EDISON

Elk Petroleum

Company update

Aneth adds another antler

Oil & gas

Elk Petroleum's (ELK) acquisition of a 63.7% operated interest in the Aneth Rocky Mountain CO_2 EOR project from Resolute Energy transforms the company into one of the largest producers on the ASX. Management forecasts 2018 net production of 11mboe/d. At US$160m, the deal is priced at a discount to our 1P estimate of proven developed reserve value of US$178m (excluding US$23m, which ELK retains in escrow to cover abandonment costs). The Aneth transaction was funded through new equity and debt, with rapid debt paydown expected from Grieve, Madden and Aneth cash flows. We update our valuation to reflect forecast Aneth cash flows, with our NAV rising to $A0.12/share from $A0.09/share.

Year end	Revenue (US$m)	EBITDA (US$m)	PBT* (US$m)	Net cash/ (debt) (US$m)	Debt (US$m)	Capex (US$m)
06/16	0.0	(4.7)	(5.2)	(3.0)	(16.4)	(2.5)
06/17	5.0	(5.2)	(8.1)	(57.7)	(62.6)	(56.6)
06/18e	56.9	26.1	2.3	(208.6)	(216.8)	(166.5)
06/19e	131.8	65.9	30.4	(174.8)	(183.1)	(6.9)

Note: *PBT is normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

Aneth adds reserves and production

The Greater Aneth Oil Field is one of the three largest CO_2 EOR projects in the US Rocky Mountains, alongside Salt Creek and Rangely; oil initially in place is estimated at 1.5bnbbls (1.15bnbbls currently accessible), with 31% recovered to date. Remaining 2P reserves (net 58.8mmbbls) imply recovery of 37% of accessible volumes. Management sees potential to make modest investments in the asset in order to grow net production from 6mbopd to 11mbopd, with individual projects generating IRRs from 15% to 50%, at the current oil price. Aneth is a significant undertaking with ELK taking on an additional 100 employees/contractors at the asset level and key senior management personnel joining ELK in senior executive roles. The addition of key Resolute personnel should assist during the planned six-month transition period.

Rapid debt paydown at current oil prices

We forecast end FY18 net debt of US$208m, including preferred equity and cash in escrow. Net debt is expected to fall rapidly from 2.7x net debt/EBITDA in FY19e to 0.8x in FY22e. ELK is highly leveraged to long-term oil and gas prices, despite short-term hedging. However, in a static commodity price environment we see potential for value creation through asset optimisation and development. Numerous opportunities have been identified across the asset base, with individual project returns ranging from 15% to 50% at current prices.

Valuation: Base case NAV increases to A$0.12/share

Our NAV increases from A$0.09/share to A$0.12/share after including the Aneth transaction. We include ELK's proven developed reserve estimates for Aneth in our NAV, which utilises a 12.5% discount rate (up from 10%) reflecting a higher long-term cost of capital.

13 November 2017

Price	**A$0.07**
Market cap	**A$74m**

Forecast net debt (US$m) at Dec 2017 including restricted cash	205
Shares in issue	1,050m
Free float	57.5%
Code	ELK
Primary exchange	ASX
Secondary exchange	N/A

Share price performance

%	1m	3m	12m
Abs	3.2	(11.0)	1.6
Rel (local)	(1.8)	(15.2)	(10.0)
52-week high/low		A$0.1	A$0.1

Business description

Elk Petroleum's Grieve EOR project is expected to start production in late 2017/early 2018. Elk has grown inorganically through the acquisition of a 13.6% interest in the Madden gas asset and, more recently, the acquisition of a 63% interest in the Aneth CO_2 EOR project in the Rockies.

