our forecasts, we assume the company funds the third stage partially through internal cash flows plus additional debt of ~A$20M.

Fig 48: Processing Plant Layout Plans



Source: Peninsula Energy

Broadly following the company's three-staged development plans, we assume that 2.3Mlbpa U_3O_8 is reached by the end of calendar 2021, with cash costs at their lowest at this point at US$30/lb (all-in sustaining cash cost).

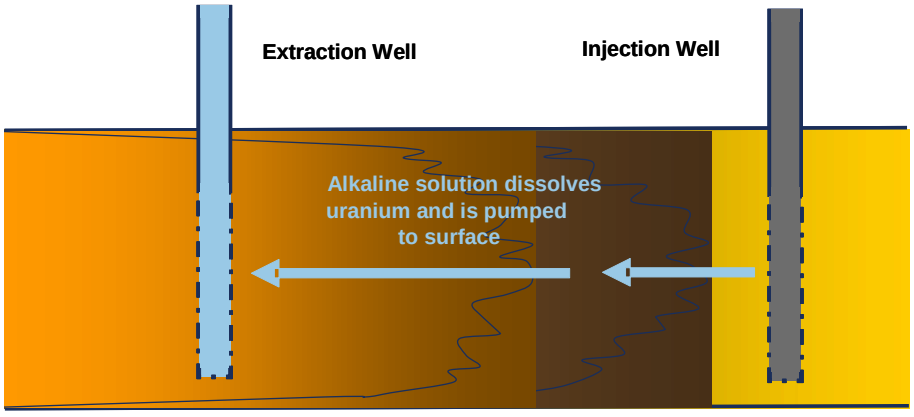
We estimate that Peninsula can continue to run at this rate out to the end of calendar 2026, at which point recoveries and grades decline at Barber as the currently defined resources are more limited here at this stage. Kendrick production continues out to 2036. We note that there is a better-than-average chance of increased resources that could extend the mine life, although this may require additional satellite plant development and therefore further capex.

In Situ Leach "ISL" Explained

ISL mining essentially follows the same processing route as conventional operations, but rather than extracting and crushing the ore prior to leaching, the porous nature of the orebody allows acid, alkali, or oxygenated water to be pumped through leaching uranium from the ore in situ. This in essence reverses the process nature followed to emplace the uranium.

Introducing and removing fluid from the ore body requires the development of a wellfield consisting of a hexagonal 'grid' of injection and extraction wells. The lixiviant, which in Peninsula's case is ground water, oxidant, and sodium bicarbonate, is pumped down the injection wells, leaching uranium from the ore body creating a pregnant solution, which returns to the surface via the extraction wells.

Fig 49: Simplified Diagram ISL Principles

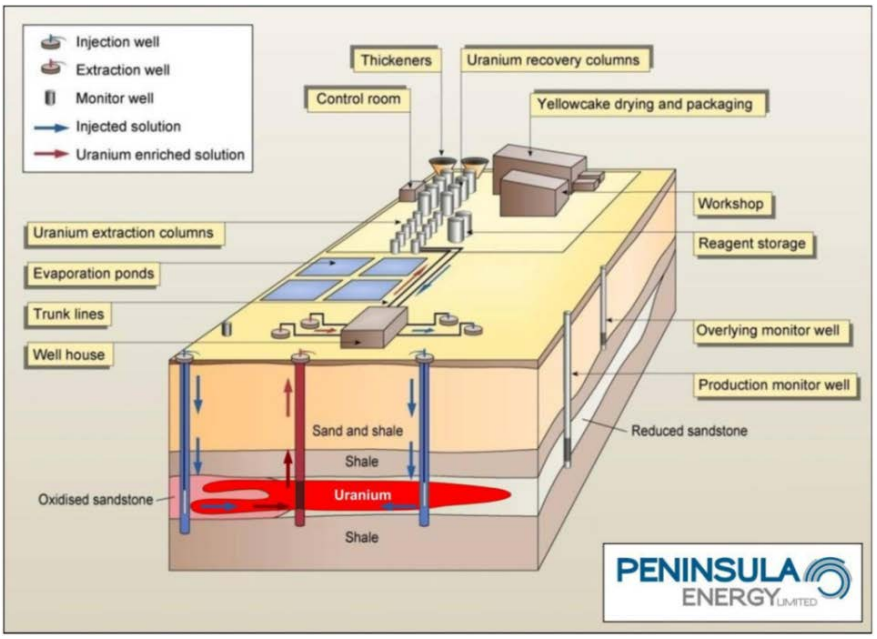


Source: BMO Capital Markets

The pregnant lixiviant is brought to surface and passed through an ion exchange column where the uranium is trapped in resin beads within the ion exchange "IX" columns.

Here, a concentrated brine solution is used to strip uranium from the resin, producing a concentrated uranium solution to which hydrogen sodium hydroxide is added, causing uranium to precipitate as sodium urinate (or oxide slurry). This is thickened, filter pressed, and dried to produce saleable product and packaged for shipment.

Fig 50: In Situ Leach Schematic



Source: Peninsula Energy

Monitor wells surround the production well field to ensure that the mining activity does not impact the surrounding strata.

Permitting, Environmental Studies, and IBA's

Permitting in Wyoming requires licenses from both the Wyoming Department of Environmental Quality (WDEQ) and the US Nuclear Regulatory Commission (NRC).

The company is permitted at its central processing plant (CPP) to 3Mlb of uranium production per annum, having been awarded NRC authorisation to begin operations from the Ross Permit area in December 2015.

In order to begin production from Kendrick, the company was required to submit a Kendrick Amendment application to the WDEQ and NRC, which has been accepted. As an aside, the Ross area can also support Stage 2 to around 2019 without Kendrick.

The same permitting process will be required for Barber development at a later date. However, we see obtaining the necessary permits for well field development and front-end plant relatively low risk given the success the company has had to date.

Capex, Cost, and Production Profile

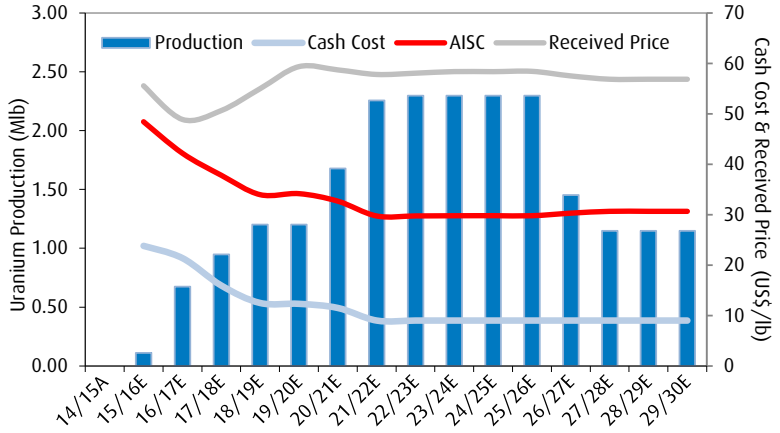
Broadly following the staged production plan, we assume a relatively quick transition from the end of Stage 1 output of 700klbpa U_3O_8 and into Stage 2 to 1.2Mlbpa U_3O_8 beginning FY18E. Stage 3 lifts production to 2.3Mlbpa U_3O_8, which we model from FY21E.

The company estimates all-in sustaining cash costs of ~US$41/lb U_3O_8 in the initial Stage 1 ramp up, including additional costs due to toll treating of the resin at Irigaray. For Stage 2, by bringing the final phase of processing in house, the company expects costs to reduce to~US$30/lb, although we conservatively estimate US$34/lb. For Stage 3, we assume cost to reduce again to US$30/lb (vs. guidance of US$29/lb) U_3O_8.

Funding for Stage 2 requires ~A$50M, or US$35M in project capex, with Stage 3 needing another A$98M or US$78M in project capex.

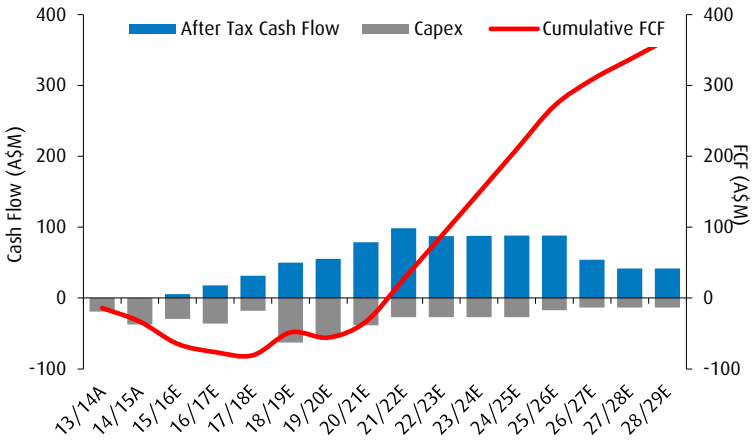
We estimate the project can run at 2.3Mlbpa U_3O_8 until FY27, at which point further resources are required to avoid a tail off of production to FY34.

Fig 51: Uranium Production, Cash Cost & Received Uranium Price (Mlb, US$/lb)



Source: BMO Capital Markets

Fig 52: Lance Projects Free Cash Flow Profile (A$M)



The cumulative FCF chart suggests payback is relatively slow, at ~six years from first production

Source: BMO Capital Markets

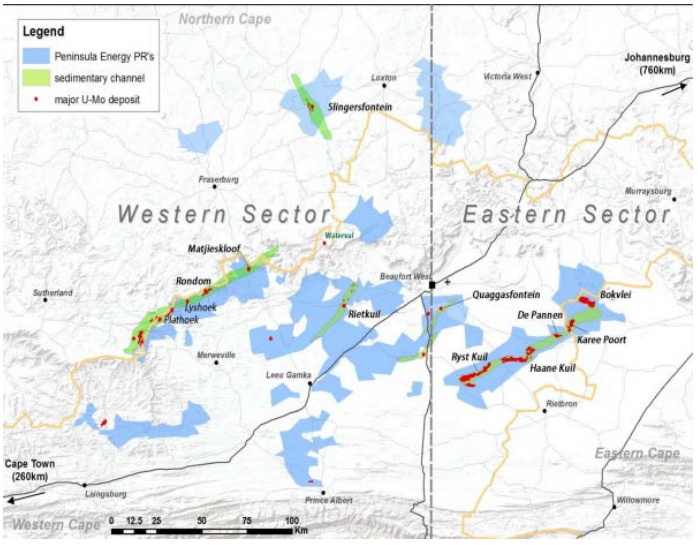
Karoo

After Lance, the company's main project is located in the Karoo region of South Africa, approximately 500km northeast of Cape Town. The company holds 40 prospecting rights covering 7,800km^2, and includes 32,176 hectares of freehold land.

The project is held by 74% by Peninsula and 26% by its BEE partners. Karoo is at an earlier stage than Lance and, at this point, we do not model the project on a cash flow basis. However, we note that the reasonably sized resource base make it an attractive prospect. With additional technical work the asset may provide some upside opportunity.

The deposit mineralisation is hosted in fluvial channel sandstone deposits, and are epigenetic, tabular, and sandstone hosted.

Fig 53: Karoo Project Location



Source: Peninsula Energy

The company completed a scoping study in 2013 envisaging an open pit and underground mine, with cash costs of US$34.11/lb and a production rate of 3Mlbpa. Peninsula is now undertaking a pre-feasibility study, which is due for completion in 2016.

A 2012 resource statement outlines ore containing 56.9Mlbs of U_3O_8 at 1,108ppm. The company is targeting 250-350Mlb of uranium including the existing resource statement through further exploration activity.

Fig 54: Karoo JORC Resource

Classification	eU3O8 (ppm) CUT-OFF	Tonnes (million)	eU3O8 (ppm)	eU3O8 (million lbs)
Indicated	600	8	1,242	21.9
Inferred	600	15.3	1,038	35
Total	**600**	**23.3**	**1,108**	**56.9**

Classification	Sector	eU3O8 (ppm) CUT-OFF	Tonnes (million)	eU3O8 (ppm)	eU3O8 (million lbs)
Indicated	Eastern	600	7.1	1,206	18.7
	Western	600	0.9	1,657	3.2
Inferred	Eastern	600	11.8	1,046	27.2
	Western	600	3.5	1,019	7.8
Total		600	**23.3**	**1,108**	**56.9**

Source: Peninsula Energy

Funding and Valuation

Stage 2 funding nearly there… once the streaming agreement is confirmed

The company has recently negotiated a US$15M one-year convertible loan with its major shareholders Resource Capital Fund VI and Pala. Since the conversion price of A$0.80/share is relatively close to the current share price (A$0.66/share) we assume this converts in early 2017.

However, funding is the biggest risk to our forecast

Streaming Agreements: in its funding update, the company also announced that it has signed a Term Sheet for a US$25M Revenue Streaming Facility (albeit not completed). We assume a ~A$35M debt facility in its place at this stage, which completes the necessary funding for Stage 2.

The details for the potential streaming agreement are not known. However, a Term Sheet has been signed and the due diligence for the other party is at "an advanced stage".

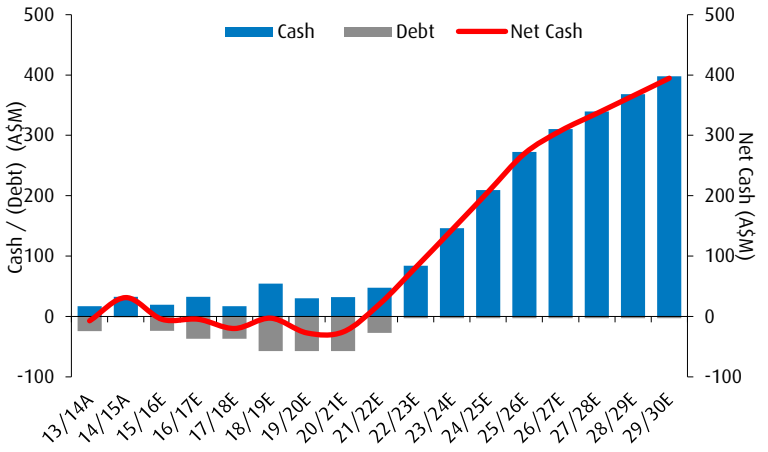
The advantage of streaming and royalty agreements is that they are generally less dilutive to shareholders than equity (if the company is trading below NPV) and have fewer restrictive covenants than debt. We estimate that Peninsula could receive between 0.8x and 1.2x NPV for the streaming deal given it is in production and has upside potential.

We estimate a streaming deal for US$25M would forego ~A$3.5M per annum, or ~4% of Stage 2 revenue

Simplistically, if the company were to sell a stream over the mine life of 21 years for US$25M, it would forego yearly cash flow of between ~US$2.5M, or ~A$3.5M using a 10% discount rate, the equivalent of ~4% of Stage 2 revenue and ~50klbpa of uranium.

Due to its favourable contracts, the company can generate attractive margins even in the current uranium price environment; therefore, we assume the company funds the final Stage 3 plans through debt and internal cash flow. The company is likely to need to draw down ~A$20M in debt in FY20E/21E.

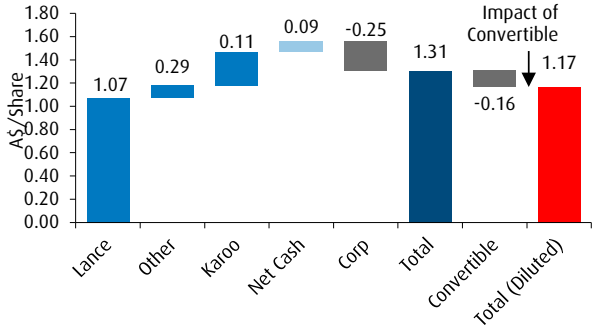
Fig 55: Peninsula Net Cash (A$M)



Source: BMO Capital Markets

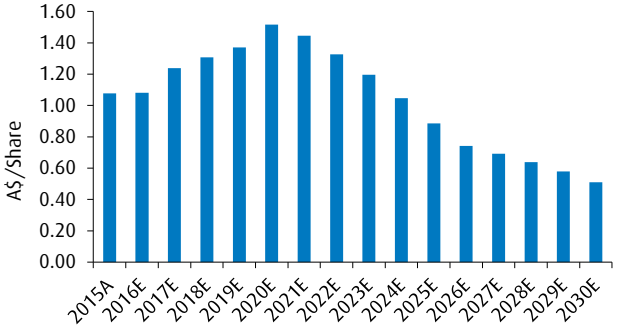
We value the company at A$1.17/share (including assumed dilution from the convertible); this consists primarily of the Lance Projects of A$1.07/share, with resource EV/lb valuations for Lance exploration upside of A$0.29/share and Karoo of A$0.11/share. As at the end of December 2015, the company had net debt of A$0.4M; however, treating the recent convertible as equity results in net cash of ~A$21M.

Fig 56: Corporate NPV10% Waterfall



Source: BMO Capital Markets. Includes impact of convertible.

Fig 57: NPV10% Project Roll Forward Profile



Source: BMO Capital Markets. Calendar Years. Excludes exploration

Fig 58: Peninsula Valuation Breakdown Including Dilution

NPV Breakdown	A$M	US$M
Lance Project NPV	A$236	US$190
Exploration (EV/lb)	A$24	US$19
Karoo (EV/lb)	A$63	US$51
Net Cash (inc. Conv.)	A$21	US$15
Corporate	-A$56	-US$43
Total NPV	A$288	US$232
Shares After Dilution	247	247
Diluted NPV/Share	A$1.17	US$0.94
Current Share Price	A$0.66	US$0.48
P/NPV	0.57	

Source: BMO Capital Markets. *fully diluted, including the convertible debt.

Management and Board of Directors:

John "Gus" Simpson – Managing Director & CEO. Mr. Simpson has >25 years of experience in metals and mining companies. He has previously held senior executive rolls in Gindalbie Mining, Australian Mineral Sands, Panorama Resources and Tanganyika Gold Limited. He is also Non-Executive Chairman of Indus Energy, and Namibian Copper.

John Harrison – Non-Executive Chairman. Mr. Harrison is also Non-Executive Chairman of RFC Ambrian Ltd, and also Non-Executive Chairman of West Cumbria Mining, a U.K. coal development company. His previous experience includes 20 years of investment banking in London.

