Canaccord Genuity Capital Markets

Initiation of Coverage

Peninsula Energy Limited

Specialty Minerals and Metals

Australian Equity Research

17 December 2020

Rating	Price Target
SPECULATIVE BUY	**A$0.15**
PEN-ASX	**Price A$0.11**

Market Data

52-Week Range (A$) :	0.06 - 0.19
Avg Daily Vol (M) :	6.3
Market Cap (A$M) :	101.4
Shares Out. (M) :	882.1
Dividend /Shr (US$) :	0.00
Dividend Yield (%) :	0.0
Enterprise Value (A$M) :	92.6

FYE Jun	2020A	2021E	2022E	2023E
EBITDA (US$M)	(1.9)	(1.9)	(2.0)	(2.0)
Net Debt (Cash) (US$M)	(11)	(9)	(5)	4
Net Income (US$M)	(7.7)	(1.7)	(1.6)	(1.5)
Sales (US$M)	6.1	6.0	6.0	6.0

Source: FactSet

Priced intraday 16 December 2020

Peninsula Energy Limited is a uranium focused development company which is seeking to restart the Lance Uranium Projects in the Powder River Basin in Wyoming, US

Canaccord Genuity (Australia) Limited has received a fee as Lead Manager to the Peninsular Energy Limited Capital Raising announced 28 May 2020.

James Bullen | Analyst | Canaccord Genuity (Australia) Ltd. | jbullen@cgf.com | +61.2.9263.2728
James Farr | Associate Analyst | Canaccord Genuity (Australia) Ltd. | jfarr@cgf.com | +61.2.9263.2714

US uranium leverage

Peninsula Energy (PEN) is focused on transitioning to a low pH operation at its uranium Lance Projects located in Wyoming, US which currently has a Mineral Resource totalling 51Mt at 479ppm U_3O_8 for 53.6Mlb U_3O_8. PEN is planning on increasing its production via a three stage development that will ultimately increase production to 3Mlb/year; it is currently awaiting results from its demonstration program and improvement in U_3O_8 prices prior to sanctioning conversion to low pH operations at Lance. We initiate coverage of PEN with a SPECULATIVE BUY rating and $0.15/share risked price target.

Low capex, short lead time restart potential

While not at the bottom of the cost curve, PEN's feasibility study highlighted a robust development assuming a recovery in uranium prices. Key highlights included:

- Capex of US$5.3mn in Stage 1, US$40.0mn in Stage 2 and US$73.4mn in Stage 3.
- Stage 1 AISC US$40.6/lb, LOM AISC US$31.8/lb.
- NPV8 of US$156.5mn at US$49/lb.
- 17-year life of mine (heavily dependent on conversion of inferred resource).

We model a US$47/lb breakeven for Stage 1 predicated on a 10% cost of capital.

No longer just Biden our time

In August the US Democrats endorsed nuclear energy for the first time in 48 years as part of its 'technology neutral' approach to decarbonising the power sector. This position appears to have been further strengthened by the US Senate Committee on Environment and Public Works passing a bill which approves the establishment of a national uranium reserve which could benefit US based supply projects. While this reserve would only add 3-4Mlb of incremental annual U_3O_8 demand (global demand is ~170Mlb) the fact that it received bipartisan support is likely, in our view, to encourage US utilities to feel more confident regarding political support and thus start contracting material volumes (inventory levels have dwindled to ~2.5 years coverage).

Positioning for a uranium recovery

After almost a decade of underinvestment, frailties in U_3O_8 supply are becoming evident, a situation which has been accelerated by COVID-19-related shutdowns (we forecast a 28Mlb deficit in 2020), just as the demand outlook for nuclear improves. All up we expect U_3O_8 demand to grow to 252Mlb (+45%) by 2035 on the back of tailwinds from three key megatrends:

- ***Electrification of everything:*** Major forecasters expect electricity demand to grow an incremental 55% by 2035 as electric vehicle penetration (CGe 14% by 2030) shapes as an emerging influence.
- ***Decarbonisation:*** With many countries below Paris-ratified targets, we expect there to be a renewal of interest in nuclear as a viable source of emissions-free energy. We note that many nations are now targeting COVID-19 recovery infrastructure funds that include carbon-free sources of energy.
- ***Non-OECD demand growth:*** We expect China (currently at 4% nuclear) to have a significant nuclear reactor build-out to meet its 2030 clean energy target of 20%.

Valuation and balance sheet

We have valued PEN using a SOTP methodology, deriving a price target of $0.15/share which has been risked for the staged development of Lance (75% Stage 1, 50% Stages 2 and 3). We have applied a discounted cash flow (DCF) valuation for Lance, the contract book and the company's corporate costs. Nominal value has been applied to exploration potential. We utilise a LT U_3O_8 price of US$50/lb (inflating at 1% p.a.). The company has US$12.7mn in net cash.

Figure 1: Financial summary

FY Jun 30	2019	2020	2021E	2022E	2023E
PROFIT & LOSS (US$mn)					
Revenue	6.6	6.1	6.0	6.0	6.0
Operational Costs	-9.5	-1.4	0.0	0.0	0.0
Royalty	0.0	0.0	0.0	0.0	0.0
Other COGS	-3.4	-4.5	-4.5	-4.5	-4.5
Other Income	0.2	0.6	0.0	0.0	0.0
Business Devt & Expl	0.0	0.0	-2.0	-2.0	-2.0
Corporate & Other	-29.3	-2.7	-1.4	-1.5	-1.5
EBITDA	**-35.5**	**-1.9**	**-1.9**	**-2.0**	**-2.0**
DD&A	-1.9	0.0	0.0	0.0	0.0
EBIT	**-37.4**	**-1.9**	**-1.9**	**-2.0**	**-2.0**
Net Financing	-3.3	-4.2	0.2	0.1	0.0
NPBT	**-40.7**	**-6.2**	**-1.7**	**-1.9**	**-2.1**
Tax	-0.3	-1.5	0.0	0.3	0.6
Reported NPAT	**-40.9**	**-7.7**	**-1.7**	**-1.6**	**-1.5**
Non-Controlling Interest	0.0	0.0	0.0	0.0	0.0
Sig Items, Discon Ops & Mins	0.0	0.0	0.0	0.0	0.0
Normalised NPAT	**-40.9**	**-7.7**	**-1.7**	**-1.6**	**-1.5**
Effective income tax rate	-1%	-25%	0%	15%	30%
CASHFLOW (US$mn)					
Cash receipts	8.2	7.5	6.0	6.0	6.0
Payments to suppliers	-14.9	-13.9	-7.9	-8.0	-8.0
Interest received	0.0	0.1	0.2	0.2	0.1
Interest paid	-0.2	-2.0	0.2	0.1	0.0
Other	0.0	0.3	1.3	0.0	0.0
Operating Cashflow	**-6.9**	**-8.0**	**-0.3**	**-1.7**	**-2.0**
Payments for PP&E	0.0	0.0	0.0	0.0	0.0
Payments for Development	-1.1	-0.2	-2.2	-2.2	-6.9
Payments for Exploration	0.0	0.0	0.0	0.0	0.0
Asset Sales / (Purchases)	0.0	0.0	0.0	0.0	0.0
Other	2.8	0.2	0.0	0.0	0.0
Investing Cashflow	**1.7**	**-0.1**	**-2.2**	**-2.2**	**-6.9**
Share Issuance / (Buyback)	0.0	33.5	0.0	0.0	0.0
Drawdown / (Repayment) of Debt	-0.8	-16.9	0.0	0.0	8.9
Dividends	0.0	0.0	0.0	0.0	0.0
Other	-0.6	-1.8	0.0	0.0	0.0
Financing Cashflow	**-1.5**	**14.7**	**0.0**	**0.0**	**8.9**
Surplus / Defecit	-6.7	6.7	-2.5	-3.9	0.0
BALANCE SHEET (US$mn)					
Current Assets	10.3	16.3	12.3	8.4	8.4
Non-Current Assets	60.1	66.0	68.1	70.3	77.2
Total Assets	**70.3**	**82.3**	**80.5**	**78.8**	**85.7**
Current Liabilities	19.1	2.5	2.5	2.0	2.4
Non-Current Liabilities	10.6	12.9	12.9	13.4	21.9
Total Liabilities	**29.6**	**15.4**	**15.4**	**15.4**	**24.3**
Net Assets	**40.7**	**66.9**	**65.1**	**63.4**	**61.4**
Total Cash	5.3	11.9	9.5	5.6	5.6
Total Debt	16.0	0.6	0.6	0.6	9.5
Net Debt	**10.8**	**-11.3**	**-8.9**	**-5.0**	**3.9**

	2019	2020	2021E	2022E	2023E
KEY ASSUMPTIONS					
Spot U3O8 (US$/lb)	26.5	32.0	38.3	40.2	42.7
A$/US$	0.68	0.69	0.70	0.70	0.70
REALISED PRICES					
U3O8 (US$/lb)	0.0	0.0	0.0	0.0	0.0
PRODUCTION FORECASTS					
U3O8 (klbs)	0.0	0.0	0.0	0.0	0.0
Total (klbs)	**0.0**	**0.0**	0.0	**0.0**	**0.0**
RESOURCES					
Lance Measured (Mlbs)		3.9			
Lance Indicated (Mlbs)		11.9			
Lance Inferred (Mlbs)		38.1			
Total (Mlbs)		**53.9**			
PER SHARE DATA					
Average Shares (Diluted, M)	41	328	784	882	882
EOP Shares (Diluted, mn)	247	882	882	882	882
Normalised EPS (US¢/sh)	-99.4	-2.3	-0.2	-0.2	-0.2
CF PS (US¢/sh)	-16.8	-2.4	0.0	-0.2	-0.2
FCF PS (US¢/sh)	-12.7	-2.5	-0.3	-0.4	-1.0
RATIOS					
Dividend Yield	0%	0%	0%	0%	0%
PE	n/a	n/a	n/a	n/a	n/a
PCF (Debt Adj)	n/a	n/a	n/a	n/a	n/a
EV / EBITDA	n/a	n/a	n/a	n/a	n/a
Gearing (ND / ND + E)	21%	n/a	n/a	n/a	6%
Net Debt / EBITDA	-0.3x	5.9x	n/a	n/a	n/a
Interest Cover	-11.3x	-0.5x	0.0x	0x	-43.1x
ROE (Reported Profit / Av Equity)	n/a	n/a	n/a	n/a	n/a
ROIC	n/a	n/a	n/a	n/a	n/a
ROACE	n/a	n/a	n/a	n/a	n/a
FCF Yield	-111%	-21%	-3%	-4%	-9%
DIVIDEND AND FRANKING					
Dividend (US¢/sh)	0	0	0	0	0
Payout ratio	0%	0%	0%	0%	0%
Franking Balance (US$mn)	0	0	0	0	0