Next events

Grieve first oil	Late 2017/2018

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Edison profile page

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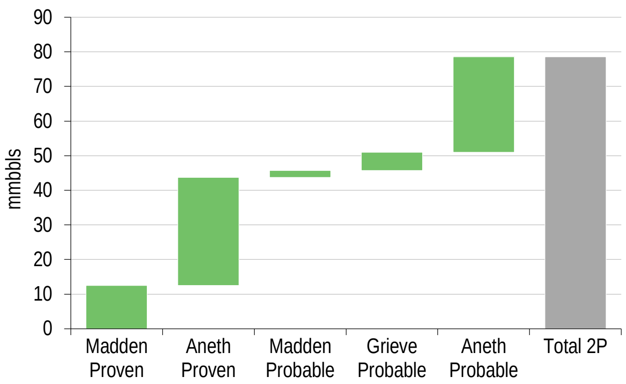
Aneth a step change in production and reserves

Based on Edison commodity price assumptions (we use EIA short-term forecasts and 70$/bbl Brent in 2022), the acquisition of a 63% interest in the Aneth CO_2 EOR project is materially accretive to our base case NAV. Our valuation increases from A$0.09/share to A$0.12/share as a result. The deal is also immediately accretive to production, reserves and NAV based on proved developed producing (PDP) projections. Production, resource and NAV upside exists, with several capital-light optimisation projects having been identified that would deliver returns in excess of 15% at current oil prices. Asset oil price leverage is somewhat muted in the short term through the inclusion of US$35m of oil price-contingent payments as part of the transaction. However, the downside is also protected through the use of hedging instruments. Financial close was achieved on 6 November 2017.

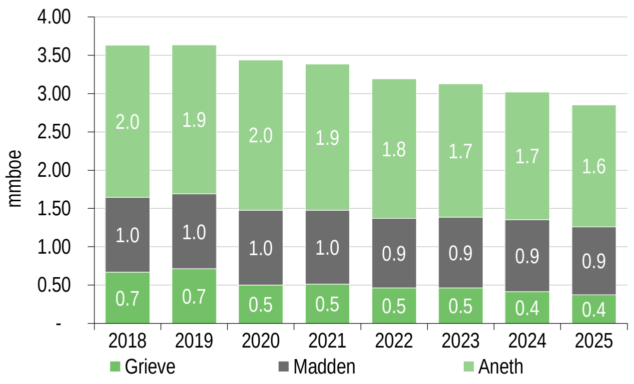
Unlike Grieve and Madden, Aneth is an ELK-operated asset. ELK has greater control and ownership over Aneth, with the addition of 100 contractors/employees at the asset level and certain Resolute Energy senior management joining ELK in senior executive roles. Key employees joining the ELK Denver-based operational team include James Piccone, a founder of Resolute Energy with intimate knowledge of the Aneth asset and relationships with key stakeholders.

Exhibit 1: Aneth drives reserve growth



Source: Elk Petroleum, Edison Investment Research

Exhibit 2: Aneth drives production growth*



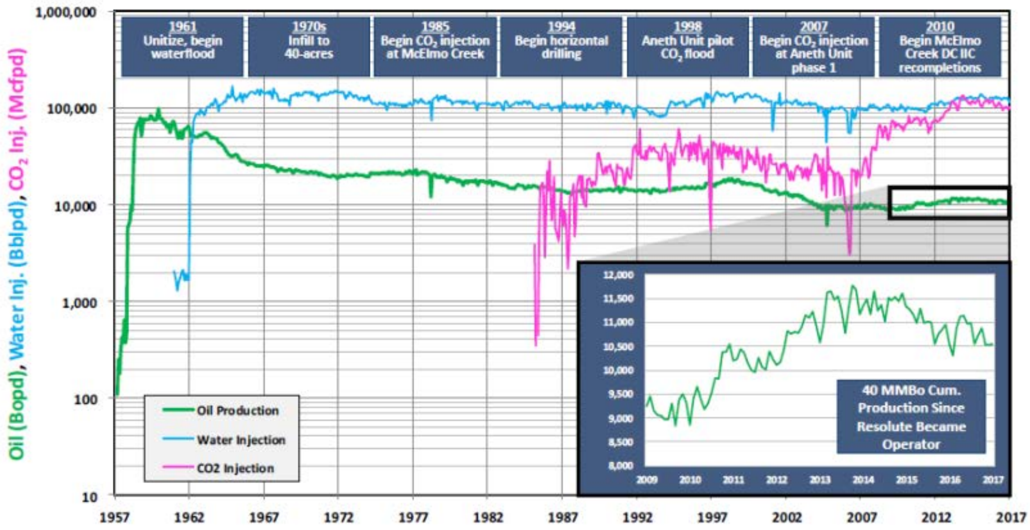
Source: Elk Petroleum, Edison Investment Research. Note: *Calendar years and post-royalty.