Richard Lockwood –Director. Mr. Lockwood has >50 years of experience in the metals and mining space, including as founder of the specialist uranium investment fund Geiger Counter Ltd. His previous roles included director of Kalahari Minerals, which had a 43% interest in the uranium development company Extract Resources, as well as senior resources fund manager at CQS Asset Management. Mr. Lockwood is a director of Arlington Group Asset Management Limited.

Warwick Grigor – Director. Mr. Grigor is a mining analyst that has held a number of senior positions within stockbroking in Australia, including more recently Canaccord Genuity Group, as well as founding Far East Capital Limited a specialist mining corporate advisor. Mr. Grigor is also Non-Executive Chairman of First Graphite.

Mark Wheatley – Director. Mr. Wheatley joined the board of Peninsula on April 26, 2016 as a nominee of Resource Capital Fund VI. He has previously been Chairman and CEO of Southern Cross Resources, the operator of Honeymoon ISR uranium project, as well as a director of Uranium One. He is also currently Executive Chairman of Xanadu Mines Ltd.

Evgenij Lorich – Director. Mr. Lorich has been a director of PEN since February 2, 2015. Mr. Lorich is currently Vice President, Investment Team, Pala Capital, and has previously worked in the metals and mining company Mechel.

Harrison Barker – Director. Mr. Barker has been a director since August 3, 2015. Mr. Barker has >40 years of experience in nuclear and fossil fuels and is a former Chair of the Nuclear Energy Institute's Utility Fuel Committee, as well as Chairman of the World Nuclear Fuel Market Board of Directors.

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Fig 59: Peninsula Energy Summary Model Using BMO Metal Price Assumptions

Peninsula Energy — **PEN** (ASX)

As at	13-May-16		
Recommendation:	Outperform (S)	**Alexander Pearce**	
		BMO Capital Markets	
Share Price (A$)	$0.66	Share Price (US$)	$0.48
Target Value (A$)	$1.00	Target Value (US$)	$0.80
NPV (A$)	$1.17	NPV (US$)	$0.94
Ordinary Shares (M)	174.2		
Dilution (M)	46.5		
Market Cap (A$M)	$115	Market Cap (US$M)	$83

PRICE ASSUMPTIONS

(June Year End)	14/15A	15/16E	16/17E	17/18E	18/19E
A$/US$ Exchange Rate	0.86	0.74	0.72	0.76	0.80
Spot Price (U3O8) US$/lb	35.84	33.85	35.63	43.75	51.25
Realised Price (U3C US$/lb	34.38	62.65	49.30	50.12	53.93

FINANCIAL SUMMARY

(June Year End)		14/15A	15/16E	16/17E	17/18E	18/19E
NPAT (Adj)	**(A$M)**	**-7.0**	**-4.1**	**4.0**	**9.8**	**19.3**
EPS	(A$/sh)	-0.05	-0.02	0.02	0.04	0.08
PER	(x)	n/a	n/a	39.6	16.6	8.5
EPS Growth	(%)	48.0	47.9	+>100%	+>100%	95.7
EBITDA	**(A$M)**	**-7.0**	**-3.5**	**11.9**	**26.5**	**45.0**
EBITDA per Share	(A$/sh)	-0.05	-0.02	0.06	0.13	0.22
EV/EBITDA	(x)	n/a	n/a	10.9	5.8	3.0
Dividend	**(A$/sh)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Yield	(%)	0.0	0.0	0.0	0.0	0.0
FCF Yield	(%)					

PROFIT AND LOSS STATEMENT - A$M

(June Year End)	14/15A	15/16E	16/17E	17/18E	18/19E
Sales Revenue	0.0	8.1	45.3	63.5	83.7
Other Revenue	0.0	0.0	0.0	0.0	0.0
Cash Operating Costs	0.0	3.3	20.0	20.0	19.0
Gross Operating Profit	**0.0**	**4.8**	**25.3**	**43.4**	**64.7**
Depreciation	0.3	0.3	4.5	10.8	15.6
Exploration and Royalties	0.0	1.4	6.0	10.0	12.2
Corporate and Other	7.0	6.9	7.4	7.0	7.5
Share of Associate Profit	0.0	0.0	0.0	0.0	0.0
EBIT	**-7.3**	**-3.8**	**7.4**	**15.7**	**29.4**
Less Net Interest Expense	-0.2	0.4	1.7	1.6	1.9
Pre-Tax Profits	**-7.0**	**-4.3**	**5.7**	**14.1**	**27.5**
Less Tax	0.0	-0.1	1.7	4.2	8.3
Less Minorities	0.0	0.0	0.0	0.0	0.0
NPAT (pre-Abs)	**-7.0**	**-4.1**	**4.0**	**9.8**	**19.3**
Net Abnormals	1.7	1.8	0.0	0.0	0.0
Reported Profit	**-8.7**	**-5.9**	**4.0**	**9.8**	**19.3**

DIVISIONAL VALUATION

	NPV A$M	NPV US$M
Lance	236	190
Other Exploration	24	19
Karoo	63	51
Net Cash	21	15
Corp/Other	-56	-43
Total NPV	**288**	**232**
NPV/Share	1.17	0.94

RESERVES AND RESOURCES

Attributable	Ore Tonnage (Mt)	Grade U3O8 ppm	Contained U3O8 (Mlb)
Lance Resources	51.2	476	54
Karoo Resources	23.3	1109	57

CASH FLOW ANALYSIS - A$M

(June Year End)	14/15A	15/16E	16/17E	17/18E	18/19E
Cash Flows From Operating Activities					
Receipts From Customers	0.0	8.1	45.3	63.5	83.7
Payments to Suppliers	(4.7)	(6.6)	(20.0)	(20.0)	(19.0)
Net Interest	(0.2)	(0.4)	(1.7)	(1.6)	(1.9)
Other	0.0	(4.0)	(14.1)	(18.2)	(25.0)
Cash Flows From Investing Activities					
Acq.of Property, Plant and Equip.	(6.0)	(36.0)	(29.5)	(36.0)	(17.7)
Exploration Expenditure	(14.5)	(1.5)	(1.0)	(3.0)	(3.0)
Other	(1.5)	0.0	0.0	0.0	0.0
Cash Flows From Financing Activities					
Net Change in Borrowings	(16.9)	22.7	13.0	0.0	20.3
Dividends Paid	0.0	0.0	0.0	0.0	0.0
Other	59.3	3.3	21.1	0.0	0.0
Net Increase In Cash Held	15.5	(14.4)	13.1	(15.3)	37.4
Cash At End of Year	32.6	18.2	31.3	16.0	53.4

BALANCE SHEET ANALYSIS - A$M

(June Year End)	14/15A	15/16E	16/17E	17/18E	18/19E
Current Assets					
Cash and Liquids	32.6	18.2	31.3	16.0	53.4
Other	3.8	4.8	4.8	4.8	4.8
Non-Current Assets					
Investments	0.0	0.0	0.0	0.0	0.0
Fixed Assets	148.8	193.8	219.8	247.9	253.1
Other	0.0	0.0	0.0	0.0	0.0
Current Liabilities					
Borrowings	0.3	0.3	21.1	0.0	0.0
Creditors	3.7	3.0	3.0	3.0	3.0
Other	0.1	1.7	1.7	1.7	1.7
Non-Current Liabilities					
Borrowings	1.2	23.8	16.0	37.1	57.4
Other	1.0	6.5	6.5	6.5	6.5
Minority Interest	1.8	1.8	1.8	1.8	1.8
SHAREHOLDERS FUNDS	179.1	181.4	207.5	220.4	242.6
Net Debt/Equity %	-17%	3%	3%	9%	2%

DIVISIONAL EARNINGS (EBITDA) - A$M

(June Year End)	14/15A	15/16E	16/17E	17/18E	18/19E
Lance	0.0	3.2	17.9	31.5	50.0

URANIUM PRODUCTION AND SALES

		14/15A	15/16E	16/17E	17/18E	18/19E
U3O8 Production	Mlb	0.0	0.10	0.67	0.95	1.20
Cash Cost	US$/lb	0.0	0.00	21.38	15.95	12.49
Total Cost	US$/lb	0	0.00	33.71	33.83	32.14
U3O8 Sales	Mlb	0	0.10	0.67	0.95	1.20

Source: BMO Capital Markets.

9. Fission Uranium (FCU)

Market Cap: US$230M

Rating: Outperform (S)

Price: C$0.65

Target: na

(Price as of market close on May 13, 2016)

Fission is a TSX-listed uranium exploration company, which holds a 100% interest in the Patterson Lake South project (PLS), located in the Athabasca Basin, Canada. The company is run by a management team with a proven track record of successfully finding and defining resources and running mining exploration companies.

Fission in our view offers investors an attractive uranium play with production some nine years hence, and one of the largest resource base in the Athabasca basin with the potential for more to come, relatively better trading multiples and lower risk than other exploration plays at this stage.

Fission recently completed a Preliminary Economic Assessment (PEA) on the Triple-R deposit, which provides a level of confidence in the economic rationale in continuing to develop and expand the resource base. According to the PEA, the current resource base supports production of up to 14Mlbpa U_3O_8 for the first five years, although production is expected to tail off to ~3Mlbpa as the operation transitions to lower-grade ore later in its life.

Positives and Negatives:

+ Management have a proven track record of resource delivery. A high grade of 1.76% U_3O_8 totalling 108Mlb (72% indicated, 28% inferred)
+ The deposit remains open and has further prospective trends showing mineralisation suggesting upside scalability
+ Recent PEA increases confidence in delivery of an economic project, expected to have low total cost of production in early years of US$25/lb
+ Could be attractive for M&A by an established player, or a company looking for a foothold in the basin.
+ Relatively more attractive trading multiples than exploration peers
– High capex of C$1.1B for development is >3x current market cap, and requires construction of a dyke and considerable pre-strip.
– Property located on west periphery of Athabasca basin, away from existing uranium infrastructure
– Permitting and construction time frame means PLS is 9-10 years away from production

Initiating With an Outperform (Speculative) Rating

We estimate a $NPV_{10\%}$ of C$0.75/share, including mine cash flow, EV/lb resource upside and after assumed future equity dilution. Due to the higher risk associated with exploration plays, we ascribe no target price.

Near Term Catalysts / Key Risks:

- **Updating Its Resource Statement:** The recent PEA indicated economic viability; however, increasing the mine life through adding to the resource base could make a significant difference to the project. We expect an updated statement by year-end 2016.
- **Drilling Down the Details:** An updated technical report is due in Q3 calendar 2017.
- **Financing:** Whilst the full project financing is a long way off, success is entirely dependent on investor appetite at the time.

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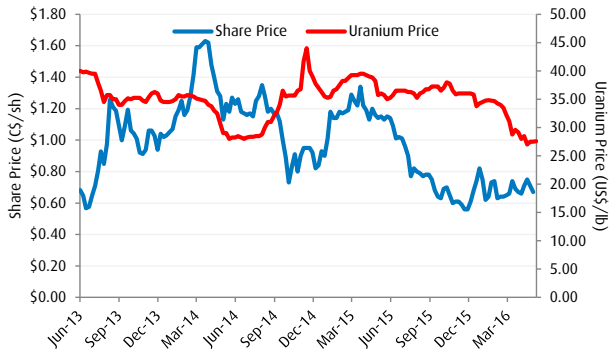
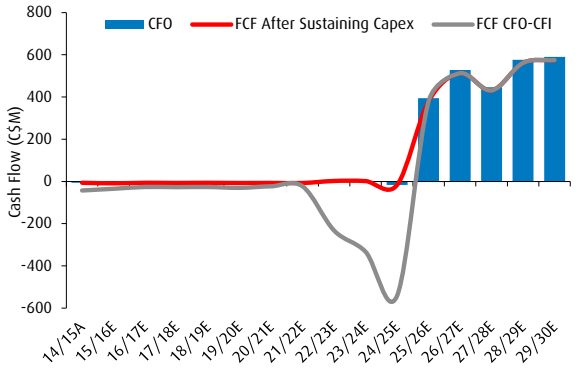
- **Permitting:** Successful permitting for a mining operation is by no means assured. The PEA envisages an open pit and dyke in Patterson Lake that will have a larger impact than a purely underground operation.
- **Uranium Price:** At a 10% discount rate, the project needs a uranium price of US$39/lb U_3O_8 to provide a positive return. If uranium is below this level, the project may not make it into production.

Fig 60: Share Price (C$)



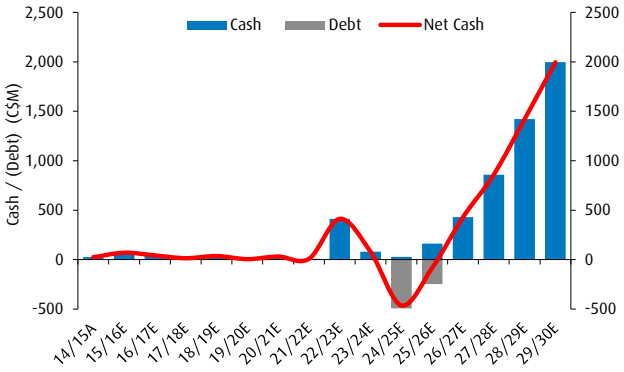
Source: BMO Capital Markets

Fig 61: Free Cash Flow (C$M)



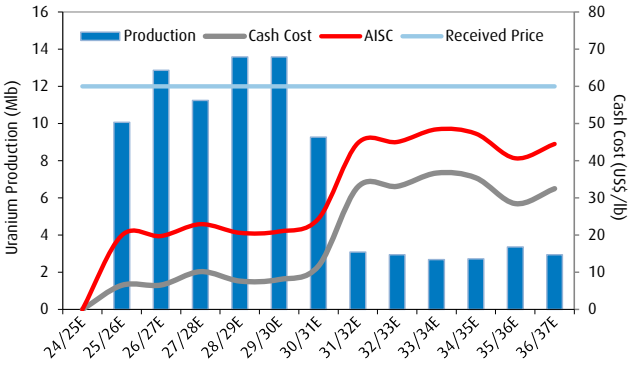
Source: BMO Capital Markets

Fig 62: Net Cash/Debt (C$M)



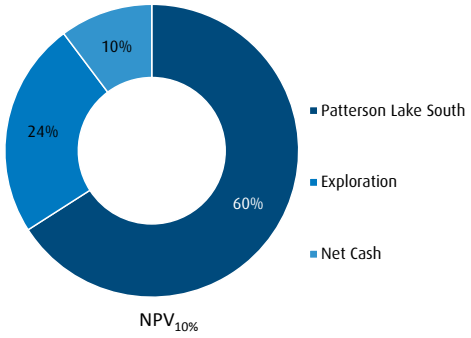
Source: BMO Capital Markets

Fig 63: Uranium Production & Cash Cost (Mlb, US$/lb)



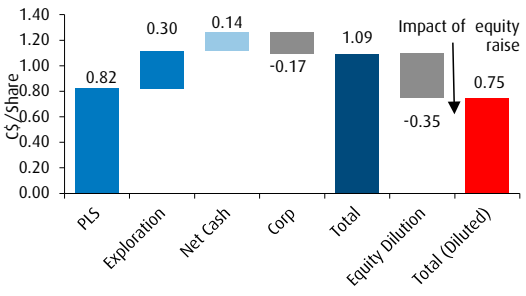
Source: BMO Capital Markets

Fig 64: NPV by Asset (%, 10% Discount Rate)



Source: BMO Capital Markets

Fig 65: NPV by Asset (C$/share, 10% Discount Rate)



Source: BMO Capital Markets

Patterson Lake South – 100% Owned

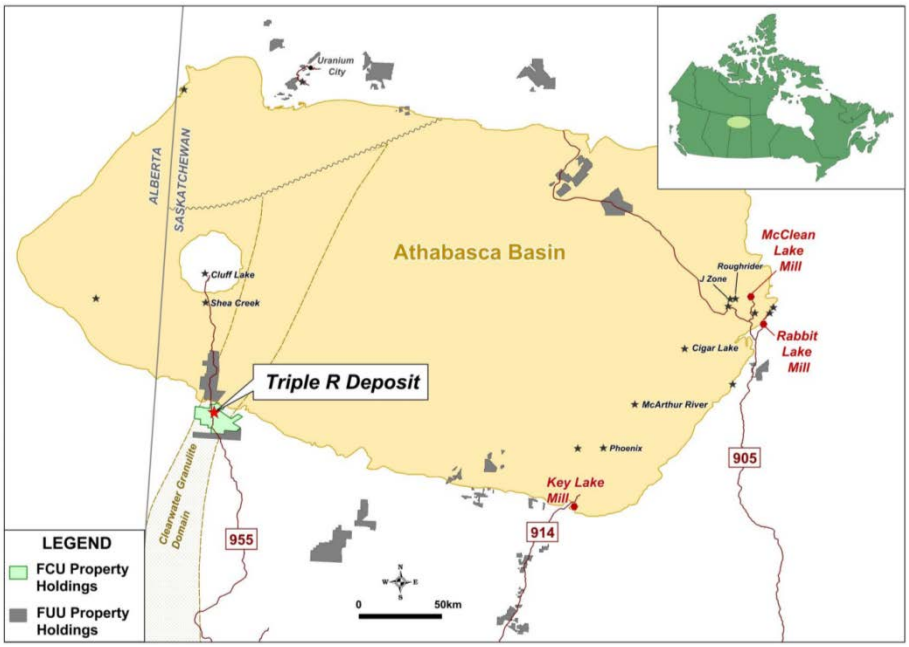
PLS is located in the western side of the Athabasca Basin just outside of the basin itself. Nonetheless, the Triple R deposit is unconformity related, albeit hosted in the basement rocks.

Although uranium has historically been mined on the western side of the basin (Cluff Lake, Uranium City, etc.) all current production is from deposits located along the eastern margin of the basin.

As such, although an all-weather highway crosses the PLS property, there is no other proximal infrastructure and the plant, tailings facility, and power generation will need to be built from scratch.

Permitting of the plant and tailings facility may prove a risk, but the Saskatchewan authorities are well versed with uranium mining. However, Fission has yet to start meaningful environmental baseline assessments or broad-based consultations with local first nations groups.

