EDISON

Rockhopper Exploration

Initiation of coverage

Sea Lion development supports core upside

Oil & gas

Rockhopper (RKH) is midway through a four-well exploration and appraisal campaign to explore and understand the reservoirs in its licences, including the 400mmbbl Sea Lion development, shared with Premier Oil (PMO). RKH is fully funded for Phases 1a and 1b, from which further development can be financed. This forms the majority of RKH's core value (144p/share), which is well above the current share price. Furthermore, our analysis indicates the value should increase markedly over time as first oil approaches. Beyond Sea Lion, the Isobel Deep discovery hints at another major discovery field, once fully explored and appraised. With pre-drill estimates of over 500mmbbl, it could more than double gross resources.

Year end	Revenue ($m)	PBT* ($m)	CFO ($m)	Net (debt) cash ($m)	Capex ($m)
12/13	0.0	(15.7)	(12.8)	247.5	(41.3)
12/14	1.9	(7.4)	(11.2)	199.7	(10.6)
12/15e	3.4	(12.0)	(8.5)	127.3	(64.0)
12/16e	10.4	(6.8)	1.4	101.6	(27.0)

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

Development of first oil at Sea Lion in 2019

After a planned final investment decision (FID) in mid-2016, Sea Lion should see first oil in late 2019 under Phase 1a, with two or more phases unlocking resources from PL032 and PL04 over time. Current plans are to produce around 60mb/d from an FPSO, though success in further drilling may boost these plans in the longer term.

Exploration still provides upside

Recent news has de-risked potential at the Isobel Deep/Elaine complex, estimated to contain 510mmbbl pMean resources. If proven up, the complex would be a second major leg in the North Falkland's story, and push gross recoverable resources over 900mmbbl. Further exploration and appraisal is needed and we expect the consortium to return to follow up the first Isobel Deep well to understand the potential. The well has further demonstrated RKH has good understanding of the basin with nine of 11 wells successful.

Valuation: Undervalued and should grow

The 2012 farm-out to PMO secured RKH's financial position and put it in a rare group of fully-funded developers. Our core NAV (144p) is well above the share price, while RENAV including the Isobel Deep complex, its two upcoming Falkland wells (Chatham and Jayne East) and Faseto in Italy increases further. Of these, we are most interested in the results of any future Isobel drilling (timing yet to be firmed up), which could de-risk a complex, which is potentially as large as than Sea Lion, and unlock further value. Our analysis indicates core NAV growth of around 20%, promising strong returns for investors.

17 July 2015

Price	**65.0p**
Market cap	**£192m**
	£0.66/US$
Net cash ($m) at Dec 2014	199
Shares in issue	296m
Free float	87.5%
Code	RKH
Primary exchange	AIM
Secondary exchange	N/A

Share price performance

%	1m	3m	12m
Abs	(4.7)	4.0	(32.4)
Rel (local)	(5.1)	8.4	(34.3)
52-week high/low		99.5p	51.8p

Business description

Rockhopper is a London-listed E&P with fully-funded development of Sea Lion, a 400mmbbl field in the Falklands. It also holds production, development and exploration assets in the Mediterranean.

Next events

Jayne East well results	Q315
FEED award on Sea Lion	Q315
Chatham well results	Q315

Analysts

Will Forbes +44 (0)20 3077 5749

Elaine Reynolds +44 (0)20 3077 5713

Ian McLelland +44 (0)20 3077 5756

oilandgas@edisongroup.com

Edison profile page

Rockhopper Exploration is a research client of Edison Investment Research Limited

Investment summary

Company description: Funded Falkland flyer

Rockhopper is a London-listed E&P and the most successful explorer in the Falkland Islands. After a 2012 farm-out to Premier Oil, it has a fully-funded 40% net working interest in Sea Lion, a 2010 discovery that holds gross contingent resources of 400mmbbl. RKH is continuing to explore in the area and is drilling four wells in 2015; of the two wells already drilled, both encountered hydrocarbons. The company also has interests in production, development and exploration assets in the Greater Mediterranean region.

Valuation: Core upside with exploration

We examine RKH's value in a number of ways. Our default methodology based on individual field DCFs results in a core NAV of 144p/share, representing significant upside to the share price. Sensitivity analysis suggests that the valuation is robust even in increased costs environment and applying higher discount rates beyond our assumed 12%. Furthermore, the value of the company should expand in time at a CAGR of around 20% 2015-20 if the development progresses as modelled, with first oil from Phase 1a in late 2019. If investors are comfortable with PMO and RKH's ability to deliver the project on timelines suggested, the shares are undervalued on our assumptions.

Beyond this, RKH has been successful in exploration and has a number of exploration prospects yet to drill in 2015, which could add meaningfully to the resource base. In particular, the oil found at Isobel Deep well has partially de-risked the prospect of another Sea Lion-type field, with pre-drill estimates of 510mmbbl pMean. Given this potential, we expect RKH and PMO to return to Isobel Deep in short order.