VALUATION (A$)	**Risked**
PRODUCTION ASSETS	0.02
DEVELOPMENT ASSETS	0.10
EXPLORATION	0.01
EV adjustments	0.02
TOTAL	**0.15**
PREMIUM/(DISCOUNT)	0.0
PRICE TARGET	**0.15**

Source: Company reports, Canaccord Genuity estimates

Contents

US-based uranium leverage

Peninsula Energy (PEN) has a 100% interest in the uranium Lance Projects in Wyoming, US which is in transition from an alkaline in-situ recovery (ISR) to a low pH ISR operation. With a feasibility study (FS) completed in September 2018 (the 2018 FS) and a field demonstration having commenced in August 2020 the company is reasonably well positioned to take advantage of an expected increase in U_3O_8 market activity.

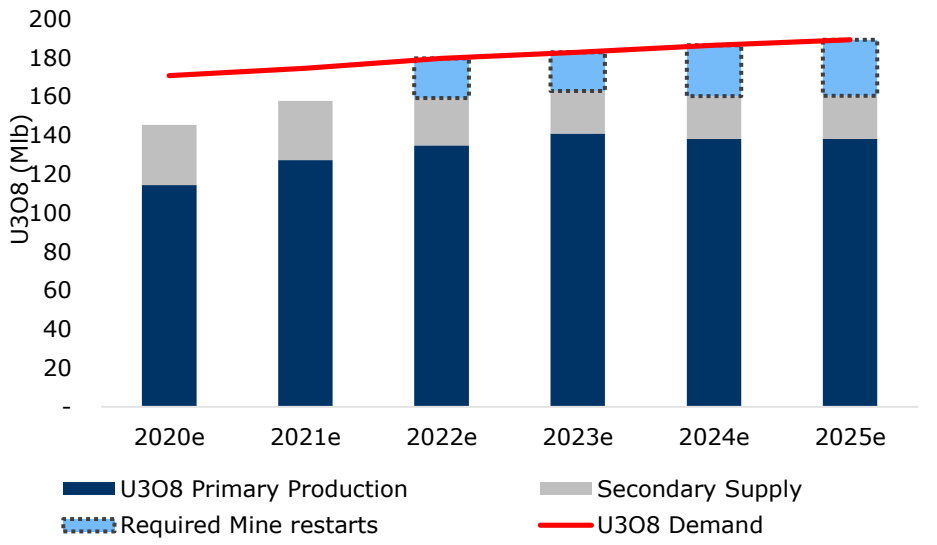
To be clear, PEN does need a 'rising-tide' in terms of uranium prices to monetise Lance (we model US$47/lb break-even for Stage 1 versus current spot of US$30/lb) but we note that: 1) this project offers a staged production build development which allows for performance targets to be achieved thereby giving increasing confidence to the low pH operation before committing to subsequent stages; and 2) the potential tailwind of the establishment of a US strategic uranium reserve. PEN expects Stage 1 of the proposed development expected to cost a relatively modest US$5.3mn.

A year of supply disruptions

2020 has been an unprecedented year for a number of sectors and this has definitely been the case for uranium. In particular, the pandemic has highlighted a number of frailties in the U_3O_8 supply chain with COVID related shutdowns at Cigar Lake and in Kazakhstan leading to a ~28Mlb deficit and accelerated inventory drawdowns.

After close to a decade of underinvestment, we believe the uranium market is primed for a renaissance, and higher prices will be necessary to stimulate new supply.

Figure 2: U_3O_8 supply and demand (Mlb)



Source: Canaccord Genuity estimates

Fuel buyers likely to make a material return to contract market in 2021

Fuel buyers have been under-purchasing since 2014, and consistent with the recent EIA report, US inventories are down 30% over the last 12 months and now represent ~2.5 years forward coverage. As a result, contracts and deliveries into utilities fall precipitously starting in 2021. With increasingly uncovered demand requirements, a decline in primary and secondary supply, and an accelerated drawdown of excess inventories, we anticipate rising concern over inventory levels; this is evident in increased near-term market activity, with 550 sales for ~90Mlb U_3O_8 transacted YTD in the spot market.

Additionally, with certainty now around the Russian Suspension agreement and bi-partisan support in the US for nuclear energy for the first time in 48 years, we believe the stage is set for big 2021 in the uranium market.

Valuation and balance sheet

We have valued PEN using a sum-of-the-parts methodology, deriving a price target of $0.15/share which has been risked for the staged development of Lance. We have applied a discounted cash flow (DCF) valuation for Lance, the contract book and the company's corporate costs. Nominal value has been applied to exploration potential.

Figure 3: Sum-of-the-parts valuation for PEN

Asset	Equity %	Net Capacity klb	NPV A$mn	Risking %	Risked NPV A$mn	Risked NPV A$ps
Existing contracts pre Lance start-up			18	100%	18.0	0.02
PRODUCTION ASSETS		**0.00**	**18.00**	**100%**	**18.0**	**0.02**
Lance Stage 1	100%	Variable	74.8	75%	56.1	0.06
Lance Stage 2 & 3	100%	Variable	59.7	50%	29.9	0.03
DEVELOPMENT ASSETS		**0**			**86.0**	**0.10**
RESEOURCES		**0**			**0.0**	**0.00**
Other exploration					10.0	0.01
EXPLORATION					**10.0**	**0.01**
Net Debt, Balance sheet adj. & corp. overhead					**15.3**	**0.02**
Premium / (Discount)						0.00
Price Target						**0.15**

Source: Canaccord Genuity estimates

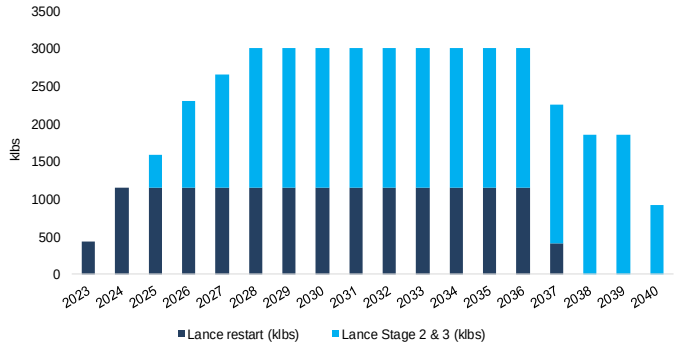
Our valuation methodology for each segment is described in further detail below.

Lance

We have used a discount rate of 10% and a risk weighting of 75% for stage 1 and 50% for Stage 2 and 3 to derive our DCF valuation of $86m, or $0.10/share. The risk weighting reflects the uncertainties around U_3O_8 pricing, timing, funding and equity capital requirements. As the project moves forward it will progressively be de-risked and our assumptions revised accordingly.

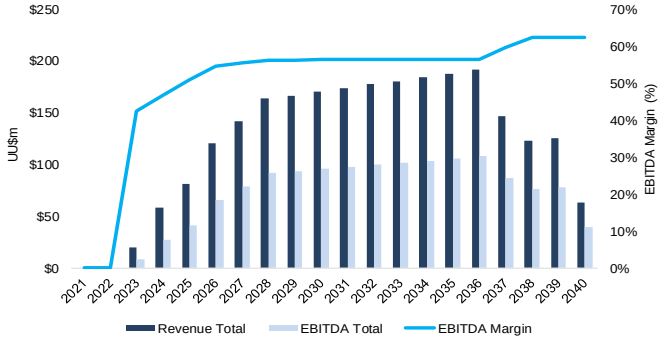
Figure 4 and Figure 5 below illustrate our assumed production profile at Lance, along with modelled revenue and EBITDA profile out to 2040 (17-year life used for valuation).

Figure 4: Lance production profile



Source: Canaccord Genuity estimates

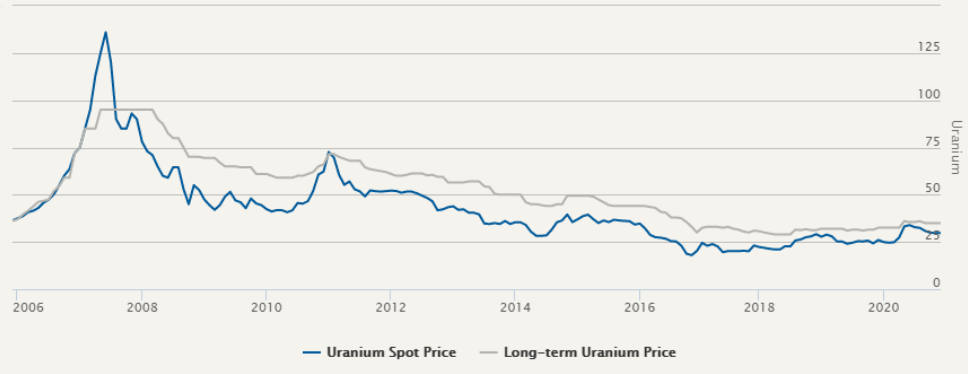
Figure 5: Lance revenue and EBITDA profile as modelled



Source: Canaccord Genuity estimates

In deriving our valuation, we utilise a LT U_3O_8 of US$50 (inflating @ 1.0% p.a.). As discussed previously, we see a robust outlook for uranium pricing underpinned by a steady demand growth trajectory. We remain of the view that our price outlook is reasonable but note that previous uranium cycles have seen prices well in excess of this (see Figure 6).