Fig 66: PLS and Triple R Location Within Canada and the Athabasca Basin



Source: Fission Uranium

Geology

Numerous conductors cross the PLS property on SW-NE trends. These are interpreted as shear zones that have acted as conduits for hydrothermal fluids that have resulted in significant alteration of the graphitic pelitic gneiss country rock.

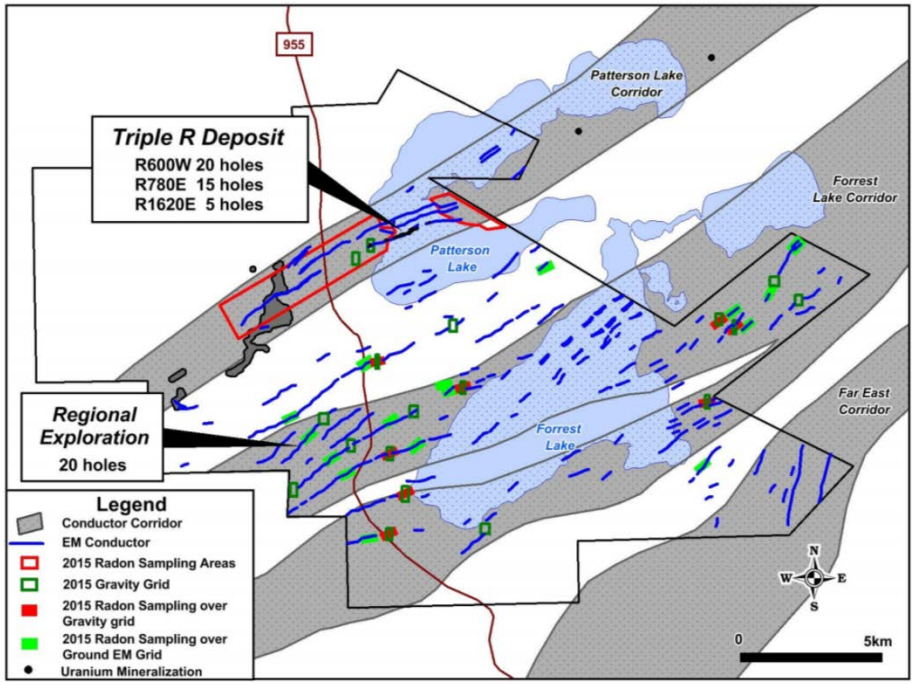
The hydrothermal fluids are believed to have acted as the transportation medium for the uranium from its source to the shear zones where it has precipitated in a reducing environment.

Uranium is not a tremendously rare element but it is generally widely dispersed. Thus the dissolution and transportation from a low-grade source followed by precipitation in a small area acts as an effective concentration mechanism.

The Triple R mineralisation included within the resource base is all related to one conductor, although with numerous other conductors identified, the property remains prospective for further discoveries.

Fission has been conducting further geophysical, radiometric, and drilling exploration on other conductors. The company has intersected a number of potential uranium bearing structures, including in the Forest Lake Corridor, which is ~7km away from PLS and between the R600W Zone and the Triple R deposits.

Fig 67: PLS Licence Schematic Showing Identified Conductors and 2015 Work



Source: Fission Uranium

Mineralisation identified to date in the Triple R deposit consists of a series of pods and sheeted lineaments that stretch along the PL-3C conductor, which follows an ENE-WSW trend. The mineralisation dips steeply to the northwest and plunges gently along strike to the northeast. Most of the defined resources are located in the ~950m long R780E zone, which is located beneath Patterson Lake.

Grade and density can vary significantly over very short distances within these types of deposits, which are also extremely small and compact relative to deposits of other metals. As an example, an historical drill hole from Denison's Wheeler River property passed to within 90m of the high-grade Phoenix deposit and intercepted alternation but no mineralisation.

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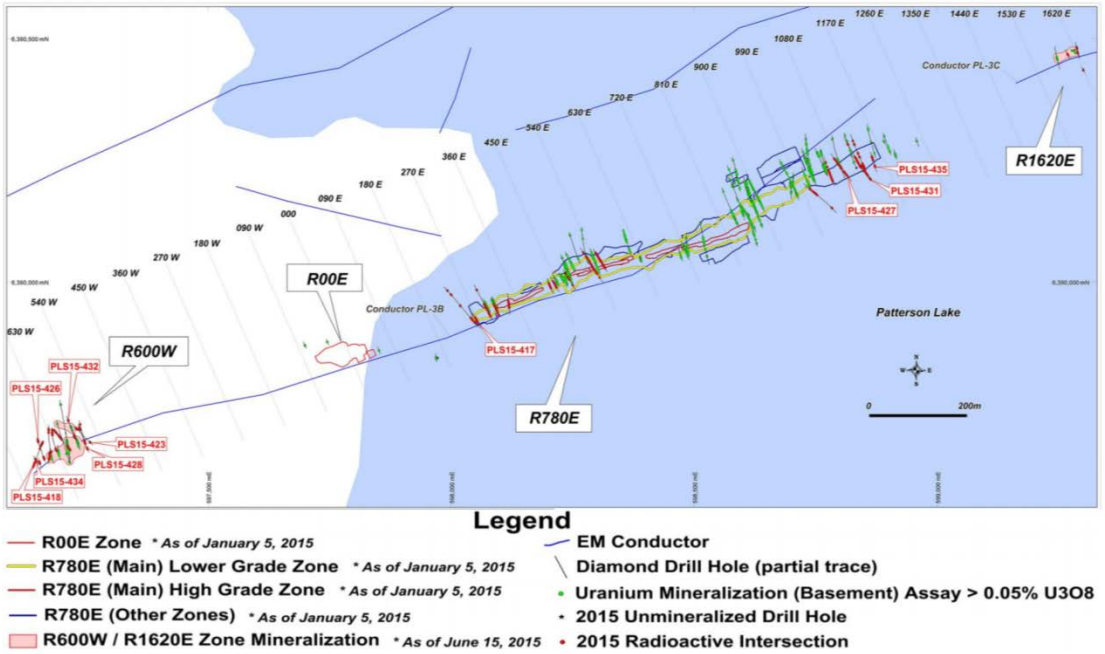
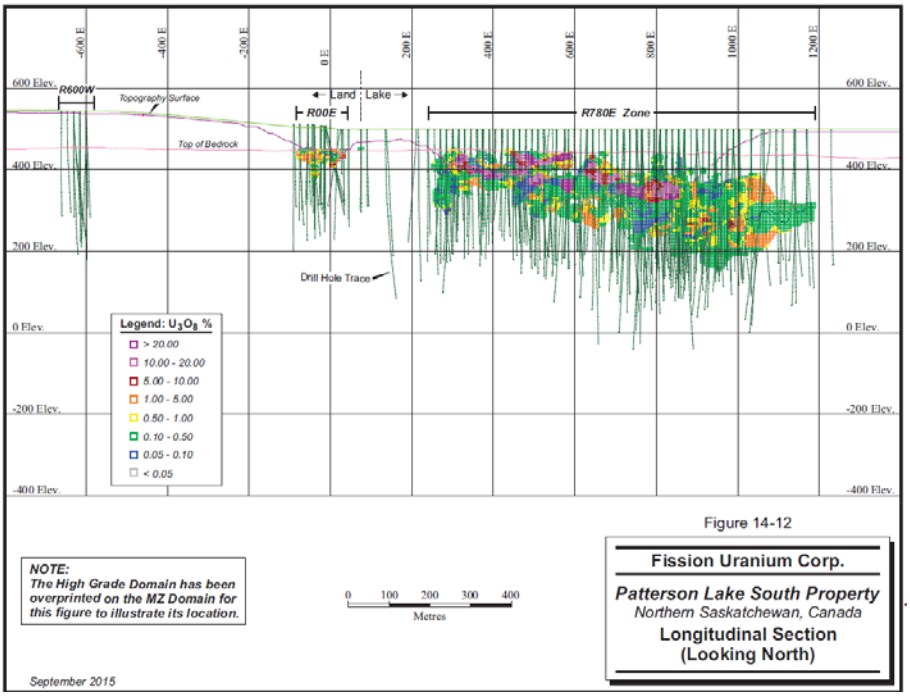
Fig 68: Outline of Identified Mineralisation Within the Triple R Deposit



Source: Fission Uranium

Fig 69: Triple R Mineralisation Definition Drilling



Source: Fission Uranium

Resources

The Triple R deposit contains indicated resources of 81Mlb contained U_3O_8 at an average grade of 1.83%, and inferred resources of 27Mlb at an average grade of 1.57% for combined resources of 108Mlb U_3O_8 at 1.76%.

The resource is modelled using a cut-off grade of 0.20% U_3O_8 for the open pit and 0.25% for underground. The resource holds together well, appearing relatively insensitive to changes in the cut-off grade, with contained uranium reduced by less than 3% at a cut-off of 0.3%, and increasing by less than 5% at a cut-off of 0.1%.

In common with many other Athabasca deposits, Triple R has returned some spectacularly high-grade intercepts. The rationale for the lower cut-off grades are the open pit and proposed underground mining technique, which will both capture and recover lower-grade material economically.

Fig 70: Triple R Resources

TABLE 14-1 MINERAL RESOURCE SUMMARY
Fission Uranium Corp. – Patterson Lake South Property

Classification	Tonnes	% U_3O_8	g/t Au	Pounds U_3O_8	Ounces Au
Indicated					
Open Pit	1,149,000	2.45	0.62	62,104,000	23,000
Underground	863,000	1.00	0.56	19,007,000	15,000
Total Indicated	**2,011,000**	**1.83**	**0.59**	**81,111,000**	**38,000**
Inferred					
Open Pit	74,000	8.61	1.64	14,060,000	4,000
Underground	711,000	0.84	0.56	13,097,000	13,000
Total Inferred	**785,000**	**1.57**	**0.66**	**27,157,000**	**17,000**

Source: Fission Uranium

Fig 71: Resource Variation With Cut-Off Grade

TABLE 14-10 TONNAGE AND GRADE BY CUT-OFF – JULY 28, 2015
Fission Uranium Corp. - Patterson Lake South Property

Classification	Cut-Off % U_3O_8	Tonnes	Grade % U_3O_8	Grade g/t Au	Pounds U_3O_8	Ounces Au
Indicated	0.30	1,693,000	2.13	0.67	79,324,000	37,000
	0.25	1,891,000	1.93	0.62	80,516,000	38,000
	0.20	2,136,000	1.74	0.57	81,729,000	39,000
	0.15	2,443,000	1.54	0.51	82,909,000	40,000
	0.10	2,766,000	1.37	0.46	83,797,000	41,000
Inferred	0.30	671,000	1.79	0.74	26,472,000	16,000
	0.25	778,000	1.58	0.67	27,123,000	17,000
	0.20	917,000	1.38	0.59	27,809,000	18,000
	0.15	1,091,000	1.18	0.52	28,479,000	18,000
	0.10	1,378,000	0.96	0.43	29,271,000	19,000

Source: Fission Uranium

Fission continues to undertake drilling in the localized area, with the current programmes testing the R600W zone and the R780E zone, which is expected to be included in a revised technical study Q3 calendar 2017.

Development Plans – Open Pit and Underground

Due to the nature of the deposit, development of the mine requires a hybrid open pit and underground plan. The open pit is to be developed first, taking the higher-grade material nearer surface, followed by underground mining towards the latter stages of the development.

We note that with additional drilling in other zones, the development of the schedule is likely to change. However, at this stage we broadly follow the company's PEA schedule, completed in September 2015, which assumes the majority of the resource is mined.

Open Pit Plan

The open pit mine plan in the PEA calls for the development of a dyke around the part of the deposit under Patterson Lake. Fully isolating the workings requires the development of an impermeable slurry diaphragm to bedrock (1m thick and 60m average depth from surface) in the centre of the dyke as well as around the land based portion of the deposit.

The impermeable dyke and diaphragm is a similar design to that used at the Diavik diamond mine in the Northwest Territories. Fission's cost estimate for the dyke development was provided by the same contractor that installed the original Diavik dyke and is now working on the A21 extension dyke, also at Diavik.

Dyke and slurry wall development is scheduled to take place in the first two years of the three-year pre-production phase, followed by a dewatering program and then pre-stripping of the glacial till overburden in the third year.

The weak nature of the till requires a relatively shallow overall angle of 26deg until bedrock is intersected at 50-100m below surface. Within rock, the overall angle varies in ore and waste, but is broadly 45deg; including 22m wide two-way ramps in upper benches, reducing to 11m at lower areas.

The PEA envisages to utilise contractor to strip waste with 100t (CAT 777 size) trucks, but operate its own mining in ore (40t underground trucks), all through conventional drill and blast & truck and shovel. Open pit mining of ore is expected to begin during pre-production and continue for ~seven years.

Underground Plan

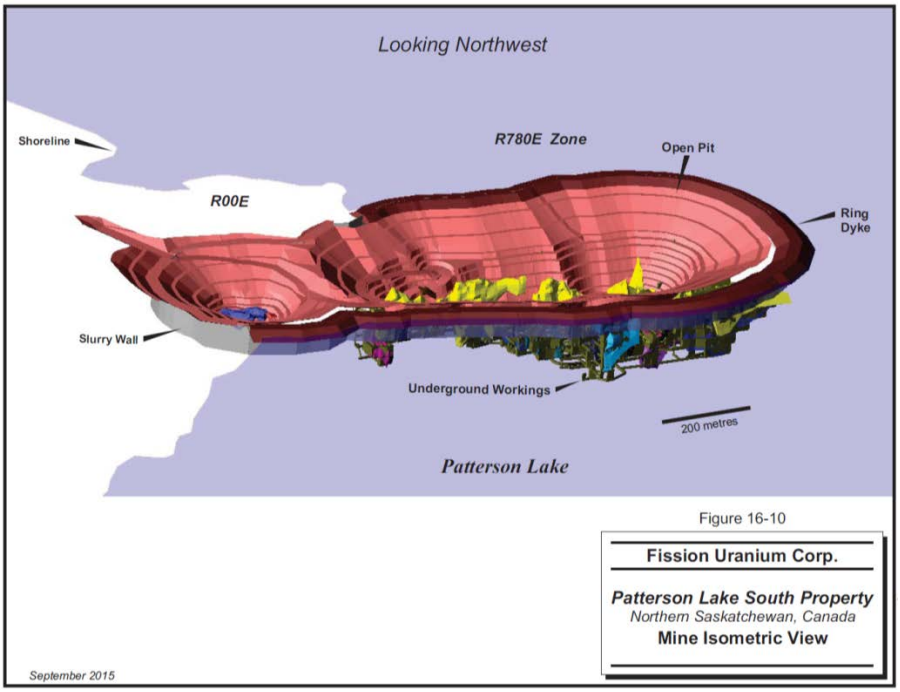
Development of the in-pit underground decline is scheduled in the PEA to start from the 420RL level as the second phase of the open pit nears completion. Key to mining uranium underground is ventilation in order to minimise the risk of radon gas exposure to employees; radon gas is a daughter product of uranium decay.

Underground mining is to be conducted by long-hole stoping with paste backfill. The mine layout is selective and targets identified ore shoots. Using this technique, drifts are constructed at the top and bottom of the stope, with production blast-holes drilled and loaded from the upper drift and ore extracted from a conical draw point in the lower drift footwall.

Underground mining is planned to continue for 11 years although the resource remains open down plunge to the northeast and certainly has upside potential.

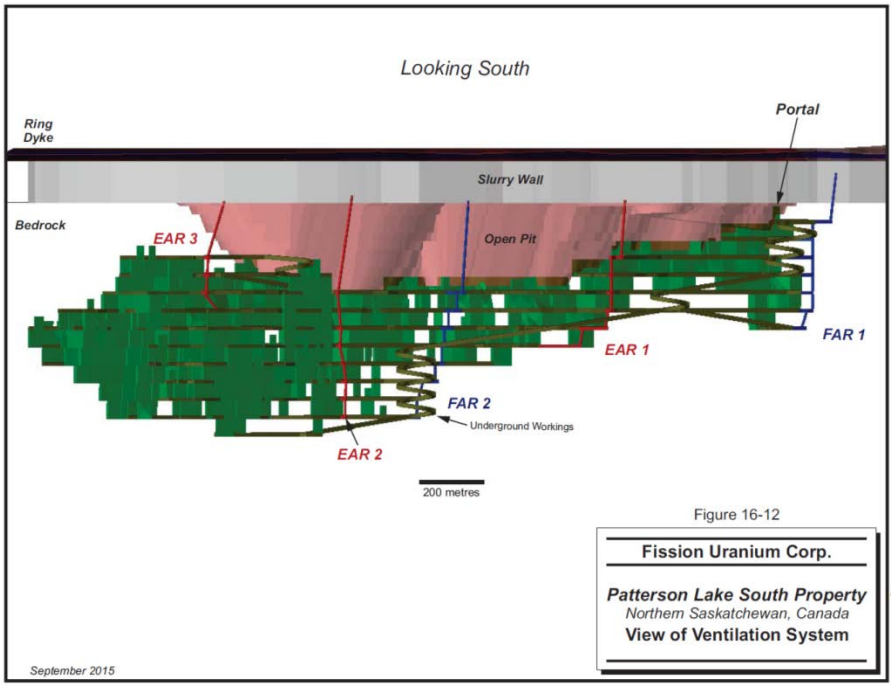
All ore headings and localised poor ground are expected to be shotcreted, which offers radon protection as well as ground support. Elsewhere, cable bolts are expected to be used in long-hole stopes, with split sets, screens and bolts in drifts.

Fig 72: Open Pit Schematic



Source: Fission Uranium

Fig 73: Underground Mineworking Schematic



Source: Fission Uranium

Processing Route Summary

Ore will be crushed and ground before the slurry is passed through an acid leaching circuit and then solid/liquid separation in CCD thickeners.

The pregnant solution is clarified and then passed to the solvent extraction circuit where it is contacted with an acidified organic solvent counter-current. Uranium passes from the eluate to the organic solvent leaving impurities behind in the aqueous phase.

The loaded organic is then passed to a stripping circuit where uranium is transferred back to an aqueous phase in counter-current mixer settlers using a pH profile by the addition of further sulphuric acid.

Passing to the precipitation circuit, uranium is precipitated from the loaded strip solution through the addition of hydrogen peroxide to raise the pH.