Financials: Strong balance sheet

With around $200m in cash at end-2014 and no need to source further external capital for the development of Sea Lion Phase 1a, Rockhopper is in a strong financial position. With projected spending in 2015 of c $75m, we expect it to have around $125m by the end of 2015. Development capital from PMO for Sea Lion should then kick in. Capital requirements for Isobel Deep are worth consideration, should drilling prove up the resource.

Sensitivities: Financial strength

As a fully-funded E&P, RKH has the financial strength to withstand near-term oil price weakness and the poor sentiment in equity markets. It has no need to seek external capital unless very significant discoveries are made, or it wants to speed up development plans. In addition, attractive fiscal terms means the development of Sea Lion is valuable even in low oil prices.

While Premier Oil is a valuable partner, we understand it is looking to reduce its stake. Although it has indicated that a farm-down will not stop it reaching project sanction, it is possible that the involvement of any farm-down partner would delay FID or first production as it seeks to understand the concept, although any farm-down would provide a greater degree of certainty of a development occurring. The discovery at Isobel Deep, and the potential for another Sea Lion, may help in any process.

We also stress that more appraisal and analysis will be required on the Elaine/Isobel complex.

Rockhopper: Building a full cycle, exploration-led E&P

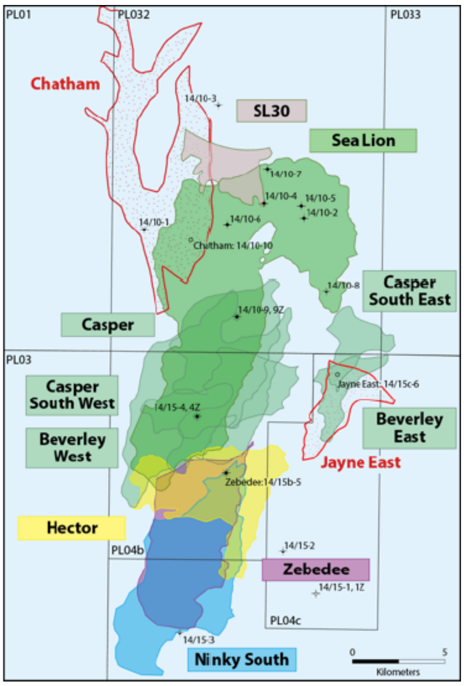
Rockhopper is a London-listed E&P and the most successful explorer in the Falkland Islands. It has a fully-funded 40% net working interest in Sea Lion, a discovery that holds gross contingent resources of 400mmbbl. Development of Sea Lion will begin with a phased approach with first oil in 2019 for Phase 1a, with further phases starting over time. The value of the development more than supports the current share price.

RKH and PMO (60% WI) continue to appraise and delineate the structures that will be developed in Sea Lion over time, but are also exploring for other prospects within the blocks. To this end, the consortium is in the middle of a four-well drilling campaign to better understand the potential upside in the area. The first discovery, Zebedee, has been followed by Isobel Deep, giving Rockhopper success in nine of its 11 wells drilled in the area to date. While Zebedee is an incremental discovery to the Sea Lion complex, the discovery at Isobel Deep opens up a new play that could be a similar size to Sea Lion (pre-drill estimates put Isobel Deep at 510mmbbl pMean). Two further wells are planned in 2015. The company also has interests in production and development assets in the Greater Mediterranean, which it acquired when it bought Mediterranean Oil & Gas in 2014.

Geologic setting of the North Falkland Basin

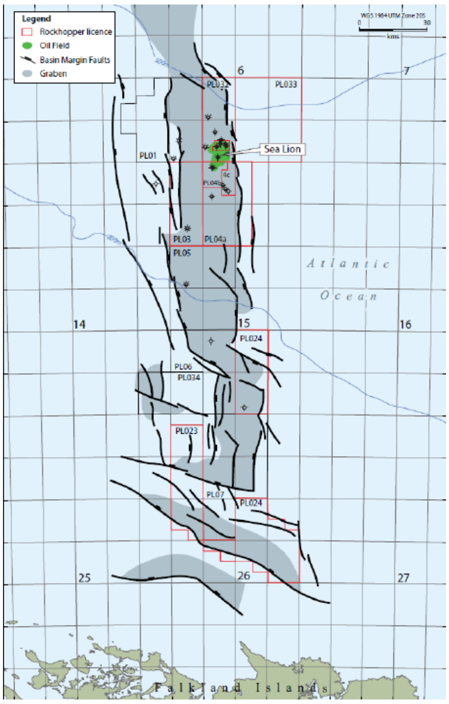
The North Falkland Basin (NFB) is a north-south trending Atlantic failed rift filled primarily by early cretaceous to tertiary sediments. Rivers entering the basin from the north deposited sand that accumulated as a shoreface deposit, and re-deposited from that shelf as a series of fans to be encased in the organic mud. Rockhopper identified the canyon feeder systems as originating from the eastern flank, with fans of many kilometres of areal extent coming from those feeders with Sea Lion close to the eastern margin.