Our NAV increases from A$0.09/share to A$0.12/share (+32%) as a result of the transaction, although we expect further value to be created as management optimises the asset and delivers on opex reduction targets (management sees potential to materially reduce the differential at which oil is sold versus WTI) and capital-light asset development opportunities. We expect our NAV to rise as ELK identifies, prioritises and commits capital to these opportunities.

Aneth field history and organic growth opportunities

The Greater Aneth Field is defined as a ‘giant’ oil field with 1.5bnbbls of light sweet oil initially in place (OIIP) and ranked by the EIA as the 86th biggest oil field in the US by proven reserves (March 2015). The field began producing in the late 1950s and tertiary oil recovery through the injection of CO_2 began in the late 1980s. Production profiles highlight the benefit of CO_2 injection on field decline rates with production close to 10mbopd gross over the last decade.

Exhibit 3: Greater Aneth Field production history



Source: Elk Petroleum

To date, oil recovery stands at 31% of in place volumes. However, a study carried out by Resolute Energy in December 2016 estimates that ultimate recovery of 49% of currently accessible in place volumes (1.15bnbbls gross) is achievable – this equates to 40mmbbls of net proven reserves and 112mmbbls of net development and contingent upside.

CO_2 supply and oil marketing

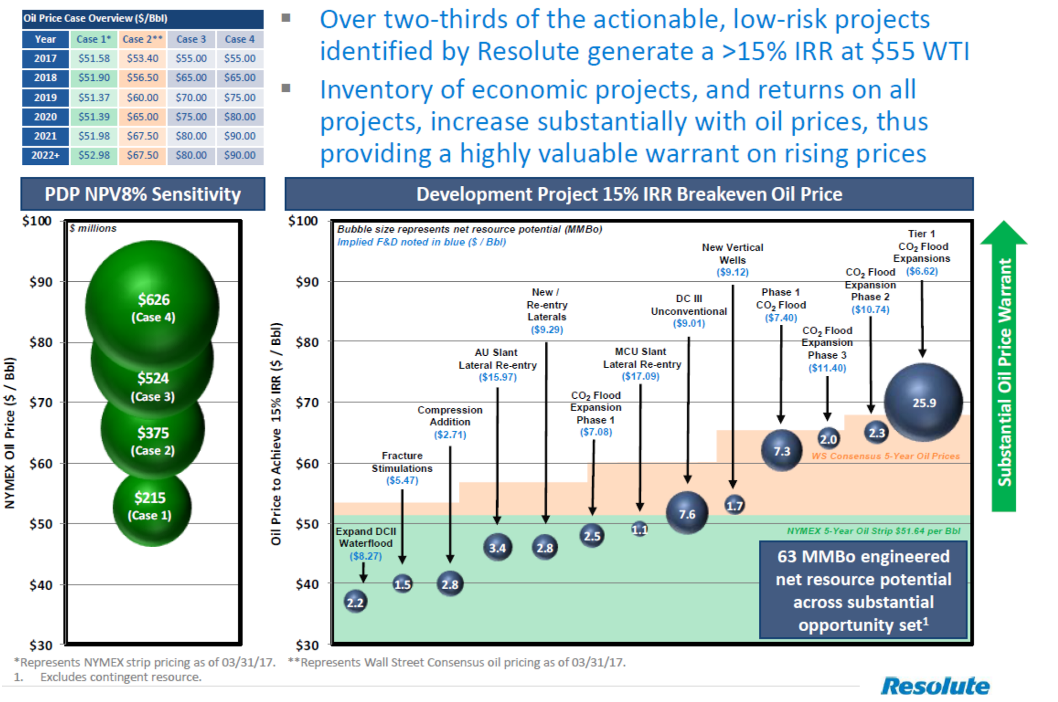
CO_2 for tertiary oil recovery is supplied from Kinder Morgan's McElmo Dome CO_2 Field, which is one of the world's largest CO_2 accumulations with over 20tcf in place and a current production capacity of 1.23bcfd. A 28-mile pipeline connects McElmo Dome to the Aneth field, with capacity of 100mmscfd and CO_2 is contracted via oil-indexed pricing through 2018. ELK sees potential for replacement CO_2 supply sourced from the reservoir beneath the Greater Aneth Field, which may provide the opportunity to reduce operating costs and/or renegotiate existing CO_2 supply contracts.