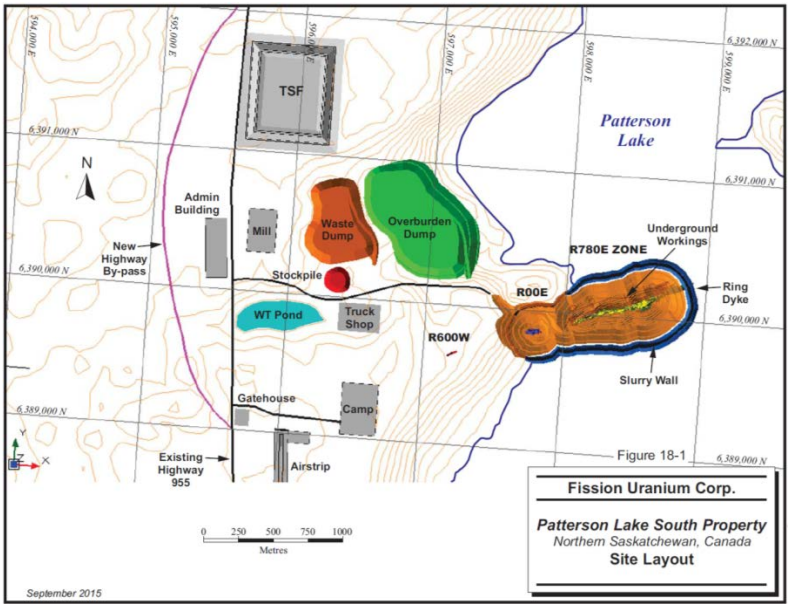
The precipitant is then washed and dewatered in a centrifuge before being dried through an LPG fired dryer to produce a yellowcake. At present there appears to be no plan to produce a calcined final product, but the discount for yellowcake is negligible, therefore yellow cake is to be transported in 450kg drums to the uranium facilities in Port Hope at a cost of ~US$0.34/lb.

Infrastructure

The site is accessible via the Highway 955 an all-weather road connecting it to La Loche ~150km away to the south. The highway requires diversion of approximately 3.5km of its length to the West of the property. The existing connection is to remain with restricted access to the operation.

The closest power line is 220km away; therefore the company's preference is to install a 12MW diesel power station to reduce up front capital costs. LPG is to be used for heating ventilation intake air and within the processing plant.

Fig 74: Proposed Site Layout



Source: Fission Uranium

Permitting, Environmental Studies and IBAs

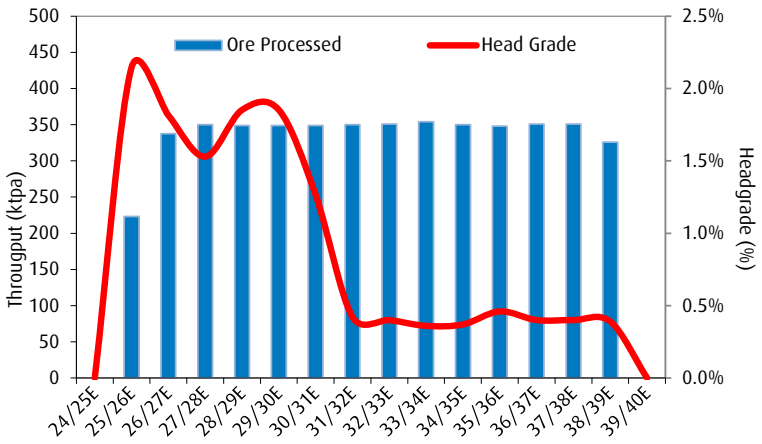
To date, Fission has conducted limited environment studies and there are no Impact and Benefit Agreements (IBAs) in place. The timeline required for the above can be rather open-ended and presents one of the greatest risks to the project timeline; possibly even ahead of the uranium price and project economics.

RPA has identified that whilst environmental baseline work has begun; it has been "somewhat selective" indicating that it is not currently sufficient to support an environmental impact assessment, although it is sufficient for a PEA level report.

Capex, Cost, and Production Profile

Production varies significantly over the mine life, with the higher-grade areas taken by the open pit driving increased production in the early years, versus the lower-grade areas taken during underground mining later. Mill throughput is expected to stay relatively flat throughout the mine life at 350ktpa. To model the project we largely follow the schedule as set out in the PEA albeit with a slightly slower ramp-up.

Fig 75: PLS Throughput and Grade (Mt, % U_3O_8)

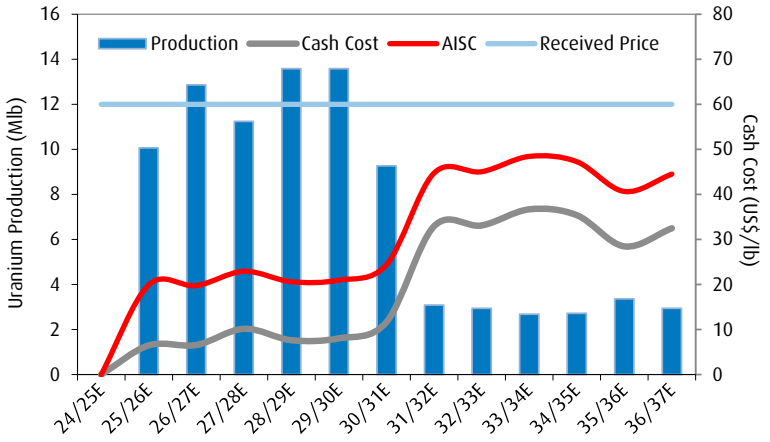


Source: BMO Capital Markets

We expect production to peak at 13.6Mlb in FY28 before tailing off quite rapidly at the end of the open pit. A significant opportunity for Fission would be if it can find additional higher-grade material to blend with the underground material to maintain the production rate.

Cash costs during the open pit phase are extremely low, based on the PEA, at ~US$10/lb. However, this increases markedly as the open pit transitions to underground, with cash costs increasing to US$33/lb, for an average of ~US$17/lb over the mine life. All-in sustaining costs are expected to be ~US$21/lb for the first five years, before increasing to US$45/lb.

Fig 76: PLS Uranium Production Profile and Costs (Mlb, US$/lb)

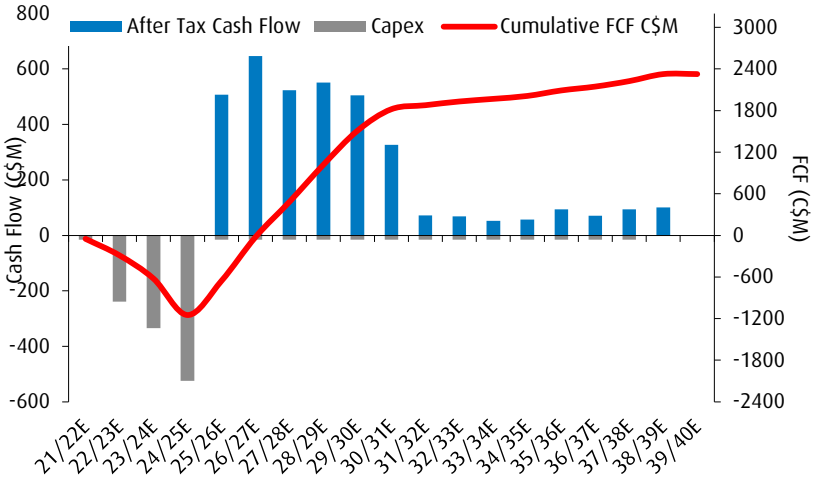


Source: BMO Capital Markets

The PEA estimates a total of C$1,095M (~US$800M) in initial capital costs, including C$209M of contingency funds. This includes some C$363M in mining, C$198M for processing, and C$117M for infrastructure; the remaining C$208M is for pre-production indirect costs. Sustaining costs in the feasibility study total C$239M, and include the transition to underground mining.

Finally, the closure and reclamation cost has been estimated at C$50M, which would entail breaching of the dyke, demolition of the site facilities, and flooding of workings.

Fig 77: PLS Free Cash Flow Profile (C$M)



Source: BMO Capital Markets

Cash flow is expected to be strong in the first few years of production, leading to a quick payback. We value the project at C$437M or US$362M. Moving the time frame just before first capex spend in FY2021E, the NPV of the project increases to C$903M.

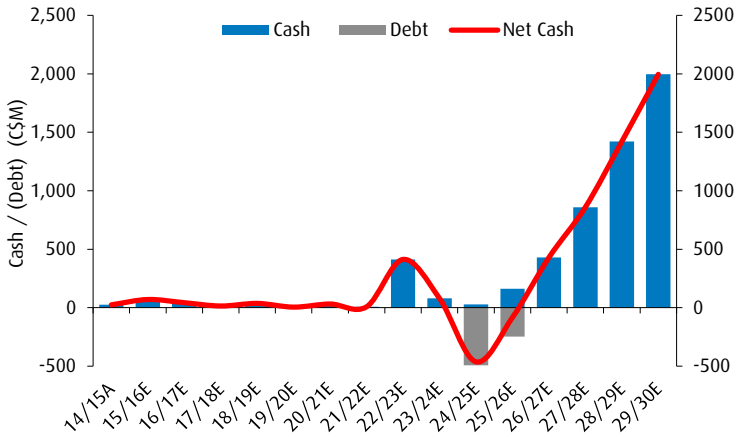
Funding and Valuation

We estimate that the company requires a total of C$1.2B net funding to develop the PLS project. Assuming a 40:60 debt equity split means the company is likely to raise a total of ~C$740M in equity and would need to borrow ~C$490M.

CGN took 20% of the company in Q1/16

This is probably the biggest hurdle for the company, particularly given the current market for uranium. However, Fission recently raised some C$82M via a private placement for which CGN Mining (a subsidiary of China General Nuclear Power Corporation) took a 20% stake at C$0.85/share, which is a vote of confidence for the project. The cash inflow has put Fission in a strong position to continue to pursue its drilling programmes and technical studies, with no debt and ~C$77M in cash at the end of Q3/FY16.

Fig 78: Fission Net Cash (C$M)

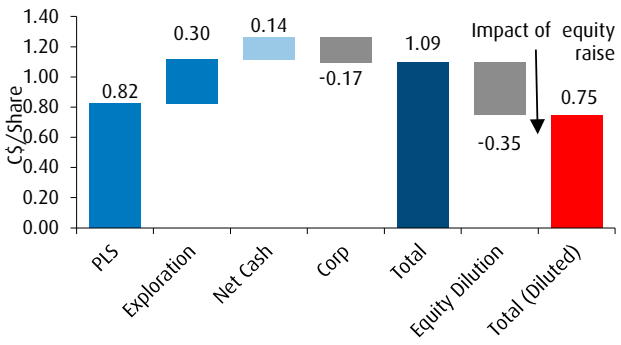


Source: BMO Capital Markets

We value the company at C$583M, including C$437M for the PLS project and C$158M for 50% exploration upside based on the peer average US$2.42 EV/lb. Including assumed equity dilution to fund first production, on a diluted basis works out at C$0.75/share.

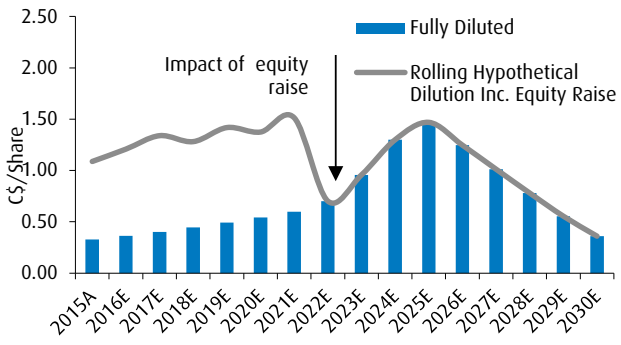
Looking at PLS through time, the asset peaks at C$1.47/share on a diluted share basis in 2025E.

Fig 79: NPV10% Waterfall



Source: BMO Capital Markets

Fig 80: NPV10% PLS Project Roll Forward Profile



Source: BMO Capital Markets. Calendar Years. Excludes exploration

Including future equity dilution we ascribe an NPV of C$0.75/share

Fig 81: Fission Valuation Breakdown Including Potential Dilution

NPV Breakdown	C$M	US$M
PLS NPV	C$437	US$362
Exploration (EV/lb)	C$158	US$131
Net Cash	C$77	US$56
Corporate	-C$89	-US$71
Total NPV	C$583	US$478
Shares Out*	533	533
Debt/Equity Split	40/60	40/60
Total Cash Raised	C$1230	US$898
- As Equity	C$738	US$539
- As Debt	C$492	US$359
NPV After Dilution	C$1321	US$965
Shares After Dilution	1773	1773
Diluted NPV/Share	C$0.75	US$0.54
Current Share Price	C$0.65	US$0.47
P/NPV	0.87	

Source: BMO Capital Markets. *fully diluted

Management and Board of Directors:

Dev Randhawa – Chairman & CEO. Mr. Randhawa founded Strathmore Minerals Corp. in 1996 from which Fission Energy Corp, and then later Fission Uranium Corp was spun out. He is also CEO of Fission 3.0 Corp.

Ross McElroy – President, COO & Director. Mr. McElroy was previously President, COO and Chief Geologist at Fission Energy whilst it made the Patterson Lake South discovery. He is also a director and COO of Fission 3.0. He has previously held positions at BHP Billiton and Cameco.

William V. Marsh – Director. Mr. Marsh is also a director of Ballyiffin Capital Corp, and is a former director of Predatory Capital and Wolf Capital. He also previously held positions at Chevron in Canada and internationally

Frank Estergaard – Director. Mr. Estergaard is a professional Chartered Accountant, having retired from KPGM as a Partner. He has also held roles as CFO from Metalex Ventures and for a number of private companies, and has been a Director and Chairman of the audit committee for QHR Technologies.

Jeremy Ross – Director. Mr. Ross has extensive experience in corporate development and marketing for small to mid-tier mining, oil, and gas companies, including corporate development consultant for Fission Energy. He is also a director of Fission 3.0.

Anthony Milewski – Director. Mr. Milewski has considerable experience in uranium trading and uranium supply and demand. He is a founder of Black Vulcan Resources and previously worked at Firebird Management, a specialist emerging market fund.

Xing Jianhua – Director. Mr. Xing has 18 years of experience in corporate finance within the mining industry. He is currently Senior Vice President and CFO of CGN Mining and is one of its two designated directors.

Shiming Ma – Director. Mr. Ma is currently the director responsible for overseas M&A for CGN Mining and is one of CGN Mining's two designated directors on Fission's board.

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Fig 82: Fission Summary Model Using BMO Metal Price Assumptions

Fission Uranium		FCU TSX	
As at	13-May-16		
Recommendation:	Outperform (S)	**Alexander Pearce**	
		BMO Capital Markets	
Share Price (C$)	$0.65	Share Price (US$)	$0.47
Target Value (C$)	n/a	Target Value (US$)	n/a
NPV (C$)	$0.75	NPV (US$)	$0.54
Ordinary Shares (M)	483.9		
Dilution (M)	48.9		
Market Cap (C$M)	$315	Market Cap (US$M)	$230

PRICE ASSUMPTIONS

(June Year End)		14/15A	15/16E	16/17E	17/18E	18/19E
C$/US$ Exchange Rate		0.86	0.74	0.72	0.76	0.80
Spot Price (U3O8)	US$/lb	35.84	33.85	35.63	43.75	51.25
Realised Price (U3C	US$/lb	35.84	33.85	35.63	43.75	51.25

FINANCIAL SUMMARY

(June Year End)		14/15A	15/16E	16/17E	17/18E	18/19E
NPAT (Adj)	**(C$M)**	**-9.9**	**-10.4**	**-7.3**	**-8.3**	**-8.0**
EPS	(US$/sh)	-0.03	-0.02	-0.02	-0.02	-0.01
PER	(x)	n/a	n/a	n/a	n/a	50.0
EPS Growth	(%)	-24.5	7.8	38.9	-14.4	18.4
EBITDA	**(C$M)**	**-8.6**	**-7.9**	**-10.0**	**-10.0**	**-10.0**
EBITDA per Share	(US$/sh)	-0.02	-0.02	-0.02	-0.02	-0.02
EV/EBITDA	(x)	n/a	n/a	n/a	n/a	n/a
Dividend	**(US$/sh)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Yield	(%)	0.0	0.0	0.0	0.0	0.0

PROFIT AND LOSS STATEMENT - C$M

(June Year End)	14/15A	15/16E	16/17E	17/18E	18/19E
Sales Revenue	0.0	0.0	0.0	0.0	0.0
Other Revenue	0.0	0.0	0.0	0.0	0.0
Cash Operating Costs	0.0	0.0	0.0	0.0	0.0
Gross Operating Profit	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Depreciation	0.1	0.1	0.1	0.1	0.1
Exploration and Royalties	0.0	0.0	0.0	0.0	0.0
Corporate and Other	8.6	7.7	10.0	10.0	10.0
Share of Associate Profit	0.0	-0.1	0.0	0.0	0.0
EBIT	**-8.7**	**-7.8**	**-10.1**	**-10.1**	**-10.1**
Less Net Interest Expense	-0.3	-0.7	-2.4	-1.3	-1.7
Pre-Tax Profits	**-8.4**	**-7.1**	**-7.7**	**-8.8**	**-8.4**
Less Tax	1.5	3.3	-0.4	-0.4	-0.4
Less Minorities	0.0	0.0	0.0	0.0	0.0
NPAT (pre-Abs)	**-9.9**	**-10.4**	**-7.3**	**-8.3**	**-8.0**
Net Abnormals	0.0	-0.1	0.0	0.0	0.0
Reported Profit	**-9.9**	**-10.3**	**-7.3**	**-8.3**	**-8.0**

DIVISIONAL VALUATION

	NPV C$M	NPV US$M
Patterson Lake Sou	437	362
Exploration	158	131
Net Cash	77	56
Corporate/Other	-89	-71
Total NPV	**583**	**478**
NPV/Share	1.09	0.90
Diluted NPV/Share	0.75	0.57

RESERVES AND RESOURCES

Attributable	Ore Tonnage (Mt)	Grade U3O8 (%)	Contained U3O8 (Mlb)
U3O8 Reserves	0.0	0.00%	0
U3O8 Resources	2.8	1.76%	108