Figure 6: Historic U_3O_8 prices (US$/lb)



Source: Cameco

Figure 7: Key model input assumptions

	DFS	CG forecast
Mine life once ramped up	17 years	17 years
Low PH transition capex	US$5.3m	US$5.3m
Stage 2 & 3 expansion capex	US$113.4	US$114.0
Wellfield replacement and sustaining capex	US$342.4	US$343.0
All-in sustaining cash cost (LOM)	US$31.7/lb	US$32.0/lb
First production (expansion)	2024	2025
LOM recovery	62%	62%
Uranium price	US$49/lb	US$50/lb

Source: Company reports, Canaccord Genuity estimates

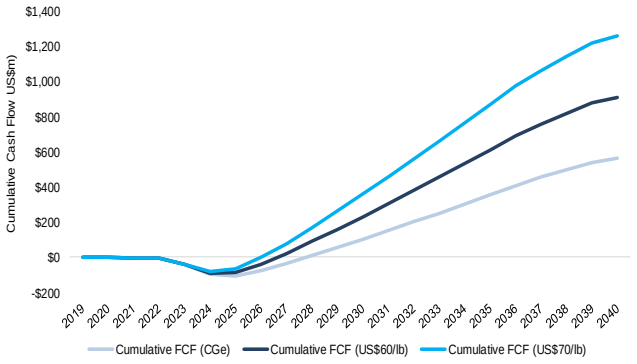
Figure 8: Sensitivity to U_3O_8 price and FX – grey = CGe LT deck

		Average U3O8 Prices					
	$/ps	US$40/lb	US$45/lb	US$50/lb	US$55/lb	US$60/lb	US$65/lb
AUD/USD	0.60	0.06	0.11	0.16	0.21	0.27	0.32
	0.65	0.05	0.11	0.15	0.20	0.25	0.30
	0.70	0.05	0.10	0.15	0.19	0.24	0.28
	0.75	0.05	0.10	0.14	0.18	0.22	0.26
	0.80	0.05	0.10	0.13	0.17	0.21	0.25
	0.85	0.05	0.09	0.13	0.17	0.20	0.24

Source: Canaccord Genuity estimates

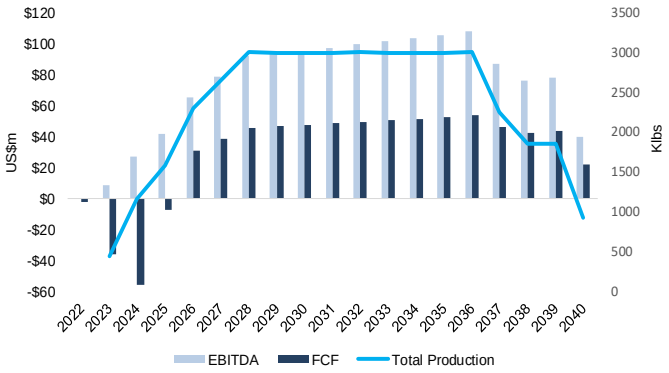
As noted previously, our modelled assumptions are essentially an extension of the 2018 FS, and underpin our forecast cash flows for the project. Our post-tax project cash flow estimates out to 2040 are shown in Figure 10. After a restart and construction period starting in 2022, we forecast sales to commence in mid-2023. We forecast free cash flows to become positive in 2026, ramping up to approximately ~US$50m p.a. by 2028 and maintained through the remainder of the ~17-year project.

Figure 9: CGe PEN cumulative cash flow



Source: Canaccord Genuity estimates

Figure 10: CGe free cash projections



Source: Canaccord Genuity estimates

Strong balance sheet

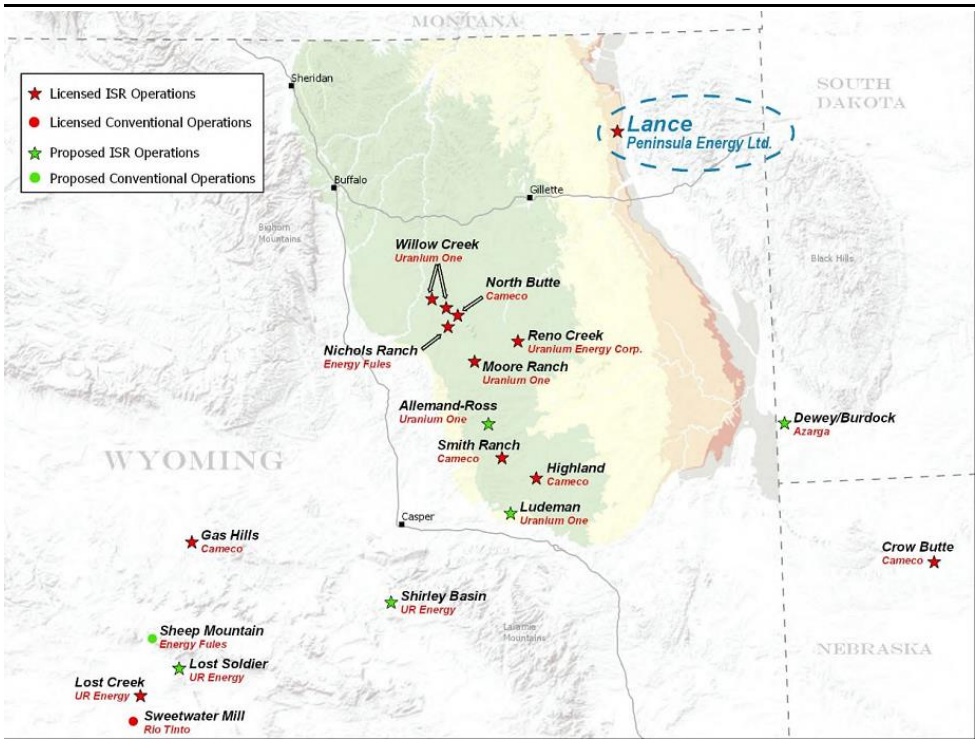
Having recently completed a fully underwritten A$40m share entitlement offer in June, PEN is term debt free after repaying the balance of a convertible note agreement executed in 2016. PEN now has sufficient cash (US$12.7m at the September quarter) to meet all ongoing low pH ISR optimisation activities into CY22, in our view.

Lance Projects overview

The wholly-owned Lance Uranium Projects in Wyoming, US is PEN's flagship development. It includes the Ross Central Processing Plant (CPP) within the Ross Permit Area, which is one of the six uranium ISR plants in the US that are either currently producing or have recently been producing.

In our view there are two key advantages to Peninsula's project being located in Wyoming, US: 1) The Powder River Basin in Wyoming is in an established uranium and mining jurisdiction (uranium mining for ~70 years and coal mining for ~150 years); and 2) The company has direct exposure to the US Government uranium purchase programme as recommended by the US Nuclear Fuel Working Group.

Figure 12: Lance Uranium Projects location



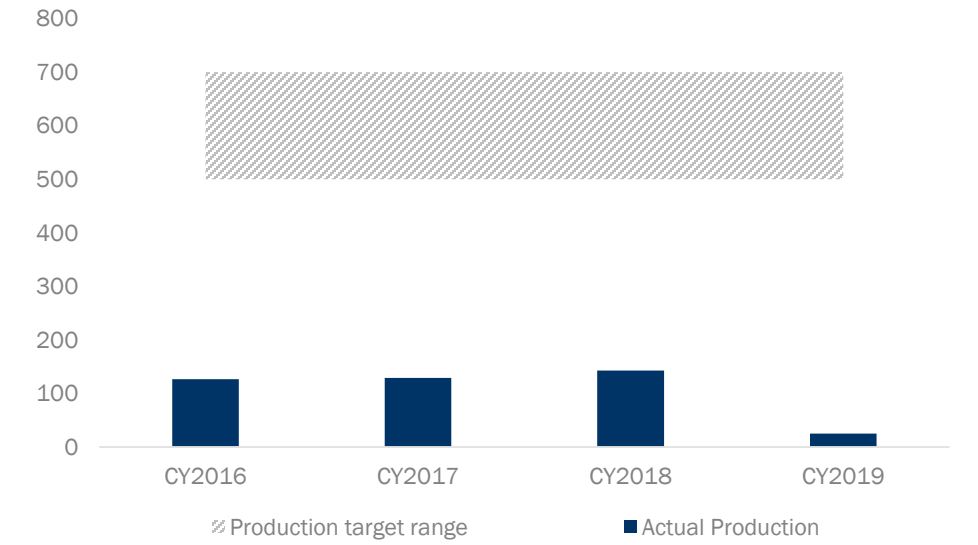
Source: Company reports

Project history

PEN commenced ISR operations at Lance in December 2015 using an alkaline-based lixiviant. To minimise initial capex, the CPP was constructed with only ion exchange facilities, with PEN outsourcing the elution, precipitation, drying and packaging processes to a nearby CPP that had available capacity. Outsourcing will continue until PEN elects to spend the capex to bring these functions in-house.

In short, production performance using the alkaline-based lixiviant was disappointing, with the project never getting close to its Stage 1 annual production target of 500-700klb.

Figure 13: Lance actual production performance versus target (U_3O_8 klb)



Source: Company reports, Canaccord Genuity estimates

Low pH transition

In 2017, PEN announced the outcomes of an initial research initiative that investigated the reasons alkaline-based production was proving to be less effective than what was anticipated in the pre-construction feasibility studies undertaken between 2011 and 2014. The outcome of the research initiative was a recommendation to change the project from an alkaline-based ISR project to an ISR project using a low pH (mild sulphuric acid) lixiviant.

Since late 2017, PEN has been steadily progressing the additional technical testwork and permit/license amendments required to enable the use of low pH lixiviants at Lance. This included laboratory tests using a low pH extraction solution that were conducted on Lance core samples. The test protocols were designed to simulate the successful low pH ISR processes utilised in Australia and Kazakhstan. Initial agitation leach tests with low pH solutions at Lance produced positive results, which led to a programme of column leach tests being conducted in 2018 and 2019. Column leach tests require a significantly longer time duration and are more costly than agitated leach tests, however, the design of the column test is regarded as more representative of the in-situ environment.