Oil recovered from the Aneth field is exported via established pipeline networks to end-markets and refineries. Oil is currently sold to Western Refining via the Running Horse Pipeline. However, offtake alternatives, which management now views as cost competitive, include trucking of crude or rail transport to Salt Lake City refineries. Resolute has estimated an average historic differential of $6.85/bbl versus WTI; however, ELK management sees the potential to halve this figure by optimising offtake agreements and routing. We currently assume a $6.85/bbl differential and see potential for a 13% increase from our base case NAV (A$0.12/share) once ELK enacts changes to reduce offtake costs.

Aneth organic growth opportunities

Current Aneth operator, Resolute Energy, has identified numerous organic growth opportunities, which include additional compression, increased CO_2 injection, waterflood expansion, accessing bypassed pay and CO_2 flood expansion. These development projects offer access to net development resources of 63mmbbls and 0.5tcf of gas. Projects highlighted in Exhibit 4 show that a range in F&D cost from US$2.7/bbl to US$17/bbl and two-thirds of the highlighted projects generate an IRR of over 15% at the current oil price, and provide additional NAV gearing to the upside in the event that oil prices rise.

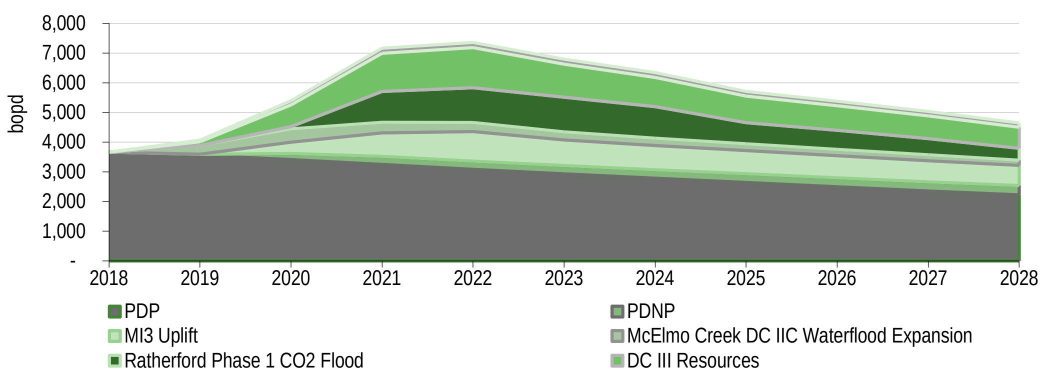
Exhibit 4: Resolute Energy presentation on Aneth development upside



Source: Resolute Energy March 2017

Our base case ELK valuation conservatively assumes a minimal capex case based on current PDP and proved developed non-producing (PDNP) (produced developed producing and produced developed non-producing) production projections. We intend to include engineered growth projects as and when ELK has the opportunity to high-grade development opportunities and commit capital. The production potential of the growth projects highlighted above is shown in Exhibit 5 below.