CASH FLOW ANALYSIS - C$M

(June Year End)	14/15A	15/16E	16/17E	17/18E	18/19E
Cash Flows From Operating Activities					
Net Profit	(9.9)	(10.4)	(7.3)	(8.3)	(8.0)
D&A	0.1	0.1	0.1	0.1	0.1
Changes in Working Capital	(0.0)	(0.0)	0.0	0.0	0.0
Other	3.4	1.5	0.0	0.0	0.0
Cash Flows From Investing Activities					
Acq.of Property, Plant and Equip.	(0.0)	(0.3)	0.0	0.0	0.0
Exploration Expenditure	(33.4)	(23.3)	(20.0)	(20.0)	(20.0)
Other	(3.1)	0.0	0.0	0.0	0.0
Cash Flows From Financing Activities					
Net Change in Borrowings	0.0	0.0	0.0	0.0	0.0
Dividends Paid	0.0	0.0	0.0	0.0	0.0
Other	38.9	77.9	0.0	0.0	50.0
Net Increase In Cash Held	(4.1)	45.5	(27.2)	(28.3)	22.1
Cash At End of Year	24.8	70.2	43.0	14.8	36.9

BALANCE SHEET ANALYSIS - C$M

(June Year End)	14/15A	15/16E	16/17E	17/18E	18/19E
Current Assets					
Cash and Liquids	24.8	70.2	43.0	14.8	36.9
Other	0.6	0.6	0.6	0.6	0.6
Non-Current Assets					
Investments	3.0	2.9	2.9	2.9	2.9
Fixed Assets	243.6	267.9	287.8	307.7	327.7
Other	0.0	0.0	0.0	0.0	0.0
Current Liabilities					
Borrowings	0.0	0.0	0.0	0.0	0.0
Creditors	1.9	2.2	2.2	2.2	2.2
Other	4.4	0.0	0.0	0.0	0.0
Non-Current Liabilities					
Borrowings	0.0	0.0	0.0	0.0	0.0
Other	0.9	3.1	3.1	3.1	3.1
Minority Interest	0.0	0.0	0.0	0.0	0.0
SHAREHOLDERS FUNDS	264.9	336.4	329.1	320.8	362.8
Net Debt/Equity %	-9%	-21%	-13%	-5%	-10%

DIVISIONAL EARNINGS (EBIT) - C$M

(June Year End)	14/15A	15/16E	16/17E	17/18E	18/19E
Patterson Lake South	0.0	0.0	0.0	0.0	0.0

URANIUM PRODUCTION AND SALES

		14/15A	15/16E	16/17E	17/18E	18/19E
U3O8 Production	Mlb	0.0	0.0	0.0	0.0	0.0
Cash Cost	US$/lb	0.00	0.00	0.00	0.00	0.00
Total Cost	US$/lb	0.00	0.00	0.00	0.00	0.00
U3O8 Sales	Mlb	0.0	0.0	0.0	0.0	0.0

Source: BMO Capital Markets.

10. NexGen Energy (NXE-TSX-V)

Market Cap: US$535M

Rating: Market Perform (S)

Price: C$2.40

Target: na

(Price as of market close on May 13, 2016)

NexGen Energy is a TSX-V listed exploration and development company with assets in the Athabasca basin in Canada. In our view, management have focussed their energy well, with its experienced technical team quickly declaring a maiden resource on its high-grade Arrow deposit, part of its Rook 1 project. Defining an inferred resource of 201.9Mlb U_3O_8 at a grade of 2.63% making it one of the largest and highest-grade resources in the region.

Upcoming catalysts include an updated resource statement by year-end as well as a potential PEA. However, the current lack of a technical report combined with inferred only resources and more expensive trading multiples after strong recent share price performance count against it. Having said that, we would look to buy on any pull back of valuation multiples.

Whilst no technical study has been undertaken yet, one is in the pipeline for the end of 2017, with potential for a PEA by the end of 2016. We estimate that the company could run an underground project at a rate of 10Mlbpa U_3O_8 for ~12 years.

Positives / Negatives:

+ Management have quickly developed a large resource at Rook 1 with 202Mlb of inferred category uranium in its maiden resource statement
+ Very high average grade resource of 2.63% U_3O_8, which is open in all directions. High-grade core of 121Mlb at 13.26% U_3O_8
+ Could be attractive for M&A by an established player, or a company looking for a foothold in the basin
– Early stage, no technical study to demonstrate extraction potential and inferred resource only. We estimate capex to be relatively high at ~C$750M
– Recent share price performance means premium P/NPV to peers – but could look attractive on any share price pull back.
– Property located on west periphery of Athabasca basin, away from existing uranium infrastructure
– Permitting and construction time frame means production is >10 years away

Initiating With a Market Perform (Speculative) Rating

We estimate a $NPV_{10\%}$ of C$2.09/share, including mine cash flow, EV/lb resource upside and after assumed future equity dilution. Due to the higher risk associated with exploration plays, we ascribe no target price.

Near Term Catalysts / Key Risks:

- **Updating Its Resource Statement:** We expect NexGen to release a revised resource statement with this year's drilling results in 2016.
- **Demonstrating Extraction Potential:** NexGen is expected to release a pre-feasibility study by year-end 2017, although it may complete a PEA by year-end 2016.
- **Financing:** Whilst the full project financing is a long way off, success is entirely dependent on investor appetite at the time.

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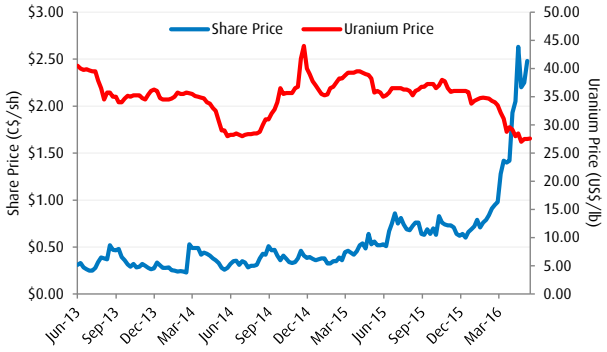
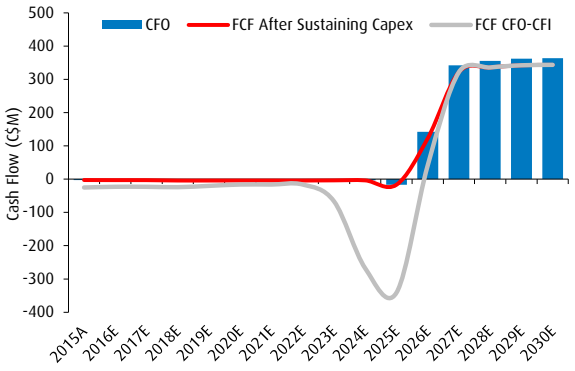
- **Permitting:** Successful permitting for a mining operation is by no means assured. As this is likely to be underground, its footprint should be smaller than an open pit.
- **Uranium Price:** At a 10% discount rate, the company's main project Rook 1 needs a uranium price of US$37.00/lb to provide a positive return. If uranium is below this level the project may not make it into production.

Fig 83: Share Price (C$)



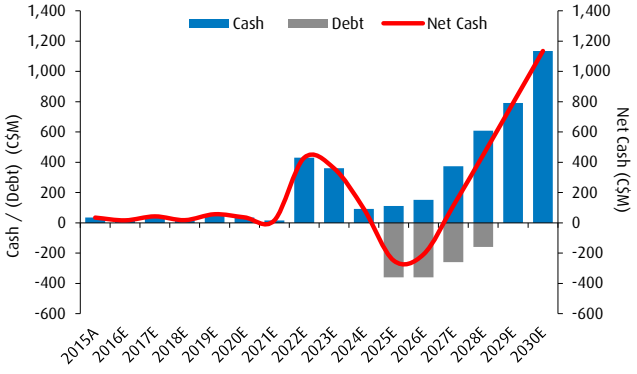
Source: BMO Capital Markets

Fig 84: Free Cash Flow (C$M)



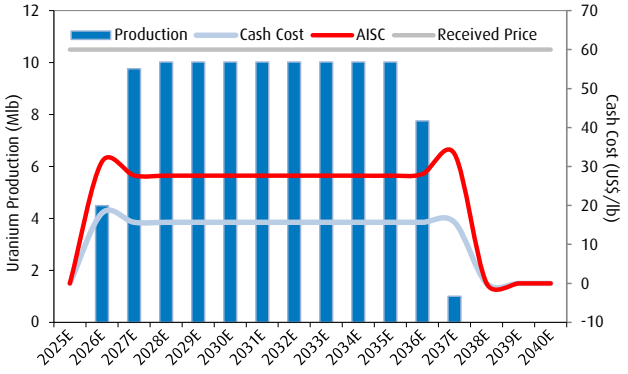
Source: BMO Capital Markets

Fig 85: Net Cash/Debt (C$M)



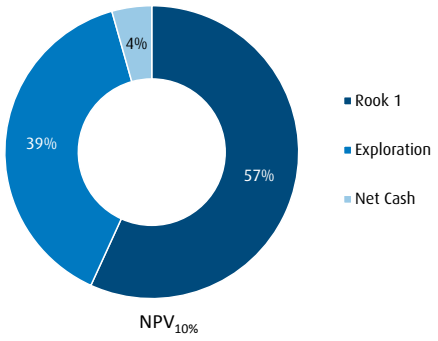
Source: BMO Capital Markets

Fig 86: Uranium Production & Cash Cost (Mlb, US$/lb)



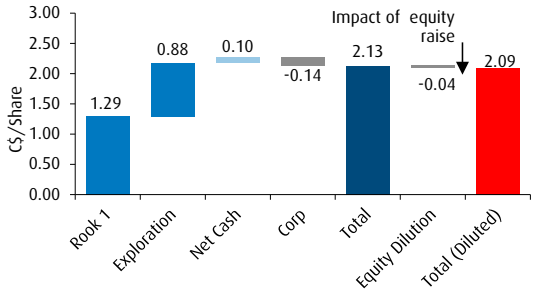
Source: BMO Capital Markets

Fig 87: NPV by Asset (%, 10% Discount)



Source: BMO Capital Markets

Fig 88: NPV by Asset (C$/share, 10% Discount)



Source: BMO Capital Markets

Rook 1 Project - 100% Owned

The company has a number of prospective deposits within its land holding in the Athabasca basin;, however, by far its most developed is its Arrow deposit, located within the Rook 1 project to the southwest of the basin where it holds 35k hectares. Within the Rook 1 project, the company also has a number of other targets, including the Bow discovery, ~3km away from Arrow.

Arrow is located within close proximity to the north east of Fission's Paterson Lake South project and, similarly, consists of unconformity related basement hosted mineralisation.

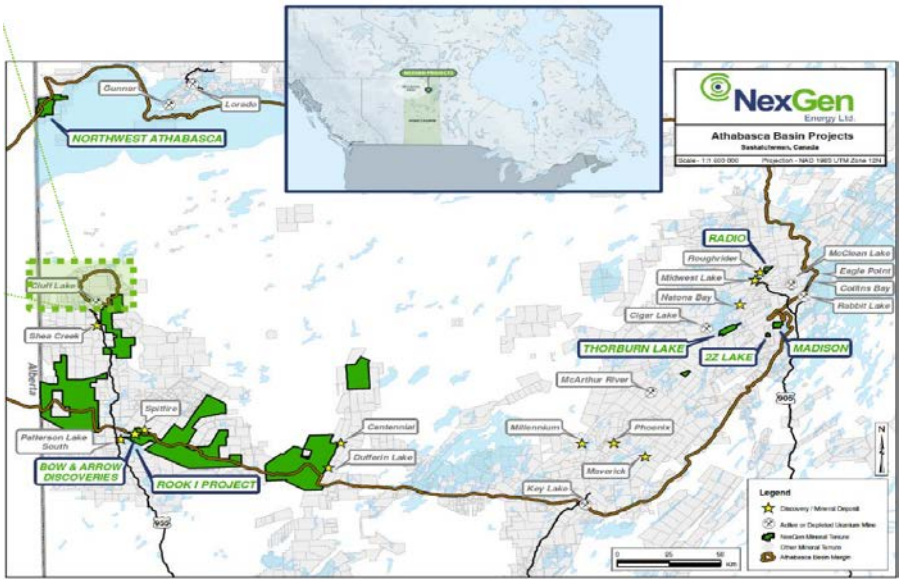
The company discovered the deposit in February 2014. Drilling on the property to resource stage totalled ~59,000m.

The project is relatively early stage; nonetheless, the company appears to have run a solid drilling campaign. Its attention is now shifting to shoring up its understanding of the Arrow ore body through delineation and extension drilling.

Permitting and Environmental work are very limited at this stage. The company plans to begin preparation for environmental applications this year; however, its first technical study is not expected until later in 2017, which would form the basis of the main permitting applications.

Infrastructure is limited to an all-weather highway some 5km away. However, the company is in the process of building a road to meet this and provide access to heavy equipment.

Fig 89: Arrow Location Relative to the Athabasca



Source: NexGen Energy

Geology

The Rook 1 property is located along the southwestern edge of the Athabasca Basin and straddles the Athabasca – basement unconformity. As per Fission's Patterson Lake South Property, mineralisation at Arrow is basement hosted.

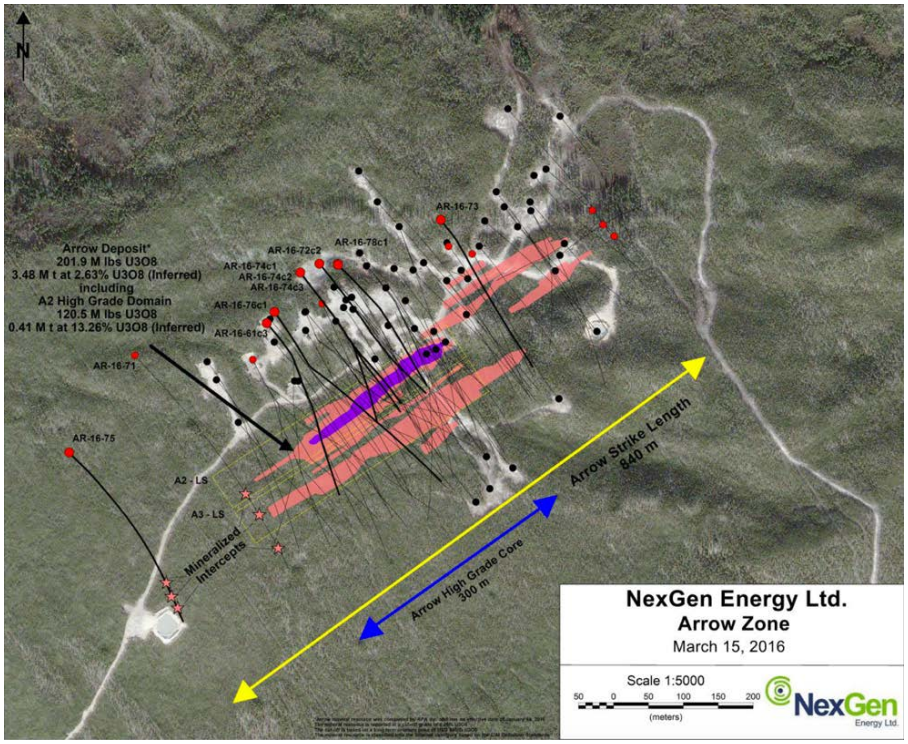
The basement rocks are northeast trending Archean and Aphebian granitic and metasedimentary gneisses, with the mineralisation primarily hosted within the graphitic pelitic and semipelitic gneises and granofels.

Mineralisation at Arrow occurs in or near graphitic mylonites, structurally controlled with clay, chlorite and haematite alteration. There are four main parallel structural zones, the A1, A2, A3, and A4 shears, which are between 4-25m thick. A2 and A3 are the higher-grade and thicker shears that have been identified to date where the company has focused its attentions.

Mineralisation to date is within a 280m wide by 865m area, from 100m deep to 920m and remains open in all directions at this stage. The high grade core is around one-third of this, with a 300m strike length. As with much of the Athabasca, the company has found some spectacularly high-grade mineralisation.

The Arrow deposit currently has a strike length of >800m, is ~280M wide and 920m in depth.

Fig 90: Plan View of the Arrow Zone



Source: NexGen Energy

Resources

The company released its maiden resource statement in March 2016, showing promising size and grade. Reported using a cut-off grade of 0.25% U_3O_8, the resource statement includes a total of 201.9Mlb U_3O_8, at an average grade of 2.63% U_3O_8.

The resource has been estimated using 82 diamond drill holes on a 50x50m spacing for much of the deposit. The company is now reducing spacing to 25x25m or less on average to increase confidence in the resource.

The majority of the uranium bearing material lies within the high-grade A2 subzone, containing 121Mlbs or 59% of the total U_3O_8, at a grade of 13.26%. As shown in the grade tonnage curve below, increasing the cut-off grade has little effect on resource tonnage. Indeed, by the increasing the cut-off grade to 0.3% from 0.25% U_3O_8, reduces the resource by less than 1%.

At a much higher cut-off grade of 10% U_3O_8, the resource reduces by only 50% and the average grade increases rather spectacularly to 20.8% U_3O_8.