Overall, the laboratory testing results indicated that a low pH process would significantly benefit the Lance resource recovery rates, while also potentially improve the overall project cost profile. The 2018 FS which supported this conclusion.

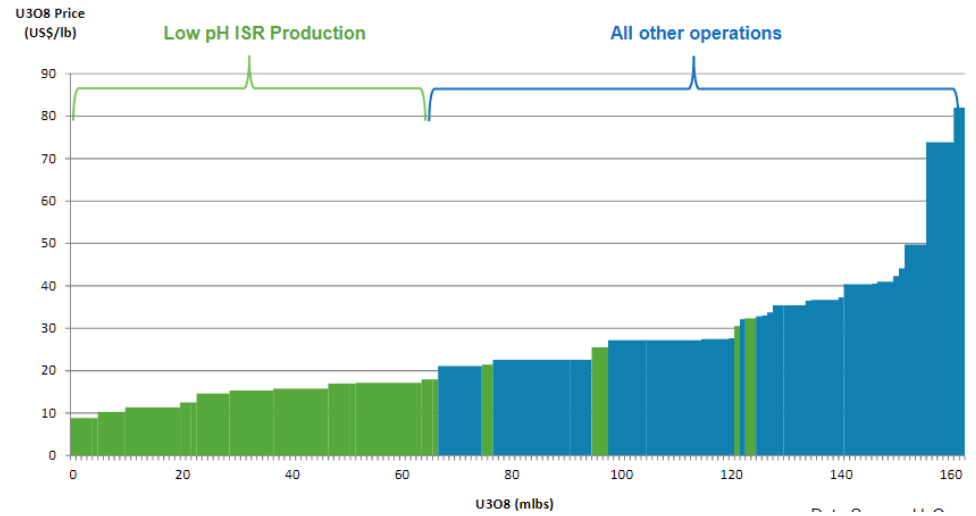
The outcomes of this FS showed that at a production rate of approximately 1.15Mlb U_3O_8 p.a., all-in sustaining cash costs would be US$41/lb U_3O_8, decreasing to US$31/lb U_3O_8 at a production rate of 2.0Mlb U_3O_8 p.a.

The laboratory work was further validated in CY19 by the positive results of a field leach trial (2019 FLT) conducted in an already mined area of Lance. The 2019 FLT focused on the impact of the acidification and neutralisation stages on mining and aquifer restoration, rather than technical optimisation.

As a consequence of this work in July 2019 PEN idled its alkaline-based production in order to focus on a low pH transition and ongoing low pH field demonstrations. In mid-2019, Lance became the only uranium ISR project in the United States authorised to use low pH lixiviant for ISR operations. Low pH ISR operation are globally recognised as the most cost competitive form or uranium mining (see Figure 14).

A low pH field demonstration commenced during the SepQ'20 and will operate over the next 12-18 months in an unmined area of Mine Unit 1 (MU1A). **We expect a material update from the company in early CY21.**

Figure 14: First quartile operations are low pH ISR



Source: Company reports

Approvals

The two overarching regulatory approvals governing the development and operation of a uranium ISR mine in Wyoming are the Permit to Mine (PTM) and the Source Materials License (SML). Both are administered by the Wyoming Department of Environmental Quality (WDEQ) with the Land Quality Division administering the PTM and the Uranium Recovery Program (URP) administering the SML. While a range of other permits and licences are required, the PTM and SML set forth the majority of the regulations and operating conditions for Lance.

In April 2020, the WDEQ notified PEN that it had approved the Initial Restoration Report **bringing an end to the process of obtaining approvals to utilise the low pH method through the entirety of the Ross Permit Area at Lance**, subject only to meeting two pre-operational licence conditions (revisions to the radiation protection program and updates to the surety bond).

While the company has successfully completed the amendments to its PTM and SML to allow commercial scale low pH operations throughout the entirety of Ross Permit Area, it believes ongoing optimisation and de-risking activities may identify proposed operational enhancements that could require additional amendments to the PTM and SML.

Geology

The Lance uranium deposits are characterised as roll fronts, which form in the redox boundary at the sandstone/groundwater interface. Multiple mineralised horizons striking north-south have been identified within the complex system, of which 22 roll fronts have been mapped over 312 linear km.

The average depth of the mineralised sandstone units are approximately 160m, with the depth gradually increasing towards the west due to dipping strata and increasing surface elevation.

Uranium mineralisation is generally in the form of uraninite, coffinite or pitchblende. The deposits also contain vanadium, minor molybdenum and selenium.

Reserves/Resources

Since acquiring the project in 2007, PEN has progressively increased resources at Lance, from 15Mlb of contained U_3O_8 in 2010 to the latest estimate (as at 31 December 2018) of 53.6Mlb of contained U_3O_8 (71% inferred).

Figure 15: Lance Resource statement

Classification	Tons (million)	Grade (ppm U_3O_8)	U_3O_8 (Mlb)
Measured	3.4	487.0	3.7
Indicated	11.1	495.0	12.1
Inferred	36.2	474.0	37.8
Total	50.7	479.0	53.6

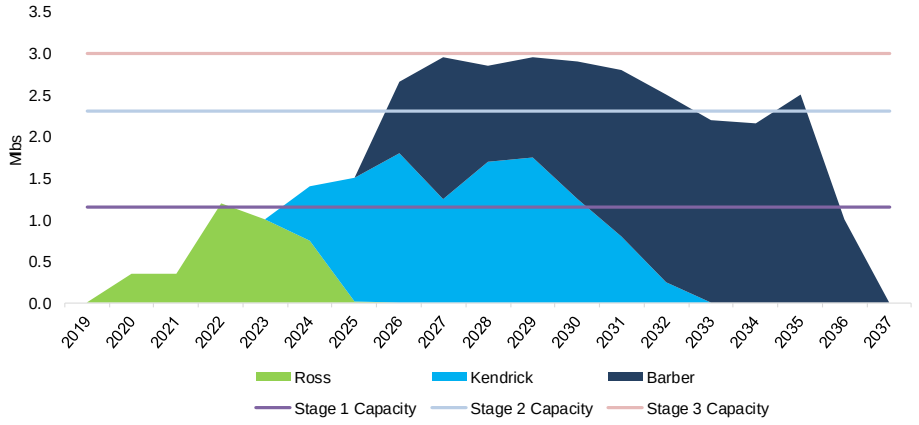
Source: Company reports

PEN's production and operating cost outlook

PEN's FS for Lance is based on a three-stage production ramp-up with an initial maximum flow rate capacity of around 3,750 gpm through the existing process plant IX circuit, once it is converted to be compatible with low pH solutions (Stage 1). Stage 2 involves expanding the plant capacity to 7,500 gpm and processing functionality of the CPP. This is then expected to be followed by Stage 3 which includes the construction of a Satellite Plant within Barber with a flow rate capacity of 7,500 gpm. More detail on the proposed stages is included below.

- **Stage 1** includes the changeover of the current facility and wellfields to utilise low pH solutions at the existing flow capacity of 3,750 gpm through the IX circuit. This is expected to result in a production capacity of 1.15Mlb p.a. U_3O_8 assuming an average head grade of 70 ppm. Head grade is currently around 10 to 20 ppm resulting in production of around 100klb p.a.
- **Stage 2** will include (1) expansion of the current facility allowing production flow to increase to 7,500 gpm from both the Ross and Kendrick Areas; (2) addition of elution systems; and (3) addition of precipitation and drying capacity. Assuming a head grade of 70 ppm, Stage 2 capacity is expected to reach 2.3Mlb p.a. U_3O_8. Stage 2 will also include the capability to produce dried yellowcake on site eliminating the need for toll milling agreements. Stage 2 will require permit approval for operation of wellfields within Kendrick.
- **Stage 3** includes construction of a satellite plant at Barber and the installation of expanded production capacity at the Ross CPP. The planned production rate at the Barber satellite plant is 2.3Mlb p.a. U_3O_8 at an average head grade of 70 ppm and the processing of the Barber satellite plant resin at the CPP. Stage 3 operations require permit approval for operation of both the associated wellfields and the satellite plant at Barber.

Figure 16: PEN's FS production profile for Lance

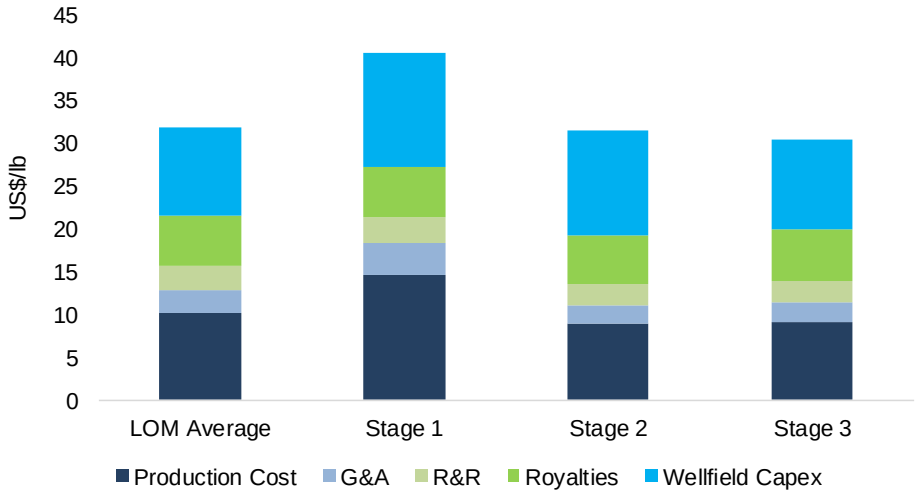


Source: Company reports

Once Lance get up to its Stage 1 output of around 1.15Mlb p.a., the AISC is expected to reduce to around US$40/lb. This includes ongoing wellfield development (US$10-12/lb), restoration accrual (US$3/lb), royalties and state taxes (US$5-7/lb). Direct operating costs are around US$15/lb.