Exhibit 5: Greater Aneth Area PDP production profile and engineered upside opportunities



Source: Elk Petroleum

Aneth acquisition financing

The total cash outlay for the Aneth acquisition, completed on 6 November 2017, stands at US$175m including financing and debt repayment costs and net of pre-close cash flow. This is to be funded through a combination of debt and new equity (raised in September 2017).

The key terms of ELK's senior debt (US$98m) and preferred equity are highlighted in Exhibit 6. Preferred equity comes at a cost of 15%, which we see as relatively expensive capital, but is an enabler providing access to Aneth cash flows at a material discount to NAV. ELK's intention is to refinance its debt in c 12 months, which should substantially reduce interest costs if it can access

US PDP debt. ELK management estimates it could secure US PDP debt at 4-5% interest (currently), which, if successful, would bring the company's weighted average interest rate down to around 7%.

Exhibit 6: Senior debt and preferred equity terms

Senior Debt

Senior Debt Terms	
Credit Facility	US$98m
Provider	Riverstone Capital Partners LLC
Interest Rate	LIBOR + 900bps
Libor Floor	1.00%
Tenor	4 years
Security	▪ First priority lien on substantially all the assets of the Borrower and the Guarantors and the capital stock of the Borrower
Financial Covenants	▪ Max Total Leverage Ratio ▪ Min Asset Coverage Ratio
Negative Covenants	▪ Strict prohibition on any non-permitted senior, pari passu, or junior debt and lien incurrence ▪ Permitted RPs for preferred equity payments subject to pro forma Financial Covenant compliance and no EoD
Refinancing	▪ Flexibility to refinance over time

Preferred Equity

Preferred Equity Terms	
Features	Unlisted preferred equity
Facility Size	US$55m[1]
Provider	▪ AB Energy Opportunity Fund backstopping the preferred equity raising which will be syndicated to other investors
Coupon	▪ 15% all-in comprising 12% cash and 3% PIK ▪ Payable from available cash flows
Tenor	▪ Perpetual tenor
Redemption	▪ Redeemable by Elk for cash at any time with a redemption premium to deliver a 20% total return ▪ Redeemable by Elk for cash or scrip in event of a secondary listing in North America with a redemption premium to deliver a 18% total return
Backstop	▪ Backstop investors will have a right to accelerated amortisation subject to certain limits for the amount backstopped

1) Elk at its discretion may scale preferred equity facility up to US$65m subject to syndication demand

Source: Elk Petroleum

In addition to debt and preferred equity, Elk has raised US$22m in new equity through the placement of 443m shares announced on 18 September 2017 with institutional and private investors at a price of A$0.062/share.

Aneth accretive to NAV despite equity dilution

Incorporating the effect of equity dilution and the addition of Aneth proven reserve net cash flows to our NAV generates an increase from A$0.09/share to A$0.12/share. With ELK's senior debt supporting the transaction priced at Libor plus 900bp and preferred equity at 15-18%, we have reviewed the use of a 10% discount rate to value the company's producing US onshore assets. Based on current cash flow projections, debt will be rapidly paid down and refinancing of senior debt in two to three years' time should lead to a significantly lower rate. We increase the discount rate used in our base case valuation from 10% to 12.5%, and intend to review this figure as and when financial leverage falls and current facilities are refinanced.