Fig 91: Arrow Resources

Structure	Tonnage (tonnes)	Grade (U_3O_8 %)	Metal U3O8 (U_3O_8 lbs)
A1	380,000	0.50	4,200,000
A2	1,480,000	0.85	27,600,000
A2 High Grade	**410,000**	**13.26**	**120,500,000**
A3	1,130,000	1.90	47,300,000
A4	80,000	1.35	2,300,000
Total	**3,480,000**	**2.63**	**201,900,000**

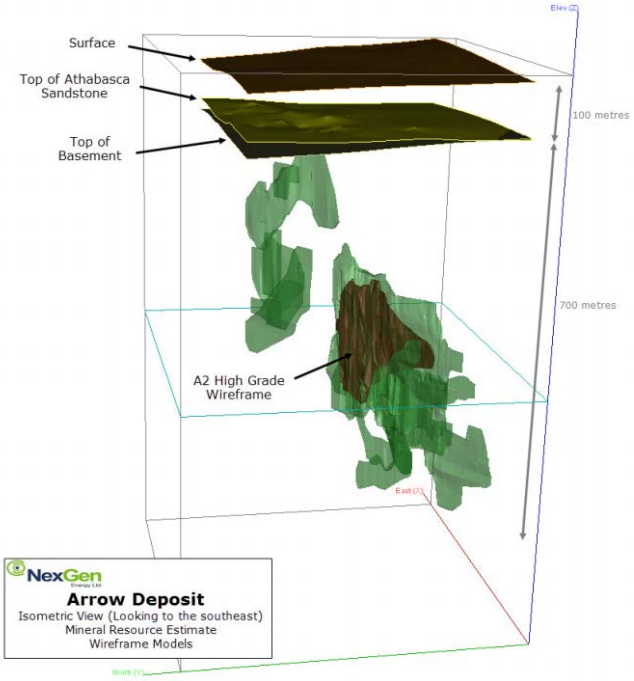
Source: NexGen Energy

Fig 92: Grade Tonnage Curve

Cut-Off (U_3O_8 %)	Tonnage (tonnes)	Grade (U_3O_8 %)	Metal (U_3O_8 lbs)
0.25	**3,480,000**	**2.63**	**201,900,000**
0.30	3,220,000	2.82	200,300,000
0.50	2,510,000	3.51	194,300,000
1.00	1,490,000	5.43	178,300,000
2.00	820,000	8.66	157,200,000
2.50	680,000	10.04	150,100,000
3.00	580,000	11.30	144,200,000
5.00	400,000	14.70	128,500,000
10.00	220,000	20.78	101,300,000

Source: NexGen Energy

Fig 93: Arrow Deposit Resource Wireframes



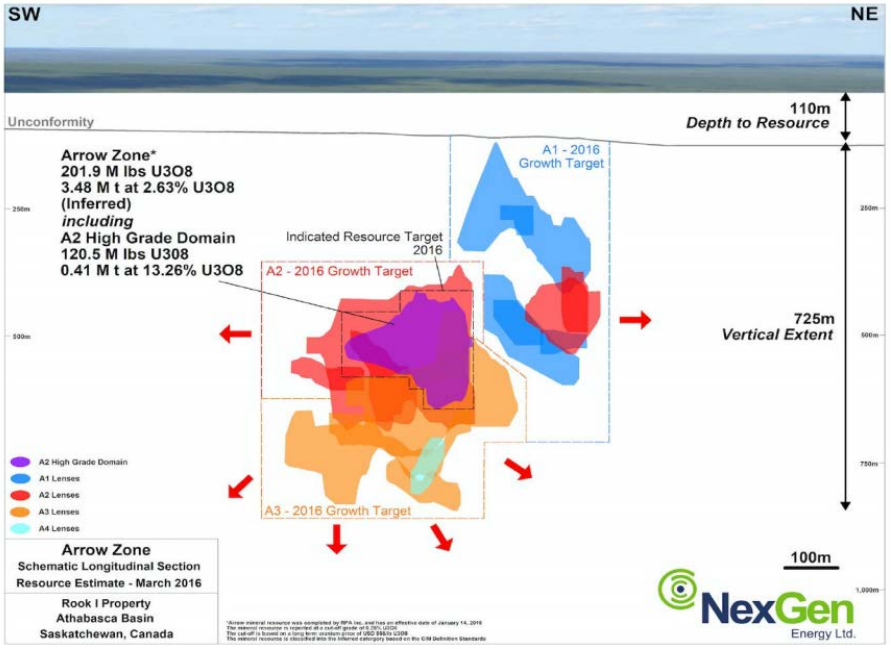
Source: NexGen Energy

The resource is in the inferred category at this stage; therefore, NexGen is now focussing on infill drilling and improving confidence in the resource base. The winter drilling programme began in January 2016, with 30,000m planned and six drill rigs, which is the largest drilling programme to date on Rook 1.

The winter-spring drilling programme has provided a number of high-grade intercepts to date, including drill-holes AR-16-63C3 and 64C2, which are expected to be included in the updated resource statement in H2/16. As an example, hole 64C2 returned 92m (including a 3.5m unmineralised intersection) at 13.51% U_3O_8, representing a grade thickness of 1,243 %m.

The Arrow deposit remains open in most directions

Fig 94: Arrow Deposit Exploration Target Areas



Source: NexGen Energy

Development Plans

There aren't as yet any technical studies at Rook 1, since the project is relatively early stage. However, the company is aiming towards completing a pre-feasibility study by the end of 2017, which will form the basis of its permit applications going forward. In the interim, NexGen is focussing on developing its resource base as well as beginning environmental baseline monitoring, geotechnical and hydrological studies and may complete a PEA study by year-end 2016.

Conceivably, the company could be ten years away from production, although this is likely dependant on continued exploration success, the results of the technical study and permitting.

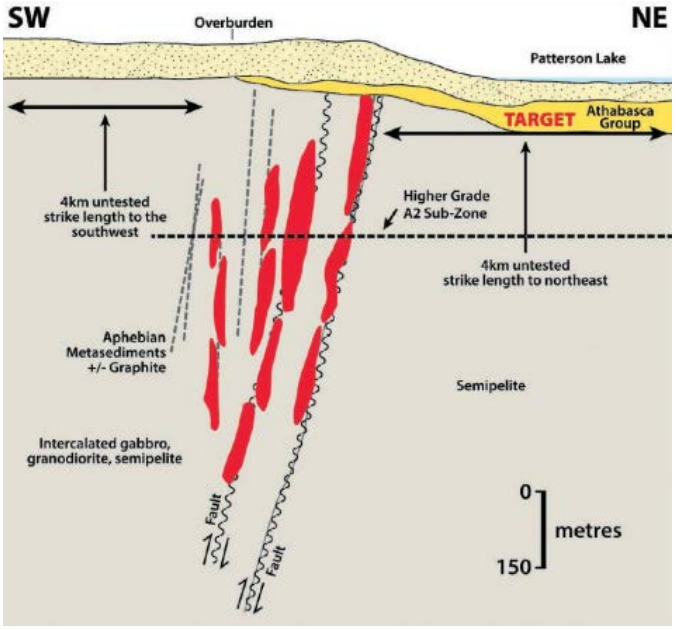
Underground Plans

In modelling the deposit, we assume the company develops an underground operation with a decline from the surface.

The key advantages of a decline are the lower up-front costs versus a shaft, increased flexibility, and potential for quicker access to the upper reaches of the ore body. The main negative is lower efficiency than a shaft at depth, with trucking times increasing as production moves downward and increasing operating costs.

Providing the geotechnical conditions allow, the steeply dipping nature of the orebody lends itself to long-hole stoping, which is the technique used at Cameco's Eagle Point operation and as a bulk mining method is also relatively efficient.

Fig 95: Simplified Schematic Showing Steeply Dipping Orebody



Source: NexGen Energy

Using this technique, drifts are constructed at the top and bottom of the stope, likely in waste to reduce airborne radiation exposure for workers, with production blast holes drilled and loaded from the upper drift and ore extracted from a draw point in the lower drift footwall.

Depending on geotechnical conditions, the stope is likely to be filled with cemented rock fill, which would aid mining recovery by reducing pillar widths and/or allow pillar robbing later, and also reduce surface deposition of waste.

However, in higher-grade areas, radiation levels may be more difficult to control; therefore, remote mining could be utilized for the A2 high-grade core. Raise bore mining is a possible candidate for this, as used at Cameco's McArthur River.

The development drifts can be located above and below the mineralisation to insulate workers from the freshly broken ground (thus reducing ventilation complexity). The downside of a technique such as this is that the operating costs tend to be higher.

Processing Route Summary

Similar to Fission, ore could conceivably be processed using a fairly standard technique. Ore is likely to be crushed and ground, then passed through an acid leaching circuit and then on to solid/liquid separation in CCD thickeners.

The pregnant solution is clarified and then passed to the solvent extraction circuit where it is contacted with an acidified organic solvent counter-current. Uranium passes from the eluate to the organic solvent leaving impurities behind in the aqueous phase.

The loaded organic is then passed to a stripping circuit where uranium is transferred back to an aqueous phase in counter-current mixer settlers by the addition of further sulphuric acid.

Moving to the precipitation circuit, uranium is precipitated from the loaded strip solution through the addition of hydrogen peroxide to raise the pH.

The precipitant is then washed and dewatered in a centrifuge before being dried through an LPG fired dryer to produce a yellow cake. We assume the company will truck the yellow cake to market, rather than add a calcining phase.

Infrastructure

Similar to PLS, the infrastructure around Rook 1 is fairly basic. The company is currently installing an access road to the property from the highway some 5km away that will enable heavy equipment to reach the site.

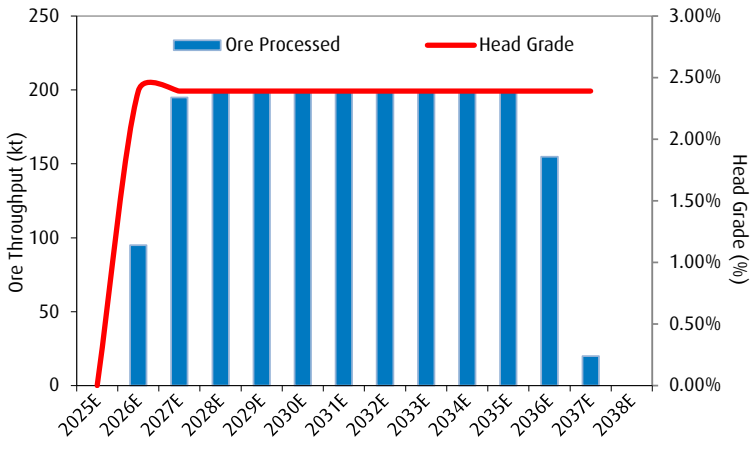
The nearest power lines are 70km away, therefore the company may elect to build its generating capacity for ventilation and the plant.

Capex, Cost, and Production Profile

We assume the orebody would be amenable to a ~200ktpa ore extraction rate. Production using this milling rate at the resource grade of 2.63% less dilution is in the region of ~10Mlbpa U_3O_8.

We assume that 70% of inferred resources convert into reserves, resulting in a mine life of around 12 years.

Fig 96: Throughput and Grade (kt, % U_3O_8)

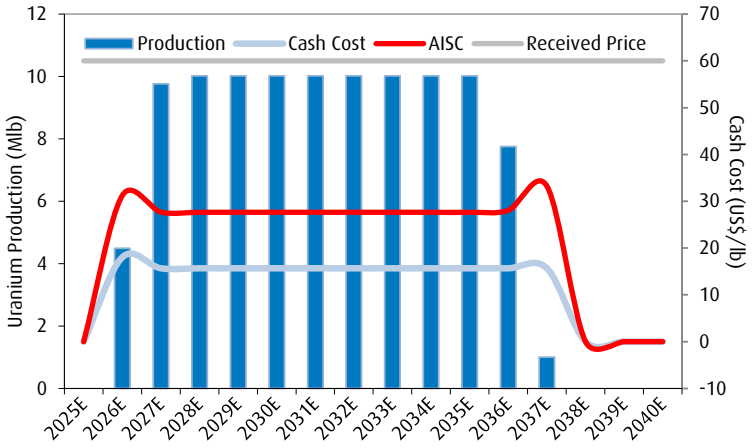


Source: BMO Capital Markets

Assuming permitting takes around three years from the submission of the technical report at the end of 2017, and a conservative estimate of a three-year construction phase, a start date of 2026 is possible.

We assume a cash cost of ~US$16/lb U_3O_8 is achievable on the basis that around half of the ore body is extracted using long-hole stoping and half via higher-cost raise-bore mining similar to at McArthur river (which has a cash cost of ~US$16/lb U_3O_8). We forecast an all-in sustaining cost of US$28/lb U_3O_8, which assumes ~C$20M per year in sustaining capex.

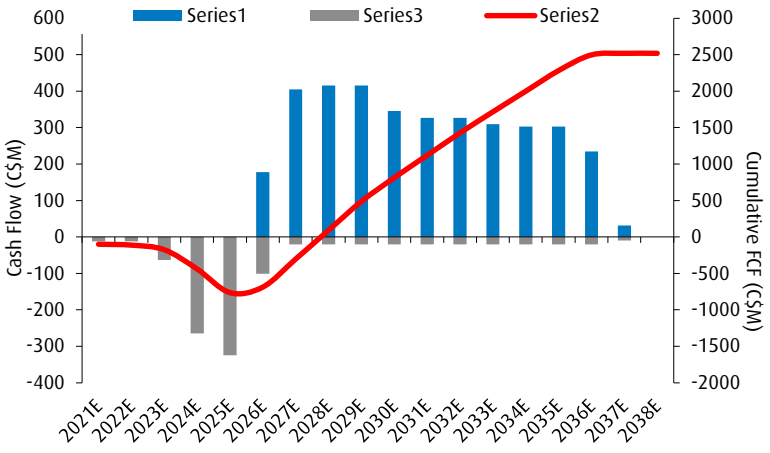
Fig 97: Production Profile and Costs (US$/lb)



Source: BMO Capital Markets

We estimate that the company could feasibly create an underground operation for ~C$750M in development capex, assuming C$300M for processing (given this is a relatively small plant), C$240M for mining, C$50M for reclamation, and C$140M for infrastructure. We stress that this is very much an estimate by us at this stage, using comparable operations as a fairly broad basis for the estimate and therefore is indicative only.

Fig 98: Rook 1 Free Cash Flow Profile (C$M)



Source: BMO Capital Markets

We estimate that Rook 1 has a NPV of C$432M (US$358M) or C$1.29/share using a 10% discount rate and long-term uranium price of US$60/lb. Cash flow is strong on our assumptions, with payback three years after first production.

Exploration

NexGen holds a number of tenements across the eastern and southwestern Athabasca basin in Saskatchewan, albeit the largest are in the southwest where it holds over 259k hectares of land and includes the Rook 1 project as already described in this report.

Projects to the east of the basin include a 100% interest in Thorburn Lake which is 7km east of Cameco's Cigar Lake which has some historical drill intersections showing 0.17% U_3O_8 over 0.6m.

In addition, the company holds an option to gain a 70% interest in the Radio project, adjacent to Rio Tinto's Roughrider project. The company needs to spend C$10M in exploration by May 31, 2017 to earn in. To date, NexGen has undertaken ~3,500m of drilling on the project.

Due to the prospective nature of the Rook 1 property in particular, we assume the company can add a further ~100Mlb of U_3O_8, which on an EV/lb resource basis is worth ~C$295M in our valuation, based on the average EV/lb of resources of its peers, which is currently US$2.42/lb.

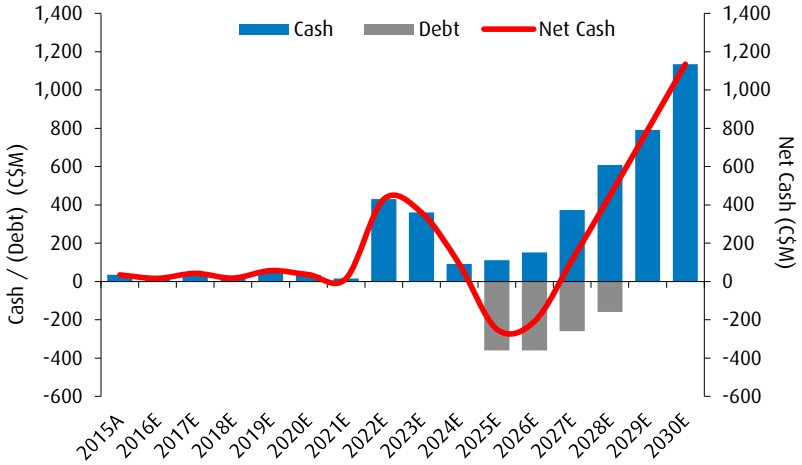
Funding and Valuation

At the end of Q1/16, the company had C$33M in cash in treasury and no debt. We estimate that this cash, combined with options, should see the company through most of 2017 and its technical study (including the potential PEA at year-end 2016). Subsequently, in H2/2017E, we anticipate that the company requires ~C$50M in equity to continue its drilling programmes and then ~C$60M in 2019E.

The recent maiden resource statement should make funding easier to obtain

On our assumptions, the company requires a total of ~C$900M to fund the project capex and working capital as well as interim drilling and corporate costs. Assuming a 60/40 equity/debt split, the company would need to raise in the order of C$540M in equity (including the C$50M and C$60M discussed above) and US$360M in debt.

Fig 99: NexGen Net Cash (C$M)



Source: BMO Capital Markets

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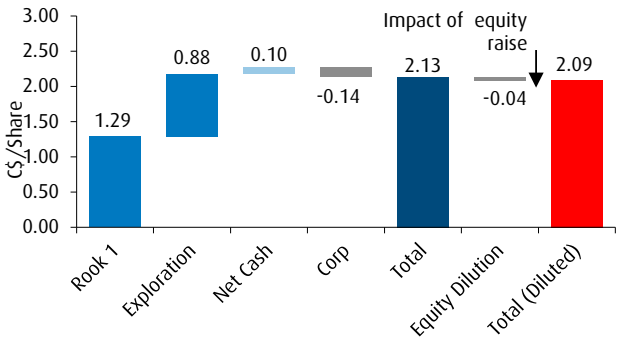
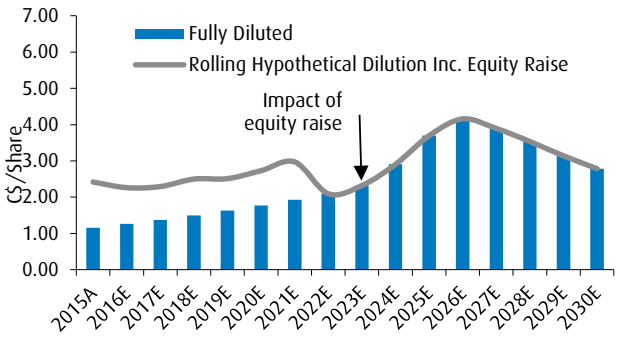
We value the company at C$2.13/share undiluted; however, including an assumed C$430M equity raise in 2019E and near-term incremental equity raises, on a diluted basis this reduces to C$2.09/share. Looking at Rook 1 through time, the asset peaks at C$4.16/share on a diluted share basis in 2026E.