AISC for Stage 1 is expected to be high (US$40.58/lb) compared to costs for subsequent stages, as shown in Figure 17. LOM AISC is forecast to be US$31.78/lb.

Figure 17: AISC at Lance



Source: Company reports

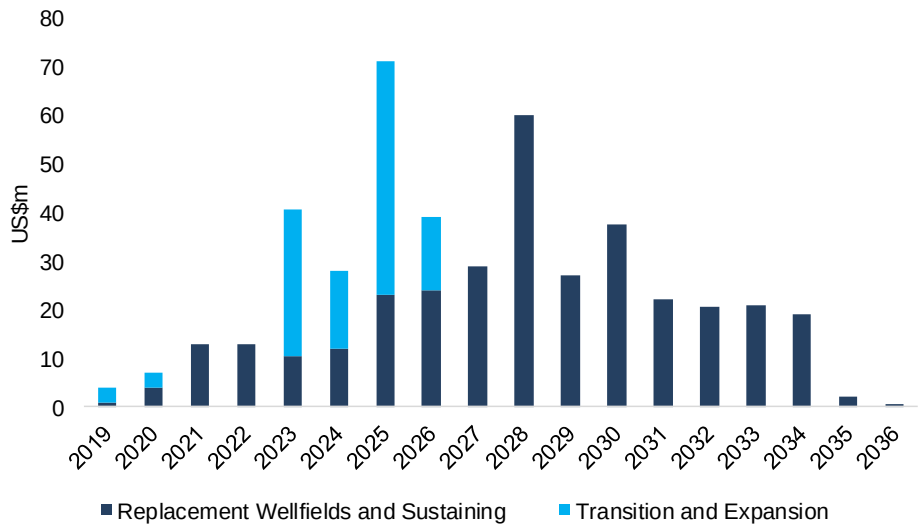
Capital required for Low pH Transition and Stages 1-3

The transition to accepting acid into the plant is estimated to cost approximately US$5.3m plus working capital. This will be spent on converting the existing wellfield infrastructure and process plant to make it amenable for acid.

The two existing wellfields will be mined first, where US$20m has already been invested. PEN will also need to invest in Mine Unit 3 which will cost around US$9m and will include everything required to connect the field into the plant and 240 wells, of these around 90 will be extraction wells. This will target output of 1.15Mlb p.a. under Stage 1 of the planned plant expansion. PEN has around 700-800klb left in MU1 and MU2, so this will see approximately two years of production ramp-up in the existing mine units.

Beyond Stage 1, PEN estimates approximately US$113.4m (US$43.1m for Stage 2, US$70.3m for Stage 3) in capital expenditure is required to achieve PEN's production target of 3Mlb p.a. by 2026. This includes an average contingency of 5.8%, which appears on the low side, and unlikely to satisfy potential debt lenders requirements in our view. The profile of forecast expenditures is shown in Figure 18.

Figure 18: Capital expenditure profile (US$m)



Source: Company reports, Canaccord Genuity estimates

Sales agreements and sales outlook

The portfolio of uranium concentrate sale and purchase agreements held by PEN contains a combination of committed sales and optional sales. Optional sales are offered at the election of the respective customer. The remaining portfolio of uranium concentrate sale and purchase agreements held by the company is currently up to 5.5Mlb U_3O_8 (4.2Mlb U_3O_8 committed; up to 1.3Mlb U_3O_8 optional). Delivery obligations under the contracts continue through to 2030. The company's weighted average future sales price now sits at the upper end of the guided US$51-53/lb range.

PEN has recently modified certain contracts to include delivery contract provisions that provide flexibility to the company during the time it may take to receive authorisation for and to ramp up production under the low pH operational plan. Approximately 50% of committed deliveries in CY20 can be sourced from either production or market purchases at the company's election without a price variation, meaning that PEN is not dependent on Lance production to meet its entire delivery commitments over the next few year. It has not been disclosed how much can be purchased on-market for sales in 2021-23, however we estimate it is significantly less than 50%. As a result, we expect operating costs in 2021-23 to be materially higher than in 2020.

Recently, PEN entered into a binding purchase agreement with UG USA, a subsidiary of ORANO, to procure 400klb U_3O_8 for delivery in CY21. The company currently has 450klb U_3O_8 of committed sales to its customers in CY21 and CY22 (US$6-8m net revenue p.a.).

The in-situ recovery process

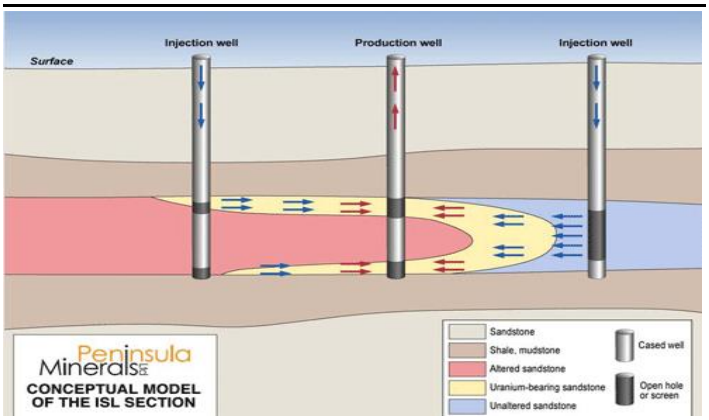
ISR of uranium is a very common uranium extraction method in both the US and globally. The ISR process works by injecting a solution (lixiviant), comprising native groundwater with reagents (alkaline, acid, and/or oxidants), into the host formation containing uranium mineralisation. The lixiviant dissolves the uranium and forms a soluble complex with the dissolved uranium, which is pumped out of the formation through a recovery well. The recovered lixiviant is typically processed using ion exchange (IX) resin, which selectively removes the uranium complexes from the solution. The lixiviant is recharged with reagents and injected back into the formation so the process can repeat. There are three primary controls to prevent the spread of lixiviant outside of the mineralised horizon. These include natural geologic confining layers above and below the mineralised horizon, injecting less lixiviant than is withdrawn in order to maintain an inward groundwater flow direction into each wellfield, and implementing a monitor well network that surrounds each wellfield horizontally and vertically.

Today, Wyoming ISR operations, including PEN's plant, and other U.S. operations currently apply alkaline leach methods, typically using a combination of carbon dioxide or sodium bicarbonate along with gaseous oxygen to dissolve and mobilize the uranium. Low pH ISR reagents are used worldwide to recover a variety of minerals, including copper in Arizona and uranium in Australia, Kazakhstan, China, Uzbekistan, and the Russian Federation. According to the World Nuclear Association, in 2017, 50% of global uranium was mined from ISR operations using low pH lixiviants, and this will likely be higher when 2019 numbers become available as Cameco's underground operation at MacArthur River/Key Lake is now on care and maintenance. At present, no US uranium ISR operations use low pH lixiviants, although we note that there are no regulatory prohibitions on their use in Wyoming.

US deposits tend to be higher carbonate concentration and this results in higher acid consumption and higher cost on the acid leach. One of the motivating factors for PEN pursuing acid leaching was the acknowledgement that Lance have a lower carbonate content, and therefore had the right ore body to change chemistry.

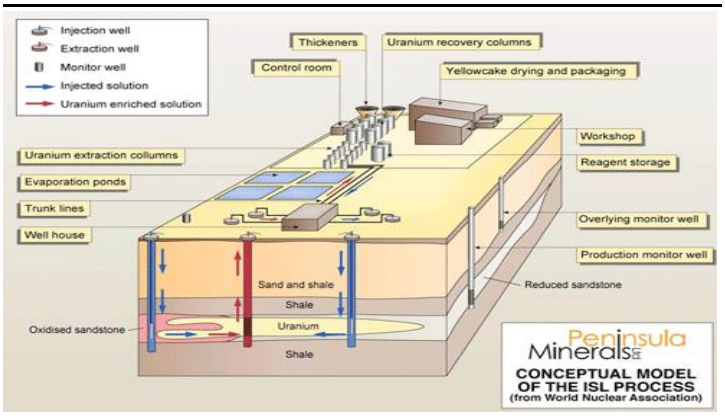
Lance has relatively good quality groundwater, with total dissolved solids (TDS) of around 1,000ppm which makes processing more straight forward as TDS up to 1,000 ppm is typically classified as fresh water by many environmental agencies. Simplistically speaking, the way the acid leach process works is the acid dissolves the uranium and complexes with the sulphates, however when the TDS is high, there are a lot of competing ions, so the process has to be more sophisticated.

Figure 19: Conceptual model of the ISL section



Source: Company reports

Figure 20: Conceptual model of the ISL process



Source: Company reports

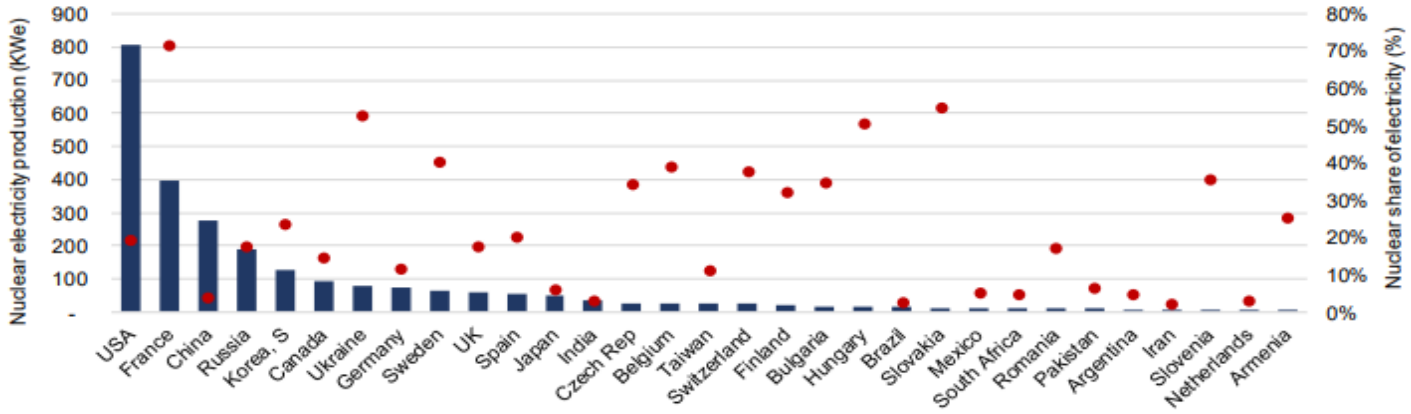
State of play in the US

The government wants more indigenous supply

With an advanced, low-cost development, and history of production, we believe PEN is well positioned to benefit from increasing US government support for nuclear energy and the domestic production of uranium.