Exhibit 7: ELK valuation summary ($NPV_{12.5}$)

Number of shares: 1061m (diluted)				Recoverable reserves			Net risked	Value per share
Asset	Country	Diluted WI	CoS	Gross	Net	NPV/boe	value	Risked
		%	%	mmboe	mmboe	$/boe	US$m	A$/share
Net (debt)/cash – Dec 17 inc convert and Aneth escrow		100%	100%				(205)	(0.24)
SG&A - NPV of 2yrs		100%	100%				(9)	(0.01)
Producing assets								
Grieve 2P	US	49%	100%	12.3	5.1	22.3	103.0	0.12
Madden Deep 2P	US	14%	100%	1,057.6	143.8	0.2	33.2	0.04
Aneth PDP + Aneth PDNP	US	63.7%	100%	38.6	20.9	9.2	178.4	0.21
Core NAV							101	0.12

Source: Edison Investment Research

In Exhibit 8, we provide a valuation sensitivity to the long-term Henry Hub gas price and WTI. As can be seen, a combination of financial and operational leverage make our ELK valuation sensitive to oil and gas price assumptions (Henry Hub and WTI minus relevant differentials) despite short-term hedges.

Exhibit 8: ELK valuation (A$/share) sensitivity to long-term WTI and Henry Hub price

Gas price (US$/mcf)/WTI (US$/bbl)	40	50	60	70 (base case)	80
2.65	(0.08)	(0.01)	0.04	0.10	0.17
3.4 (Base case)	(0.06)	0.00	0.05	0.12	0.18
4.45	(0.04)	0.03	0.08	0.14	0.20
5.31	(0.02)	0.05	0.10	0.16	0.22

Source: Edison Investment Research

Our valuation is also sensitive to the discount rate used over field life. In our base case we use a static rate of 12.5% over field life. The valuation sensitivity to WACC is shown below.

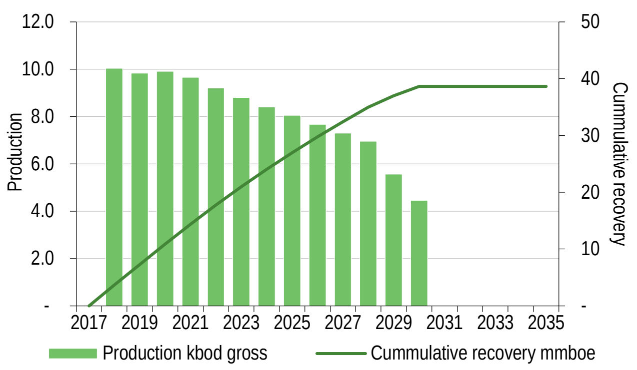
Exhibit 9: ELK valuation (A$/share) sensitivity to long-term WACC and WTI

WACC (%)/WTI (US$/bbl)	40	50	60	70 (base case)	80
7.50%	(0.03)	0.06	0.13	0.22	0.31
10.0%	(0.05)	0.03	0.09	0.17	0.24
12.5% (Base case)	(0.06)	0.00	0.05	0.12	0.18
15.0%	(0.08)	(0.02)	0.02	0.08	0.13

Source: Edison Investment Research

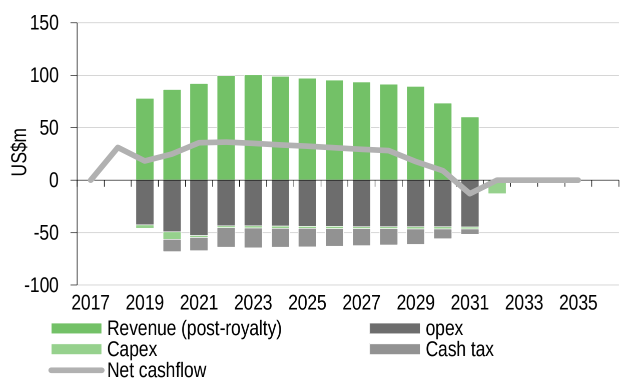
Aneth net production and cash flow projections

Exhibit 10: Aneth modelled PDP + PDNP net production profile



Source: Edison Investment Research

Exhibit 11: Aneth modelled PDP + PDNP net cash flows



Source: Edison Investment Research

Valuation risks and sensitivities

We discussed generic company risks and risks associated with the Grieve and Madden projects in our last published outlook note. Asset-specific risks relating to Aneth include:

- Ability to retain key staff that have prior Aneth operating experience. A six-month transition period and the hire of a Resolute Energy founder, James Piccone, should help mitigate this risk.
- Decommissioning and site restoration costs over and above the US$23m retained in escrow. ELK has indicated Resolute's internal abandonment cost estimate is only US$14m.
- Ensuring subsurface performs in-line with predicted production profiles. We only use PDP and PNDP production profiles in our valuation at this stage, and therefore estimates include an element of conservatism.
- Expansion/optimisation project costs are in line with operator estimates. We do not include differential reduction options in our base case at this stage.