Fig 100: Corporate NPV10% Waterfall



Source: BMO Capital Markets

Fig 101: Rook 1Project NPV10% Roll Forward Profile



Source: BMO Capital Markets. Excludes exploration value

Fig 102: NexGen Valuation Breakdown Including Potential Dilution

NPV Breakdown	C$M	US$M
Rook 1 NPV	C$432	US$358
Exploration (EV/lb)	C$295	US$244
Net Cash	C$33	US$24
Corporate	-C$46	-US$37
Total NPV	C$714	US$589
Shares Out*	335	335
Debt/Equity Split	40/60	40/60
Total Cash Raised	C$900	US$657
- As Equity	C$540	US$394
- As Debt	C$360	US$263
NPV After Dilution	C$1254	US$983
Shares After Dilution	599	599
Diluted NPV/Share	C$2.09	US$1.64
Current Share Price	C$2.40	US$1.75
P/NPV	1.15	

Source: BMO Capital Markets. *fully diluted

Management and Board of Directors:

Christopher McFadden – Chairman. Mr. McFadden also currently holds the position of Manager, Business Development at Newcrest Mining. He has previously been Commercial General Manager at Rio Tinto's exploration division.

Leigh R. Curyer – CEO and Director. Mr. Curyer has previously held the role of CFO and Head of Corporate Development of Southern Cross Resources (now Uranium One). He was also Head of Corporate Development for Accord Nuclear Resource Management, a private equity and infrastructure investment firm.

Richard Patricio – Director. Mr. Patricio also holds the position of Vice President, Corporate and Legal Affairs at Pinetree Capital and has extensive experience with mining companies on the TSX.

Trevor J. Thiele – Director. Mr. Thiele is currently non-executive director of a number of non-listed Australian entities and has previously held senior finance roles in medium to large ASX-listed companies including the position of CFO for Elders and Viterra.

Craig Parry – Director. Mr. Parry is a founding member of the Tigers Realm Group and is CEO of Tigers Realm Coal. He was previously Business Development Manager for G-Resources and Principal Geologist, New Business at Oxiana, as well as leading exploration programmes at Rio Tinto.

Gerry Feldman – Director. Mr. Feldman is Vice-President Corporate Development and CFO of Pinetree Capital. His previous roles included Senior Partner at a number of accounting firms.

James Currie – Director. Mr. Currie's previous roles include COO of Pretium Resources and Executive Vice President and COO of New Gold.

Andrew Browne – Technical Committee Advisory Head. Prior to joining NexGen, Mr. Browne operated a geoscientific consultancy specialising in uranium projects globally, and has been involved with exploration of uranium projects in Australia since 1969.

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Fig 103: NexGen Summary Model Using BMO Metal Price Assumptions

NexGen Energy		NXE TSX-V	
As at	13-May-16		
Recommendation:	Mkt Perform (S)	**Alexander Pearce**	
		BMO Capital Markets	
Share Price (C$)	$2.40	Share Price (US$)	$1.75
Target Value (C$)	na	Target Value (US$)	na
NPV (C$)	$2.09	NPV (US$)	$1.53
Ordinary Shares (M)	305.5		
Dilution (M)	29.1		
Market Cap (C$M)	$733	Market Cap (US$M)	$535

PRICE ASSUMPTIONS

(June Year End)		2015A	2016E	2017E	2018E	2019E
C$/US$ Exchange Rate		0.78	0.72	0.74	0.78	0.82
Spot Price (U3O8)	US$/lb	36.85	31.94	40.63	46.25	55.00
Realised Price (U3C	US$/lb	36.85	31.94	40.63	46.25	55.00

FINANCIAL SUMMARY

(June Year End)		2015A	2016E	2017E	2018E	2019E
NPAT (Adj)	**(C$M)**	**-5.0**	**-4.8**	**-5.1**	**-5.1**	**-5.1**
EPS	(US$/sh)	-0.02	-0.02	-0.02	-0.02	-0.01
PER	(x)	n/a	n/a	n/a	n/a	n/a
EPS Growth	(%)	4.0	24.5	-1.5	4.3	3.8
EBITDA	**(C$M)**	**-4.0**	**-5.3**	**-4.9**	**-5.2**	**-5.2**
EBITDA per Share	(US$/sh)	-0.02	-0.02	-0.02	-0.02	-0.02
EV/EBITDA	(x)	n/a	n/a	n/a	n/a	n/a
Dividend	**(US$/sh)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Yield	(%)	0.0	0.0	0.0	0.0	0.0

PROFIT AND LOSS STATEMENT - C$M

(June Year End)	2015A	2016E	2017E	2018E	2019E
Sales Revenue	0.0	0.0	0.0	0.0	0.0
Other Revenue	0.0	0.0	0.0	0.0	0.0
Cash Operating Costs	0.0	0.0	0.0	0.0	0.0
Gross Operating Profit	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Depreciation	0.2	0.2	0.2	0.2	0.2
Exploration and Royalties	0.0	0.0	0.0	0.0	0.0
Corporate and Other	4.9	4.9	5.2	5.2	5.2
Share of Associate Profit	0.0	0.0	0.0	0.0	0.0
EBIT	**-5.1**	**-5.1**	**-5.4**	**-5.4**	**-5.4**
Less Net Interest Expense	-0.2	-0.1	0.0	-0.1	0.0
Pre-Tax Profits	**-5.0**	**-5.0**	**-5.4**	**-5.3**	**-5.4**
Less Tax	0.0	-0.2	-0.3	-0.3	-0.3
Less Minorities	0.0	0.0	0.0	0.0	0.0
NPAT (pre-Abs)	**-5.0**	**-4.8**	**-5.1**	**-5.1**	**-5.1**
Net Abnormals	-0.3	0.0	0.0	0.0	0.0
Reported Profit	**-4.6**	**-4.8**	**-5.1**	**-5.1**	**-5.1**

DIVISIONAL VALUATION

	NPV C$M	NPV US$M
Rook 1	432	358
Exploration	295	244
Net Cash	33	24
Other	-46	-37
Total NPV	**714**	**589**
NPV/Share	2.13	1.76
Diluted NPV/Share	2.09	1.64

RESERVES AND RESOURCES

Attributable Rook 1	Ore Tonnage (Mt)	Grade U3O8 (%)	Contained U3O8 (Mlb)
U3O8 Reserves	0.0	0.00%	0
U3O8 Resources	3.5	2.63%	202

CASH FLOW ANALYSIS - C$M

(June Year End)	2015A	2016E	2017E	2018E	2019E
Cash Flows From Operating Activities					
Net Profit	(4.6)	(4.8)	(5.1)	(5.1)	(5.1)
D&A	0.2	0.2	0.2	0.2	0.2
Changes in Working Capital	(0.1)	0.0	0.0	0.0	0.0
Other	1.8	0.4	0.0	0.0	0.0
Cash Flows From Investing Activities					
Acq.of Property, Plant and Equip.	(0.3)	(3.3)	(3.8)	(4.0)	(3.2)
Exploration Expenditure	(22.3)	(20.0)	(15.2)	(16.0)	(12.8)
Other	0.2	0.0	0.0	0.0	0.0
Cash Flows From Financing Activities					
Net Change in Borrowings	0.0	0.0	0.0	0.0	0.0
Dividends Paid	0.0	0.0	0.0	0.0	0.0
Other	45.6	9.4	50.0	0.0	60.0
Net Increase In Cash Held	20.5	(18.1)	26.1	(24.9)	39.1
Cash At End of Year	34.3	16.2	42.3	17.5	56.6

BALANCE SHEET ANALYSIS - C$M

(June Year End)	2015A	2016E	2017E	2018E	2019E
Current Assets					
Cash and Liquids	34.3	16.2	42.3	17.5	56.6
Other	0.5	0.9	0.9	0.9	0.9
Non-Current Assets					
Investments	0.0	0.0	0.0	0.0	0.0
Fixed Assets	66.3	91.0	109.8	129.6	145.4
Other	0.0	0.0	0.0	0.0	0.0
Current Liabilities					
Borrowings	0.0	0.0	0.0	0.0	0.0
Creditors	1.0	2.7	2.7	2.7	2.7
Other	0.0	0.0	0.0	0.0	0.0
Non-Current Liabilities					
Borrowings	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.1	0.1	0.1	0.1
Minority Interest	0.0	0.0	0.0	0.0	0.0
SHAREHOLDERS FUNDS	100.2	105.4	150.3	145.3	200.2
Net Debt/Equity %	-34%	-15%	-28%	-12%	-28%

DIVISIONAL EARNINGS (EBIT) - C$M

(June Year End)	2015A	2016E	2017E	2018E	2019E
Rook 1	0.0	0.0	0.0	0.0	0.0

URANIUM PRODUCTION AND SALES

		2015A	2016E	2017E	2018E	2019E
U3O8 Production	Mlb	0.0	0.0	0.0	0.0	0.0
Cash Cost	US$/lb	0.00	0.00	0.00	0.00	0.00
Total Cost	US$/lb	0.00	0.00	0.00	0.00	0.00
U3O8 Sales	Mlb	0.0	0.0	0.0	0.0	0.0

Source: BMO Capital Markets.

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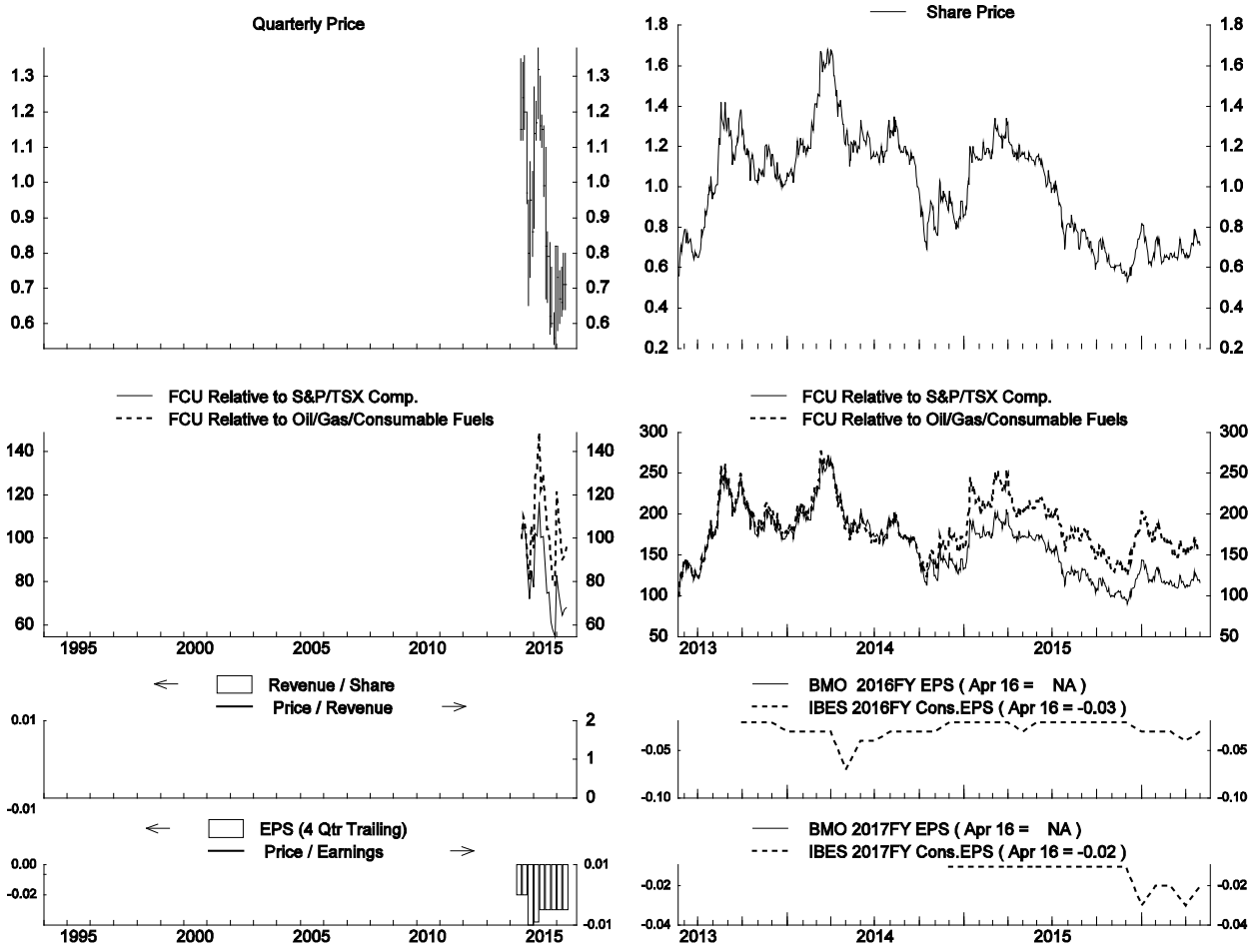
Fission Uranium (FCU)



FYE (Jun.)	EPS $	P/E Hi	P/E Lo	DPS $	Yield% Hi	Yield% Lo	Payout %	BV $	P/B Hi	P/B Lo	ROE %
2014	ND	na	na	0.00	0.0	0.0	0	ND	>15	>15	
2015	ND	na	na	0.00	0.0	0.0	0	ND	>15	>15	na
Range*:		na	na		0.0	0.0			>15	>15	
Current*	-0.03	na		0.00	0.0		0	ND	ND		na

FCU - Rating as of 12-Apr-16 = NR

* Current EPS is the 4 Quarter Trailing to Q3/2016.
* Valuation metrics are based on high and low for the fiscal year.
* Range indicates the valuation range for the period presented above.

Last Price (April 29, 2016): $0.71
Sources: IHS Global Insight, Thomson Reuters, BMO Capital Markets.

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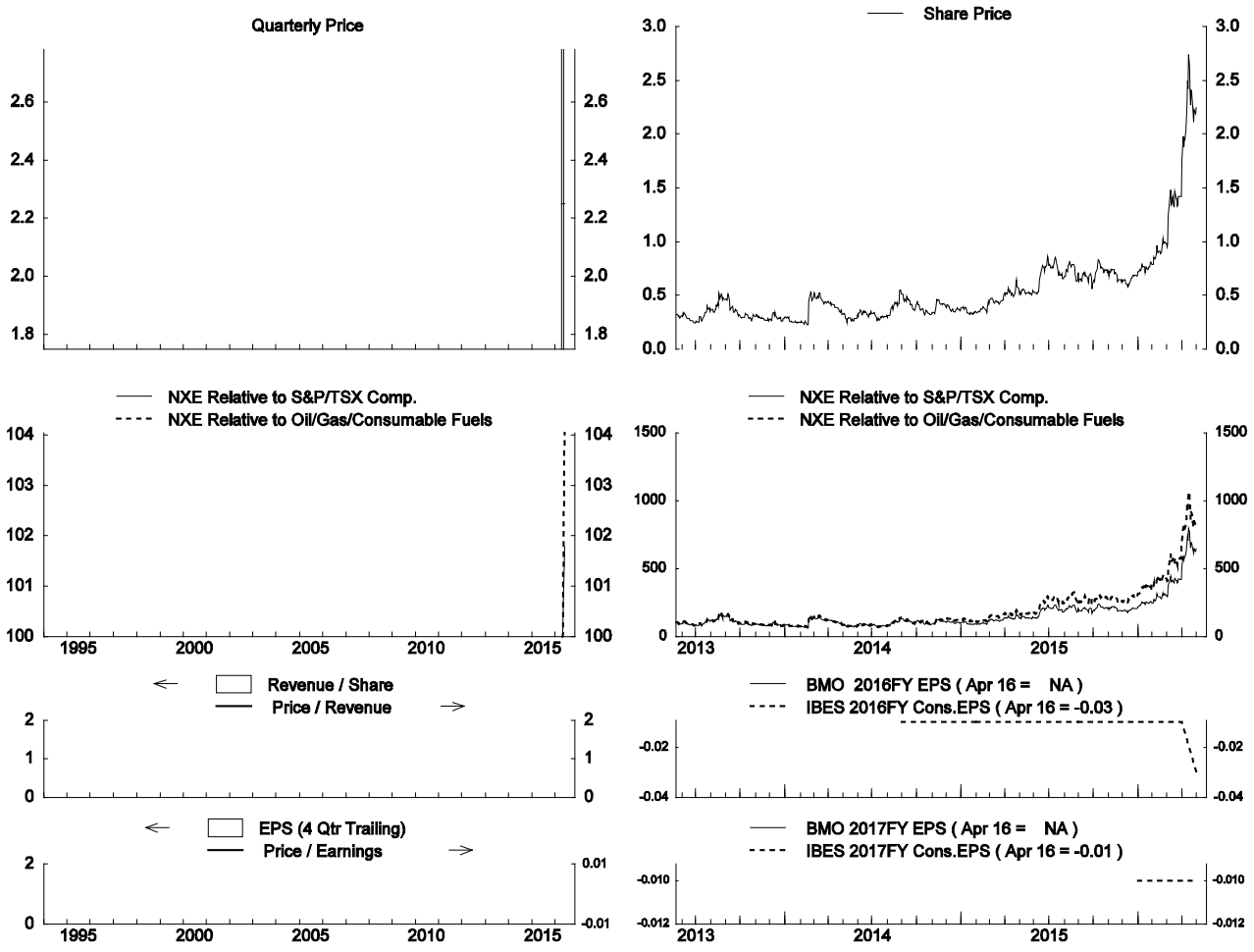
NexGen Energy (NXE)