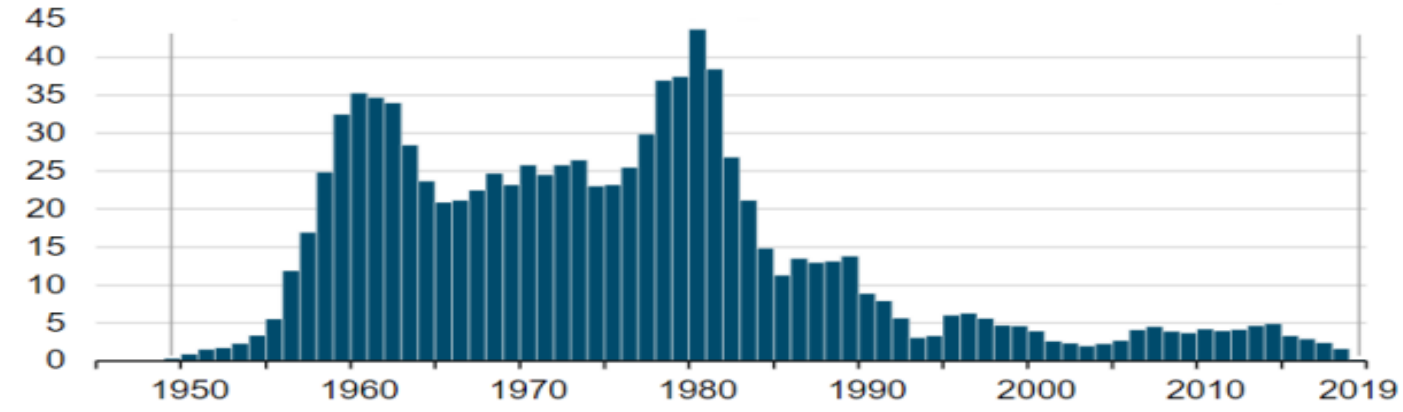
The US is the world's largest consumer of uranium, accounting for more than 30% of worldwide nuclear demand (Figure 21) Despite this, the US produced only 174 thousand pounds of U_3O_8 in 2019, representing only 0.3% of the annual fuel requirements for US nuclear reactors (~50Mlb U_3O_8 demand per year), and the country's lowest annual production since 1950 (Figure 22).

Figure 21: Nuclear electricity production and nuclear share of total electricity by our country



Source: World Nuclear Association

Figure 22: United States uranium production history (U_3O_8 Mlb)



Source: EIA: 2019 Domestic Uranium Production Report

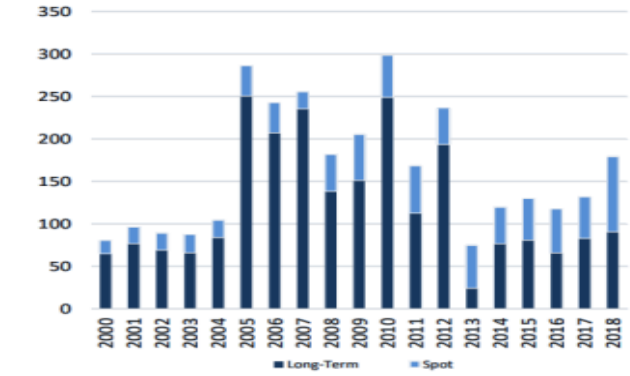
Recognising this decline in domestic production and an increasing dependence on offshore pounds, President Trump established a Nuclear Fuel Working Group (NFWG) in July 2019 to examine the current state of the domestic nuclear fuel supply chain and its implications for national security. In April 2020, the Nuclear Fuel Working Group released its recommendations (see note here), which showed strong support for nuclear power and outlined actions to revive the front-end of the nuclear fuel cycle, including uranium mining and conversion services.

Included in these recommendations was the establishment of a $150m annual reserve for purchases of US-mined uranium over the next 10 years. This reserve is expected to support the operation of at least two US uranium mines and the re-establishment of active domestic conversion capabilities. The likelihood of this reserve being established took a major step forward with the US Senate Committee on Environment and Public Works passing a bill which approves the establishment of a national uranium strategic reserve

In our view, PEN is well positioned as a potential beneficiary of US government support, as a proven operator with fully permitted, reasonably low-cost project, that has a short timeline to production (six-month lead time post FID). We believe news of government support, such as funding, is potentially catalytic for PEN's shares.

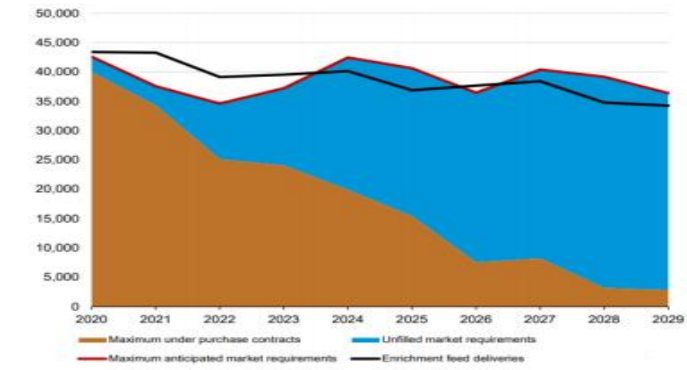
Furthermore, the US Department of Commerce and Rosatom, on behalf of the Russian government, recently signed an amendment to the Russian Suspension Agreement (RSA), originally signed in 1992, extending the agreement to 2040 and reduces the delivery of nuclear fuel into the US from Russia. Under the current agreement, Russian exports are limited to ~20% of US enrichment demand; however, under the amended agreement this percentage would drop to an average of 17% over a 20-year period. In our view, this is positive for US miners (such as PEN) as it restricts the quantity of uranium that can be delivered to US utilities at lower costs from Russia, which in turn supports increased domestic production. Clarity on the RSA is also positive for US utilities which, in our view, have sat on the sidelines over the past few years as market access and trade policy issues (Section 232, US trade tensions, NFWG recommendations, and RSA amendments) have weighed heavily on the market and increased uncertainty for utilities. However, with much of this uncertainty now resolved, we believe utilities will soon look to re-enter the term market to ensure future supply for their reactors. We note that long-term contracts from the previous uranium cycle are rolling off at increasing rates and significant uncovered utility requirements are emerging (Figure 23 and 24). We view this as advantageous for PEN, as we expect US utilities to re-enter the market looking to negotiate contracts with companies that offer responsiveness (advanced permitting and lower development capital) and security geographically.

Figure 23: Long-term contract volumes have been low in recent years



Source: Company reports, Canaccord Genuity estimates

Figure 24: Uncovered uranium demand requirements for US utilities are increasing



Source: Company reports, Canaccord Genuity estimates

Additionally, and perhaps most importantly, for the first time in 48 years there is bipartisan support for nuclear. In its recently announced platform, the US Democratic Party changed its stance on nuclear energy, stating it now favours a technology-neutral approach that includes "all zero-carbon technologies, including hydroelectric power, geothermal, existing and advanced nuclear, and carbon capture and storage". Biden also supports nuclear; his climate change agenda plans for investment in clean energy research, including small modular reactors. In our view, this is a significant step forward for nuclear in the US.

Investment risks

Financing risks

Our analysis suggests that PEN will require additional capital to fund the development costs for the Lance project for which we have risked our valuation. PEN is reliant on equity/debt/external capital to fund capital commitments, and there is no guarantee that accessing these markets will be achieved without dilution to shareholders.

Furthermore, accurate estimates of capital costs for the project remain subject to completion of pre-feasibility and feasibility studies, which may see capital requirements exceed our model assumptions. There is no guarantee that studies will result in a positive investment decision for the project.

Operational risks

Once in production, the company will be subject to risks such as plant/equipment breakdowns, metallurgical (noting flowsheet changes to address previous challenges), geological and other technical issues. An increase in operating costs could reduce the profitability and free cash generation from the operating assets and negatively impact valuation.

Further, the yellow cake product specifications may differ from initial test work interpretations which can also materially impact product acceptance by customers and therefore earnings from forecast production.

Implementation risks

We note the compressed development schedule will require concurrent plant commissioning of Stage 1 followed soon after by the installation of Stage 2 equipment and then Stage 3. This sequence presents a natural risk that delays in Stage 1 could impact Stage 2 and therefore Stage 3 which present downside risk to our cash flow projections.

Market risks

PEN's sales revenue is dependent on being able to secure term contracts for its proposed level of production and priced with the required mechanisms that will enable proactive capital and budgetary management. We note the protracted nature of negotiating uranium product offtake with the potential that timelines could be prolonged to ensure than an acceptable order book is agreed on.

Commodity price and currency fluctuation

The company as a near-term uranium producer is exposed to commodity price and currency fluctuations, often driven by macro-economic forces including inflationary pressure, interest rates and supply and demand of commodities. These factors are external and could reduce the profitability, costing and prospective outlook for the business.

Geological and resource risk

The actual characteristics of a mineral deposit may differ significantly from initial interpretations and expectations. PEN's plan incorporates Mineral Resources whose actual economics are yet to be determined. Grades and tonnages for Exploration Targets are conceptual in nature.