- Facility integrity and uptime maintained.
- Increase in financial leverage as a result of asset transaction. This is mitigated by ELK's ability to refinance in c 12 months, given the fact gearing is likely to fall rapidly at current commodity prices and hedging is in place for the next 18 months, reducing downside risk.
- Identified 'engineered' projects can be executed and deliver returns in line with management estimates.

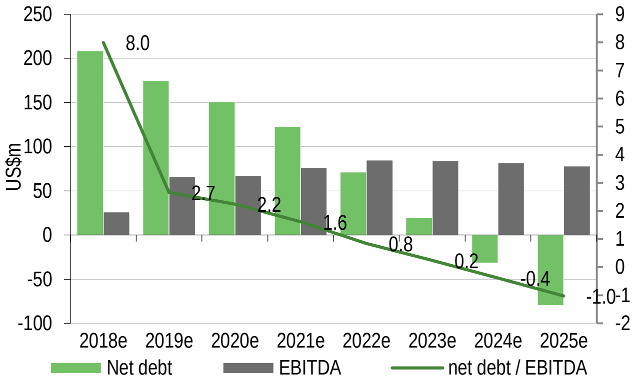
Financials

The net result of the Aneth acquisition is a material increase in CFO and also net debt.

- Management estimates consolidated EBITDA of US$50-55m in calendar year 2018 with sustainable operational cash flow of A$20-25m.
- This compares to our financial year (June year-end) forecasts below of US$26m in FY18 and US$65.9m in FY19. Sustainable CFO will depend on underlying price decks but, as can be seen in Exhibit 13 we expect annual cash flows in the US$30-50m range out to 2025.

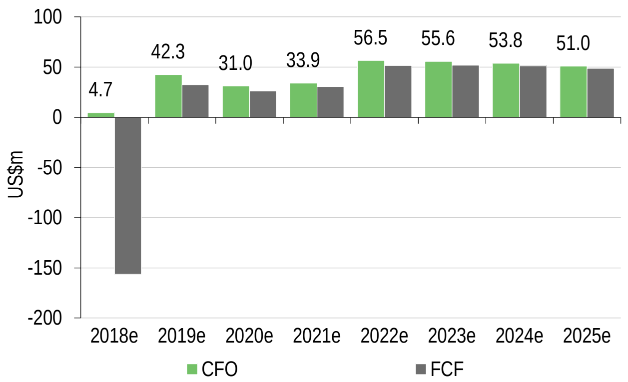
We expect cash flow to be used to pay down debt in the short term. Financial leverage may limit the ability to fund further transactions in the short term unless they reduce net debt/EBITDA. However, it is encouraging to see net debt falling rapidly over the next five years based on our forecasts and we would expect ELK to seek to refinance its debt once leverage starts to drop.

Exhibit 12: Forecast net debt/EBITDA*



Source: Edison Investment Research. Note: *Financial years with June year end.

Exhibit 13: Cash flow from operations and FCF*



Source: Edison Investment Research. Note: *Financial years with June year end. Numbers reflect CFO (operating cash flow).