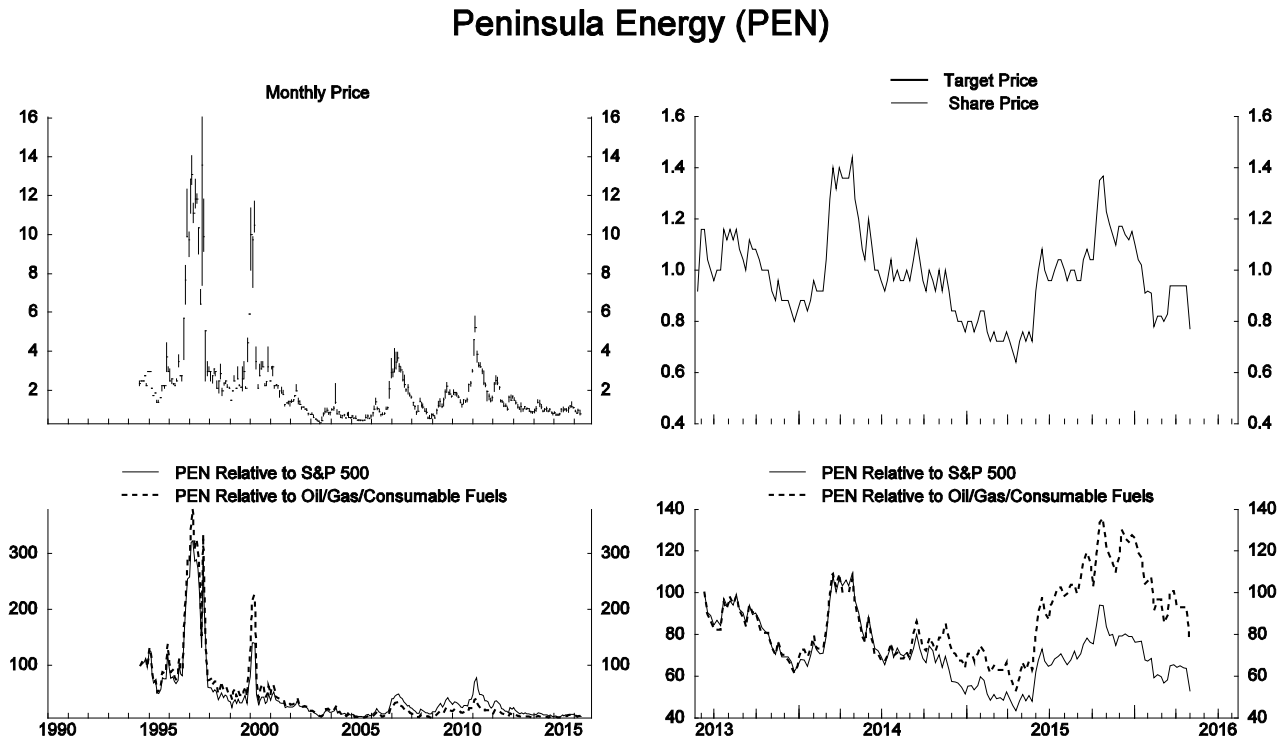
FYE (Dec.)	EPS $	P/E Hi - Lo	DPS $	Yield% Hi - Lo	Payout %	BV $	P/B Hi - Lo	ROE %
Range*:		na na		NC			>15 >15	
Current*	ND	na	0.00	0.0	na	ND	ND	na

NXE - Rating as of 12-Apr-16 = NR

* Current EPS is the 4 Quarter Trailing to Q1/2016.
* Valuation metrics are based on high and low for the fiscal year.
* Range indicates the valuation range for the period presented above.

Last Price (April 29, 2016): $2.25
Sources: IHS Global Insight, Thomson Reuters, BMO Capital Markets.

How to Bake a Yellow Cake
May 16, 2016



PEN - Rating as of 12-Apr-16 = NR

Last Weekly Data Point: April 29, 2016
Sources: Bloomberg, Thomson Reuters, BMO Capital Markets.

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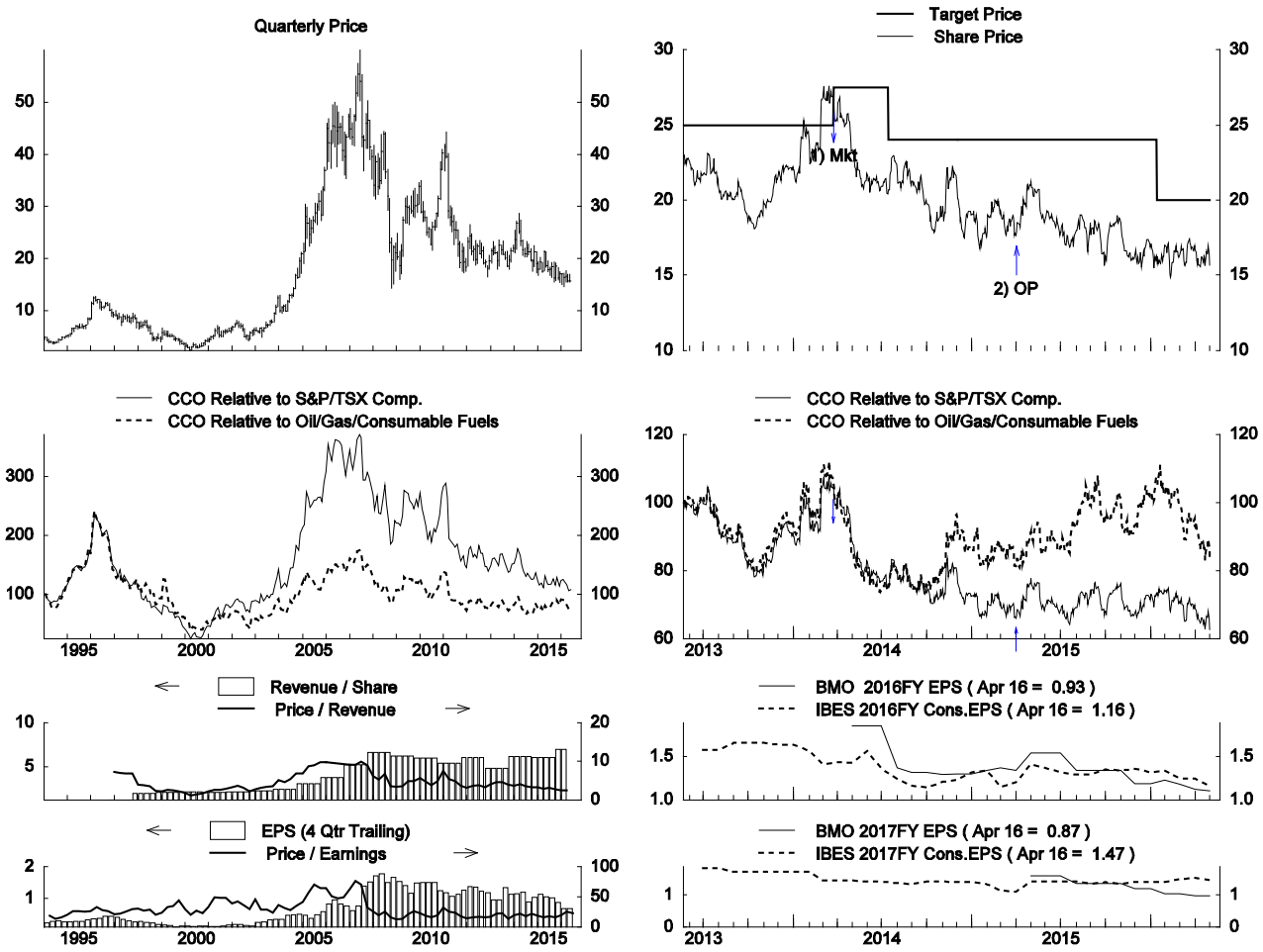
Cameco Corp (CCO)



FYE (Dec.)	EPS $	P/E Hi	P/E Lo	DPS $	Yield% Hi	Yield% Lo	Payout %	BV $	P/B Hi	P/B Lo	ROE %
1994	0.26	20.0	13.9	0.08	2.3	1.6	32	3.9	1.3	0.9	
1995	0.33	26.7	14.9	0.08	1.7	1.0	26	4.1	2.1	1.2	8
1996	0.43	29.3	18.7	0.08	1.0	0.7	19	4.4	2.9	1.8	10
1997	0.25	39.7	26.5	0.08	1.3	0.8	33	4.9	2.0	1.4	5
1998	0.19	45.2	20.9	0.08	2.1	1.0	43	5.0	1.7	0.8	4
1999	0.12	56.3	28.8	0.08	2.4	1.2	69	5.1	1.3	0.7	2
2000	0.14	34.9	17.9	0.08	3.4	1.8	62	4.8	1.0	0.5	3
2001	0.17	43.0	23.7	0.08	2.1	1.2	50	4.9	1.5	0.8	3
2002	0.14	58.6	30.3	0.08	2.0	1.0	60	4.9	1.6	0.9	3
2003	0.35	36.7	13.8	0.10	2.1	0.8	29	5.4	2.4	0.9	7
2004	0.51	41.8	18.9	0.10	1.0	0.5	20	6.2	3.4	1.5	9
2005	0.58	65.2	29.9	0.12	0.7	0.3	21	6.8	5.5	2.5	9
2006	0.77	64.9	42.8	0.16	0.5	0.3	21	7.8	6.4	4.2	11
2007	1.52	39.4	23.2	0.20	0.6	0.3	13	8.0	7.5	4.4	19
2008	1.72	25.8	8.3	0.24	1.7	0.5	14	9.6	4.6	1.5	20
2009	1.48	23.3	10.8	0.24	1.5	0.7	16	12.3	2.8	1.3	13
2010	1.25	32.8	17.3	0.28	1.3	0.7	22	13.2	3.1	1.6	10
2011	1.28	34.6	13.5	0.40	2.3	0.9	31	12.5	3.6	1.4	10
2012	1.19	22.2	13.8	0.40	2.4	1.5	34	12.5	2.1	1.3	10
2013	1.12	21.0	16.0	0.40	2.2	1.7	36	13.5	1.7	1.3	9
2014	1.04	27.5	16.6	0.40	2.3	1.4	38	13.8	2.1	1.3	8
2015	0.87	24.6	17.8	0.40	2.6	1.9	46	14.0	1.5	1.1	6
Range*:		65.2	8.3		3.4	0.3			7.5	0.5	
Current*	0.68	23.1		0.40	2.5		59	14.0	1.1		5
Growth(%):											
5 Year:	-10.4			0.0				1.2			
10 Year:	-1.9			9.6				7.6			
20 Year:	3.3			8.2				6.3			

CCO - Rating as of 21-May-13 = OP

	Date	Rating Change	Share Price
1	24-Mar-14	OP to Mkt	$26.72
2	1-Apr-15	Mkt to OP	$17.87

* Current EPS is the 4 Quarter Trailing to Q1/2016.
* Valuation metrics are based on high and low for the fiscal year.
* Range indicates the valuation range for the period presented above.

Last Price (April 29, 2016): $15.70
Sources: IHS Global Insight, Thomson Reuters, BMO Capital Markets.

How to Bake a Yellow Cake

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Analyst's Certification

I, Alexander Pearce, hereby certify that the views expressed in this report accurately reflect my personal views about the subject securities or issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

Analysts who prepared this report are compensated based upon (among other factors) the overall profitability of BMO Capital Markets and their affiliates, which includes the overall profitability of investment banking services. Compensation for research is based on effectiveness in generating new ideas and in communication of ideas to clients, performance of recommendations, accuracy of earnings estimates, and service to clients.

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Company Specific Disclosure

For Important Disclosures on the stocks discussed in this report, please go to http://researchglobal.bmocapitalmarkets.com/Public/Company_Disclosure_Public.aspx

Company specific disclosures for Fission Uranium

Disclosure 16: A BMO Nesbitt Burns Inc. research analyst has extensively viewed the material operations of this issuer.

Rook the Atha-Casbah! Initiating With a Market Perform (Speculative) **RatingInvestment Thesis:** We are initiating coverage of NexGen Energy with a Market Perform (Speculative) rating and no target price. NexGen is a uranium explorer listed on the TSX-V with the ticker "NXE". Its main project, Rook 1, is located in the Athabasca Basin in Saskatchewan. NexGen has quickly delineated one of the largest and highest-grade resources in the basin at Rook 1, recently declaring maiden inferred resources of 202Mlb of U3O8 at a grade of 2.63%. NexGen is undertaking an intensive drilling campaign and there is strong potential for the resource to grow, in our view. There is no economic study to date, however, we estimate that the resource could conceptually support a ~10Mlbpa operation for ~12 years. Cash costs are likely to be low (~US$28/lb AISC) but capex is likely to be high (~C$750M). In our view, NexGen could be attractive for M&A by an established or new entrant looking for a foothold in the basin. For more detail, please refer to our report "How to Bake a Yellow Cake".

Forecast & Valuation: We estimate NexGen to have an NPV of C$2.09/share, including a mine level DCF, an EV/lb-driven resource upside estimate, and after assumed future equity dilution. As an exploration company, near-term earnings are immaterial. At the end of Q1/16, the company had C$33M in treasury, which is sufficient to continue its drilling plans out mid-2017. Near-term catalysts include an updated resource statement and potential PEA by end-2016, with a PFS by end-2017.

Recommendation: We rate NexGen Market Perform (Speculative) with no target price. NexGen offers exposure to a world class, high-grade deposit with strong potential for expansion. However, due to a greater confidence its resource base, completed PEA, stronger balance sheet, and relatively better valuation multiples, we prefer Fission as an exploration play at this stage (NexGen trades at an EV/lb of resources of US$2.61/lb and P/NPV of 1.1x versus Fission at US$1.73/lb and 0.9x, respectively). Having said that, we would look to buy NexGen on a pull back toward comparable valuation multiples.

Disclosure 18: A redacted draft of this report was previously shown to the issuer (for fact checking purposes) and changes were made to the report before publication.

Methodology and Risks to Our Price Target

Methodology: We do not assign target prices to early stage exploration and development companies that have not completed a feasibility study, are unfinanced or unpermitted.

Risks: Fission Uranium is exposed to global demand for its key commodity uranium and is exposed to foreign exchange rate movements and country risk within Canada. Additionally, the development of PLS depends on receiving financing and permitting.

Company specific disclosures for NexGen Energy

Disclosure 1 - BMO Capital Markets has undertaken an underwriting liability with respect to this issuer within the past 12 months.

Disclosure 2 - BMO Capital Markets has provided investment banking services with respect to this issuer within the past 12 months.

Disclosure 3 - BMO Capital Markets has managed or co-managed a public offering of securities with respect to this issuer within the past 12 months.

Disclosure 4 - BMO Capital Markets or an affiliate has received compensation for investment banking services from this issuer within the past 12 months.

Disclosure 6A: This issuer is a client (or was a client) of BMO Nesbitt Burns Inc., BMO Capital Markets Corp., BMO CM Ltd. or an affiliate within the past 12 months: Investment Banking Services.

Disclosure 18: A redacted draft of this report was previously shown to the issuer (for fact checking purposes) and changes were made to the report before publication.

Methodology and Risks to Our Price Target

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Methodology: We do not assign target prices to early stage exploration and development companies that have not completed a feasibility study, are unfinanced or unpermitted.

Risks: NexGen is exposed to global demand for its key commodity uranium and is exposed to foreign exchange rate movements and country risk within Canada. Additionally, the development of Rook 1 depends on receiving financing and permitting.

Company specific disclosures for Peninsula Energy

Disclosure 16: A BMO Nesbitt Burns Inc. research analyst has extensively viewed the material operations of this issuer.

Disclosure 18: A redacted draft of this report was previously shown to the issuer (for fact checking purposes) and changes were made to the report before publication.

Methodology and Risks to Our Price Target

Methodology: PEN's target price reflects a 75/25 blend of P/NPV (long term – 0.9x) and 2017E EV/EBITDA (short term – 0 9x) multiples.

Risks: Peninsula is exposed to global demand for its key commodity uranium and is exposed to foreign exchange rate movements and country risk within the US and South Africa.

Company Specific Disclosure for Cameco

Disclosure 5: BMO Capital Markets or an affiliate received compensation for products or services other than investment banking services within the past 12 months.

Disclosure 6: This issuer is a client (or was a client) of BMO NB, BMO Capital Markets Corp., BMO CM Ltd. or an affiliate within the past 12 months: Non-Securities Related Services.

Disclosure 8: BMO Capital Markets or an affiliate has a financial interest in 1% or more of any class of the equity securities of this issuer.

Disclosure 9: BMO Capital Markets makes a market in this security.

Methodology and Risks to Price Target/Valuation

Methodology: Cameco's target price is 1.4x its estimated 10% NPV.

Risks: Ongoing transfer pricing disputes remains a significant risks to Cameco's outlook.

Distribution of Ratings (March 31, 2016)

Rating Category	BMO Rating	BMOCM US Universe*	BMOCM US IB Clients**	BMOCM US IB Clients***	BMOCM Universe****	BMOCM IB Clients*****	Starmine Universe
Buy	Outperform	43.3%	21.6%	63.5%	44.4%	60.9%	54.7%
Hold	Market Perform	53.1%	9.0%	32.4%	51.7%	35.6%	39.8%
Sell	Underperform	3.6%	16.7%	4.1%	3.9%	3.4%	5.5%

* Reflects rating distribution of all companies covered by BMO Capital Markets Corp. equity research analysts.

** Reflects rating distribution of all companies from which BMO Capital Markets Corp. has received compensation for Investment Banking services as percentage within ratings category.

*** Reflects rating distribution of all companies from which BMO Capital Markets Corp. has received compensation for Investment Banking services as percentage of Investment Banking clients.

**** Reflects rating distribution of all companies covered by BMO Capital Markets equity research analysts.

***** Reflects rating distribution of all companies from which BMO Capital Markets has received compensation for Investment Banking services as percentage of Investment Banking clients.

Ratings and Sector Key (as of April 5, 2013):
We use the following ratings system definitions:

OP = Outperform - Forecast to outperform the analyst's coverage universe on a total return basis;
Mkt = Market Perform - Forecast to perform roughly in line with the analyst's coverage universe on a total return basis;
Und = Underperform - Forecast to underperform the analyst's coverage universe on a total return basis;
(S) = Speculative investment;
NR = No rating at this time; and
R = Restricted – Dissemination of research is currently restricted.
BMO Capital Markets' seven Top 15 lists guide investors to our best ideas according to different objectives (CDN Large Cap, CDN Small Cap, US Large Cap, US Small Cap, Income, CDN Quant, and US Quant have replaced the Top Pick rating).

Prior BMO Capital Markets Rating System (January 4, 2010 – April 4, 2013)
http://researchglobal.bmocapitalmarkets.com/documents/2013/prior_rating_system.pdf

Other Important Disclosures
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Dissemination of Research

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