Directors and key management

John Harrison – Non-Executive Chairman

John has had a 45-year career which includes broking, corporate finance and 20 years of investment banking experience. During this time, John has advised companies across a range of commodities (including uranium), as well as related engineering and service businesses, in both an M&A and equity capital markets context. John founded the UK coking coal company, West Cumbria Mininig Pty Ltd, and is currently a Non-Executive Director of that company. He is also a Non-Executive Director of Newscape Capital Group Ltd, a diversified UK fund management and advisory group based in St James's, London.

Wayne Heili – Managing Director/Chief Executive Officer

Wayne has spent the bulk of his 30-year professional career in the uranium mining industry. He most recently served as President and Chief Executive Officer of Ur-Energy, Inc. where he oversaw the design, construction, commissioning and ramp-up of the Lost Creek in-situ uranium project in Wyoming, US. Prior to joining Ur-Energy, Inc., Wayne served as Operations Manager of the Christensen/Irigaray in-situ uranium mines in Wyoming and also has experience on conventional uranium mines in Texas. He holds a Bachelor of Science in Metallurgical Engineering from Michigan Technological University and is a past President of the Uranium Producers of America.

Harrison (Hink) Barker – Non-Executive Director

From 1992 until 2015, Hink had been the manager responsible for Dominion Resources' procurement of nuclear fuel and the related processing steps of conversion from U_3O_8 to UF_6, enrichment of UF_6, and fabrication of nuclear fuel assemblies. He is a former chair of the Nuclear Energy Institute's Utility Fuel Committee, and a past member of the World Nuclear Fuel Market Board of Directors (Chairman for two years). From 1975 to 1984 he worked as an engineer and supervisor in the areas of nuclear fuel quality assurance, nuclear core design, nuclear fabrication contract administration, nuclear fuel procurement, spent fuel transportation and disposal planning during a period when Dominion was building its regulated nuclear operating fleet in Virginia. Hink holds a Bachelor of Science degree in Electrical Engineering, and a Master's in Nuclear Engineering Science both from the University of Florida.

Mark Wheatley – Non-Executive Director

Mark is an experienced resources company CEO, Non-Executive Director and Chairman with a career spanning more than 30 years in mining and related industries. Mark's uranium experience includes the roles of Chairman and CEO of Southern Cross Resources Inc, the operator of the Honeymoon ISR uranium project, Non-executive Director of Uranium One Inc and Uranium Resources Inc. His other board roles have included Non-Executive Chairman of Xanadu Mines Ltd, Gold One International Ltd, Goliath Gold Mining Ltd, Norton Gold Fields Ltd and directorship of St Barbara Ltd.

David Coyne – Finance Director/Chief Financial Officer

David has over 20 years' experience in the mining, and engineering and construction industries, both within Australia and internationally. Prior to joining Peninsula, David held senior executive positions with Australian listed companies Macmahon Holdings Limited and VDM Group Limited, and with unlisted global manganese miner Consolidated Minerals. Over the past 10 years, Wayne has been directly involved in a number of equity and debt raising transactions and has been the project director on a company-wide systems implementation project. Wayne has previously served on the board of listed iron ore miner, BC Iron limited, where he also held the role of Chairman of the Audit and Risk Committee.

Appendix: Important Disclosures

Analyst Certification

Each authoring analyst of Canaccord Genuity whose name appears on the front page of this research hereby certifies that (i) the recommendations and opinions expressed in this research accurately reflect the authoring analyst's personal, independent and objective views about any and all of the designated investments or relevant issuers discussed herein that are within such authoring analyst's coverage universe and (ii) no part of the authoring analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the authoring analyst in the research, and (iii) to the best of the authoring analyst's knowledge, she/he is not in receipt of material non-public information about the issuer.

Analysts employed outside the US are not registered as research analysts with FINRA. These analysts may not be associated persons of Canaccord Genuity LLC and therefore may not be subject to the FINRA Rule 2241 and NYSE Rule 472 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

Sector Coverage

Individuals identified as "Sector Coverage" cover a subject company's industry in the identified jurisdiction, but are not authoring analysts of the report.

Investment Recommendation

Date and time of first dissemination: December 17, 2020, 00:00 ET

Date and time of production: December 17, 2020, 00:00 ET

Target Price / Valuation Methodology:

Peninsula Energy Limited - PEN

Our target price is derived from a DCF-based sum of the parts valuation, comprising our NPV10% of the stage Lance project, a nominal value for exploration, and net cash.

Risks to achieving Target Price / Valuation:

Peninsula Energy Limited - PEN

Financing risks: Our analysis suggests that PEN will require additional capital to fund the development costs for the Lance project for which we have risked our valuation. PEN is reliant on equity/debt/external capital to fund capital commitments, and there is no guarantee that accessing these markets will be achieved without dilution to shareholders.

Furthermore, accurate estimates of capital costs for the project remain subject to completion of pre-feasibility and feasibility studies, which may see capital requirements exceed our model assumptions. There is no guarantee that studies will result in a positive investment decision for the project.

Operational risks: Once in production, the company will be subject to risks such as plant/equipment breakdowns, metallurgical (noting flowsheet changes to address previous challenges), geological and other technical issues. An increase in operating costs could reduce the profitability and free cash generation from the operating assets and negatively impact valuation.

Further, the yellow cake product specifications may differ from initial test work interpretations which can also materially impact product acceptance by customers and therefore earnings from forecast production.

Implementation risks: We note the compressed development schedule will require concurrent plant commissioning of Stage 1 followed soon after by the installation of Stage 2 equipment and then Stage 3. This sequence presents a natural risk that delays in Stage 1 could impact Stage 2 and therefore Stage 3 which present downside risk to our cash flow projections.

Market risks: PEN's sales revenue is dependent on being able to secure term contracts for its proposed level of production and priced with the required mechanisms that will enable proactive capital and budgetary management. We note the protracted nature of negotiating uranium product offtake with the potential that timelines could be prolonged to ensure than an acceptable order book is agreed on.

Commodity price and currency fluctuation: The company as a near-term uranium producer is exposed to commodity price and currency fluctuations, often driven by macro-economic forces including inflationary pressure, interest rates and supply and demand of commodities. These factors are external and could reduce the profitability, costing and prospective outlook for the business.

Geological and resource risk: The actual characteristics of a mineral deposit may differ significantly from initial interpretations and expectations. PEN's plan incorporates Mineral Resources whose actual economics are yet to be determined. Grades and tonnages for Exploration Targets are conceptual in nature.

Distribution of Ratings:

Global Stock Ratings (as of 12/16/20)

Rating	Coverage Universe		IB Clients
	#	%	%
Buy	566	63.24%	57.95%
Hold	166	18.55%	41.57%
Sell	9	1.01%	33.33%
Speculative Buy	135	15.08%	80.00%
	895*	100.0%	

*Total includes stocks that are Under Review

Canaccord Genuity Ratings System

BUY: The stock is expected to generate risk-adjusted returns of over 10% during the next 12 months.

HOLD: The stock is expected to generate risk-adjusted returns of 0-10% during the next 12 months.

SELL: The stock is expected to generate negative risk-adjusted returns during the next 12 months.

NOT RATED: Canaccord Genuity does not provide research coverage of the relevant issuer.

"Risk-adjusted return" refers to the expected return in relation to the amount of risk associated with the designated investment or the relevant issuer.

Risk Qualifier

SPECULATIVE: Stocks bear significantly higher risk that typically cannot be valued by normal fundamental criteria. Investments in the stock may result in material loss.

12-Month Recommendation History (as of date same as the **Global Stock Ratings** table)

A list of all the recommendations on any issuer under coverage that was disseminated during the preceding 12-month period may be obtained at the following website (provided as a hyperlink if this report is being read electronically) http://disclosures-mar.canaccordgenuity.com/EN/Pages/default.aspx

Required Company-Specific Disclosures (as of date of this publication)

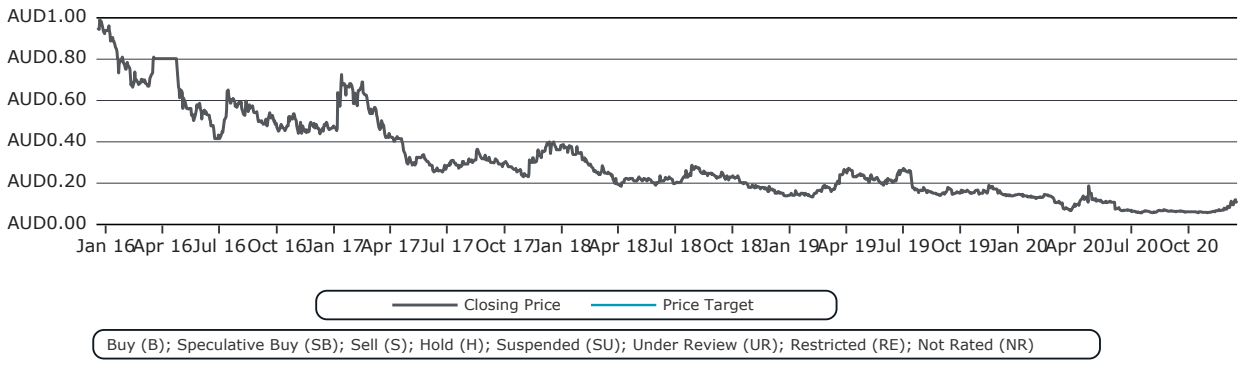
Peninsula Energy Limited currently is, or in the past 12 months was, a client of Canaccord Genuity or its affiliated companies. During this period, Canaccord Genuity or its affiliated companies provided investment banking services to Peninsula Energy Limited.

In the past 12 months, Canaccord Genuity or its affiliated companies have received compensation for Investment Banking services from Peninsula Energy Limited .

In the past 12 months, Canaccord Genuity or any of its affiliated companies have been lead manager, co-lead manager or co-manager of a public offering of securities of Peninsula Energy Limited or any publicly disclosed offer of securities of Peninsula Energy Limited or in any related derivatives.