Exhibit 14: Financial summary

A$'000 to FY16 then US$'000	2016	2017	2018e	2019e	2020e
Year end June	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS					
Revenue	44	4,965	56,937	131,791	136,742
Cost of sales	(231)	(4,366)	(26,210)	(61,256)	(64,629)
Gross profit	(187)	598	30,728	70,535	72,113
General & admin	(4,554)	(5,784)	(4,630)	(4,630)	(4,630)
EBITDA	(4,740)	(5,185)	26,098	65,905	67,484
Depreciation	(128)	(1,377)	(9,724)	(16,866)	(14,952)
Operating Profit (before amort. and except.)	(4,868)	(6,562)	16,373	49,038	52,532
Intangible amortisation	0	0	0	0	0
Exceptionals	1,079	0	0	0	0
Other	0	0	0	0	0
EBIT	(3,789)	(6,562)	16,373	49,038	52,532
Net interest	(356)	(1,555)	(14,088)	(18,597)	(18,597)
Profit Before Tax (norm)	(5,224)	(8,118)	2,286	30,441	33,935
Profit before tax (FRS 3)	(4,145)	(8,118)	2,286	30,441	33,935
Tax	0	0	(1,861)	(9,765)	(18,750)
Profit After Tax (norm)	(5,224)	(8,118)	425	20,677	15,185
Profit after tax (FRS 3)	(4,145)	(8,118)	425	20,677	15,185
Average number of shares outstanding (m)	263.2	819.9	1,050.0	1,050.0	1,050.0
EPS - normalised (c)	(2.0)	(0.9)	0.0	2.0	1.4
EPS - normalised fully diluted (c)	(2.0)	(0.9)	0.0	2.0	1.4
EPS - (IFRS) (c)	(1.6)	(1.0)	0.0	2.0	1.4
Dividend per share (c)	0.0	0.0	0.0	0.0	0.0
Gross margin (%)	-422.2	12.1	54.0	53.5	52.7
EBITDA margin (%)	-10,728.7	-104.5	45.8	50.0	49.4
Operating margin (before GW and except.) (%)	-11,018.2	-132.2	28.8	37.2	38.4
BALANCE SHEET					
Non current assets	31,197	96,415	230,219	220,270	210,926
Intangible assets	30,901	93,064	93,064	93,064	93,064
Tangible assets	118	105	133,908	123,960	114,615
Investments	178	3,247	3,247	3,247	3,247
Current assets	14,783	15,283	41,372	43,252	42,799
Stocks	0	0	631	1,258	1,106
Debtors	1,339	2,184	1,262	2,515	2,213
Cash	13,444	4,859	8,239	8,239	8,239
Other/ restricted cash	0	8,240	31,240	31,240	31,240
Current liabilities	(10,095)	(17,531)	(11,784)	(16,797)	(15,588)
Creditors	(10,092)	(10,795)	(5,048)	(10,061)	(8,852)
Short term borrowings	(3)	(6,736)	(6,736)	(6,736)	(6,736)
Long term liabilities	(18,957)	(73,662)	(227,900)	(194,141)	(170,367)
Long term borrowings	(16,441)	(55,846)	(210,083)	(176,324)	(152,551)
Other long term liabilities	(2,516)	(17,817)	(17,817)	(17,817)	(17,817)
Net assets	16,928	20,505	31,907	52,584	67,770
CASH FLOW					
Operating cash flow	(3,122)	(3,084)	4,693	42,326	31,031
Net interest	0	0	0	0	0
Tax	0	0	0	0	0
Capex inc acquisitions	(2,451)	(56,553)	(166,528)	(6,917)	(5,607)
Other	0	(4,458)	0	0	0
Equity issued	17,916	(648)	10,977	0	0
Dividends	0	0	0	0	0
Net cash flow	12,342	(64,743)	(150,857)	35,409	25,424
Opening net debt/(cash)	20,949	3,001	57,723	208,580	174,821
HP finance leases initiated	0	0	0	0	0
Other	5,606	10,021	(0)	(1,650)	(1,650)
Closing net debt/(cash)	3,001	57,723	208,580	174,821	151,047

Source: Company accounts, Edison Investment Research. Note: *After placement fees relating to financing (equity, preferred equity and debt).

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