Canaccord Genuity or one or more of its affiliated companies intend to seek or expect to receive compensation for Investment Banking services from Peninsula Energy Limited in the next three months.

Peninsula Energy Limited Rating History as of 12/16/2020



Past performance

In line with Article 44(4)(b), MiFID II Delegated Regulation, we disclose price performance for the preceding five years or the whole period for which the financial instrument has been offered or investment service provided where less than five years. Please

note price history refers to actual past performance, and that past performance is not a reliable indicator of future price and/or performance.

Online Disclosures

Up-to-date disclosures may be obtained at the following website (provided as a hyperlink if this report is being read electronically) http://disclosures.canaccordgenuity.com/EN/Pages/default.aspx; or by sending a request to Canaccord Genuity Corp. Research, Attn: Disclosures, P.O. Box 10337 Pacific Centre, 2200-609 Granville Street, Vancouver, BC, Canada V7Y 1H2; or by sending a request by email to disclosures@cgf.com. The reader may also obtain a copy of Canaccord Genuity's policies and procedures regarding the dissemination of research by following the steps outlined above.

General Disclaimers

See "Required Company-Specific Disclosures" above for any of the following disclosures required as to companies referred to in this report: manager or co-manager roles; 1% or other ownership; compensation for certain services; types of client relationships; research analyst conflicts; managed/co-managed public offerings in prior periods; directorships; market making in equity securities and related derivatives. For reports identified above as compendium reports, the foregoing required company-specific disclosures can be found in a hyperlink located in the section labeled, "Compendium Reports." "Canaccord Genuity" is the business name used by certain wholly owned subsidiaries of Canaccord Genuity Group Inc., including Canaccord Genuity LLC, Canaccord Genuity Limited, Canaccord Genuity Corp., and Canaccord Genuity (Australia) Limited, an affiliated company that is 80%-owned by Canaccord Genuity Group Inc.

The authoring analysts who are responsible for the preparation of this research are employed by Canaccord Genuity Corp. a Canadian broker-dealer with principal offices located in Vancouver, Calgary, Toronto, Montreal, or Canaccord Genuity LLC, a US broker-dealer with principal offices located in New York, Boston, San Francisco and Houston, or Canaccord Genuity Limited., a UK broker-dealer with principal offices located in London (UK) and Dublin (Ireland), or Canaccord Genuity (Australia) Limited, an Australian broker-dealer with principal offices located in Sydney and Melbourne.

The authoring analysts who are responsible for the preparation of this research have received (or will receive) compensation based upon (among other factors) the Investment Banking revenues and general profits of Canaccord Genuity. However, such authoring analysts have not received, and will not receive, compensation that is directly based upon or linked to one or more specific Investment Banking activities, or to recommendations contained in the research.

Some regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of research. This research has been prepared in accordance with Canaccord Genuity's policy on managing conflicts of interest, and information barriers or firewalls have been used where appropriate. Canaccord Genuity's policy is available upon request.

The information contained in this research has been compiled by Canaccord Genuity from sources believed to be reliable, but (with the exception of the information about Canaccord Genuity) no representation or warranty, express or implied, is made by Canaccord Genuity, its affiliated companies or any other person as to its fairness, accuracy, completeness or correctness. Canaccord Genuity has not independently verified the facts, assumptions, and estimates contained herein. All estimates, opinions and other information contained in this research constitute Canaccord Genuity's judgement as of the date of this research, are subject to change without notice and are provided in good faith but without legal responsibility or liability.

From time to time, Canaccord Genuity salespeople, traders, and other professionals provide oral or written market commentary or trading strategies to our clients and our principal trading desk that reflect opinions that are contrary to the opinions expressed in this research. Canaccord Genuity's affiliates, principal trading desk, and investing businesses also from time to time make investment decisions that are inconsistent with the recommendations or views expressed in this research.

This research is provided for information purposes only and does not constitute an offer or solicitation to buy or sell any designated investments discussed herein in any jurisdiction where such offer or solicitation would be prohibited. As a result, the designated investments discussed in this research may not be eligible for sale in some jurisdictions. This research is not, and under no circumstances should be construed as, a solicitation to act as a securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on the business of a securities broker or dealer in that jurisdiction. This material is prepared for general circulation to clients and does not have regard to the investment objectives, financial situation or particular needs of any particular person. Investors should obtain advice based on their own individual circumstances before making an investment decision. To the fullest extent permitted by law, none of Canaccord Genuity, its affiliated companies or any other person accepts any liability whatsoever for any direct or consequential loss arising from or relating to any use of the information contained in this research.

Research Distribution Policy

Canaccord Genuity research is posted on the Canaccord Genuity Research Portal and will be available simultaneously for access by all of Canaccord Genuity's customers who are entitled to receive the firm's research. In addition research may be distributed by the firm's sales and trading personnel via email, instant message or other electronic means. Customers entitled to receive research may also receive it via third party vendors. Until such time as research is made available to Canaccord Genuity's customers as described above, Authoring Analysts will not discuss the contents of their research with Sales and Trading or Investment Banking employees without prior compliance consent.

For further information about the proprietary model(s) associated with the covered issuer(s) in this research report, clients should contact their local sales representative.

Short-Term Trade Ideas

Research Analysts may, from time to time, discuss "short-term trade ideas" in research reports. A short-term trade idea offers a near-term view on how a security may trade, based on market and trading events or catalysts, and the resulting trading opportunity that may be available. Any such trading strategies are distinct from and do not affect the analysts' fundamental equity rating for such stocks. A short-term trade idea may differ from the price targets and recommendations in our published research reports that reflect the research analyst's views of the longer-term (i.e. one-year or greater) prospects of the subject company, as a result of the differing time horizons, methodologies and/or other factors. It is possible, for example, that a subject company's common equity that is considered a long-term 'Hold' or 'Sell' might present a short-term buying opportunity as a result of temporary selling pressure in the market or for other reasons described in the research report; conversely, a subject company's stock rated a long-term 'Buy' or "Speculative Buy' could be considered susceptible to a downward price correction, or other factors may exist that lead the research analyst to suggest a sale over the short-term. Short-term trade ideas are not ratings, nor are they part of any ratings system, and the firm does not intend, and does not undertake any obligation, to maintain or update short-term trade ideas. Short-term trade ideas are not suitable for all investors and are not tailored to individual investor circumstances and objectives, and investors should make their own independent decisions regarding any securities or strategies discussed herein. Please contact your salesperson for more information regarding Canaccord Genuity's research.

For Canadian Residents:

This research has been approved by Canaccord Genuity Corp., which accepts sole responsibility for this research and its dissemination in Canada. Canaccord Genuity Corp. is registered and regulated by the Investment Industry Regulatory Organization of Canada (IIROC) and is a Member of the Canadian Investor Protection Fund. Canadian clients wishing to effect transactions in any designated investment discussed should do so through a qualified salesperson of Canaccord Genuity Corp. in their particular province or territory.

For United States Persons:

Canaccord Genuity LLC, a US registered broker-dealer, accepts responsibility for this research and its dissemination in the United States. This research is intended for distribution in the United States only to certain US institutional investors. US clients wishing to effect transactions in any designated investment discussed should do so through a qualified salesperson of Canaccord Genuity LLC. Analysts employed outside the US, as specifically indicated elsewhere in this report, are not registered as research analysts with FINRA. These analysts may not be associated persons of Canaccord Genuity LLC and therefore may not be subject to the FINRA Rule 2241 and NYSE Rule 472 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

For United Kingdom and European Residents:

This research is distributed in the United Kingdom and elsewhere Europe, as third party research by Canaccord Genuity Limited, which is authorized and regulated by the Financial Conduct Authority. This research is for distribution only to persons who are Eligible Counterparties or Professional Clients only and is exempt from the general restrictions in section 21 of the Financial Services and Markets Act 2000 on the communication of invitations or inducements to engage in investment activity on the grounds that it is being distributed in the United Kingdom only to persons of a kind described in Article 19(5) (Investment Professionals) and 49(2) (High Net Worth companies, unincorporated associations etc) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended). It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. This material is not for distribution in the United Kingdom or elsewhere in Europe to retail clients, as defined under the rules of the Financial Conduct Authority.

For Jersey, Guernsey and Isle of Man Residents:

This research is sent to you by Canaccord Genuity Wealth (International) Limited (CGWI) for information purposes and is not to be construed as a solicitation or an offer to purchase or sell investments or related financial instruments. This research has been produced by an affiliate of CGWI for circulation to its institutional clients and also CGWI. Its contents have been approved by CGWI and we are providing it to you on the basis that we believe it to be of interest to you. This statement should be read in conjunction with your client agreement, CGWI's current terms of business and the other disclosures and disclaimers contained within this research. If you are in any doubt, you should consult your financial adviser.

CGWI is licensed and regulated by the Guernsey Financial Services Commission, the Jersey Financial Services Commission and the Isle of Man Financial Supervision Commission. CGWI is registered in Guernsey and is a wholly owned subsidiary of Canaccord Genuity Group Inc.

For Australian Residents:

This research is distributed in Australia by Canaccord Genuity (Australia) Limited ABN 19 075 071 466 holder of AFS Licence No 234666. To the extent that this research contains any advice, this is limited to general advice only. Recipients should take into account their own personal circumstances before making an investment decision. Clients wishing to effect any transactions in any financial products discussed in the research should do so through a qualified representative of Canaccord Genuity (Australia) Limited or its Wealth Management affiliated company, Canaccord Genuity Financial Limited ABN 69 008 896 311 holder of AFS Licence No 239052.

For Hong Kong Residents:

This research is distributed in Hong Kong by Canaccord Genuity (Hong Kong) Limited which is licensed by the Securities and Futures Commission. This research is only intended for persons who fall within the definition of professional investor as defined in the Securities and Futures Ordinance. It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. Recipients of this report can contact Canaccord Genuity (Hong Kong) Limited. (Contact Tel: +852 3919 2561) in respect of any matters arising from, or in connection with, this research.

Additional information is available on request.