Exhibit 1: Rockhopper Falklands discoveries and drill prospects (Isobel Deep not included)



Source: Rockhopper

Exhibit 2: NFB depositional setting



Source: Rockhopper

The field was discovered in 2010 by Rockhopper's first operated well in the basin (14/10-2) and was extensively appraised throughout 2010 and 2011 with nine wells over the Sea Lion structure. The campaign established the presence of c 400mmbbl recoverable oil (150mmbbl net to RKH) and 1.8tcf gas in Sea Lion and the satellite fields Casper, Casper South and Beverley. The 14/10-5 well also demonstrated the field could deliver commercial flow rates when it produced at a stable rate through an ESP at 5,508b/d and a maximum rate of 9,600b/d.

Farm-down to Premier

In July 2012, Rockhopper announced a farm-down of 60% of its North Falkland Island interests to Premier Oil. In return, Premier took over operatorship and agreed to provide $231m in cash, a $722m development carry (net to Rockhopper) and $48m of exploration carry (net). Premier would also extend financing to Rockhopper for any development capital required beyond the $722m. The terms of the financing have since evolved and they now take the form of a vanilla loan.

A phased approach at Sea Lion targets 2019 first oil

When Rockhopper farmed-out its licences to Premier Oil in 2012, the joint venture began looking to develop Sea Lion in two phases, with Phase 1 developing 293mmbbl in Sea Lion and Phase 2 developing around 100mmbbl from the satellite discoveries. The development concept involved 32 wells producing at a peak rate of 100mb/d to a tension-leg platform (TLP) at an estimated cost of $3.8bn to first oil. In response to lower oil prices, however, this was broken down further in November 2014 to provide a lower-cost development solution.

Development concept and roll-out

Phase 1a – The initial phase will target a reduced area of the field from the North East area. As a result, the new development will have a reduced well count of 14 development wells to provide a plateau of c 60mb/d, producing from a leased FPSO rather than a TLP. There will be eight producers, five water injectors and one gas producer/injector, with nine of these pre-drilled. The wells will be tied back to the FPSO via a single subsea drill centre. This will minimise the number of flowlines and mitigate potential flow assurance issues due to the crude's waxy nature.

Further technical details are still being determined; however, at this stage the production wells are planned to be horizontal, with an open hole or screened horizontal section of around 1km, while artificial lift will be provided by gas. Techniques to keep the temperature of the crude above pour-point temperature to avoid wax deposition are also being assessed, including using vacuum insulated tubing in the production wells, as was successful in the 14/10-5 DST, and water circulation in the flowlines. Project sanction is now targeted for mid-2016 with first oil expected in 2019. In our modelling, we assume the production profiles as given by Premier Oil in the recent company presentation. We do not expect any unitisation on this part of the development, as all the oil would be sourced from within PL032.

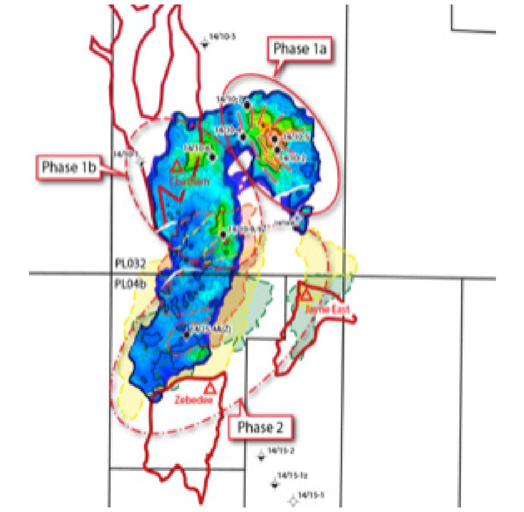
Phase 1b – Development of the Sea Lion complex will move south west for Phase 1b, which is currently planned to start in 2024, five years after the production from Phase 1a. It is planning to develop around 160mmbbl (according to RKH) in a look-alike development. As envisaged, the drainage area for Phase 1b will remain within Block PL032 (RKH WI 40%). This may be extended to drain any resources found with Chatham (60mmbbls if no gas cap is found with 65mmbbls with Chatham success).

Phase 2 – As Phase 1a and Phase 1b volumes decline, the plan is to exploit resources further south for Phase 2, where production start-up is planned for 2026 (though timing will depend on

Phase 1a/1b). Additional resources discovered from Zebedee and Jayne East would be included at this juncture.

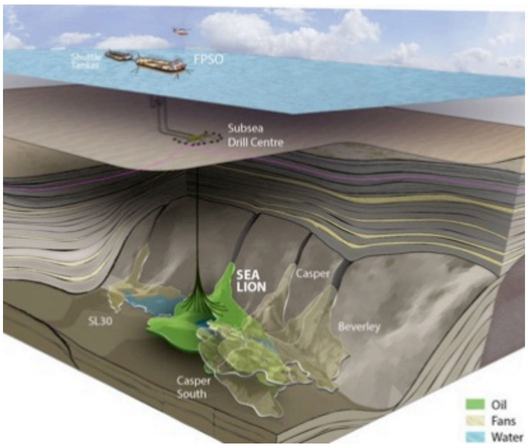
We assume that Phase 2 volumes will be fed exclusively from Block PL04b, which has a different ownership structure to PL032 and the rest of Sea Lion (PMO 36% and RKH 24% are joined by FOGL [40%]).

Exhibit 3: Sea Lion development phases



Source: Rockhopper

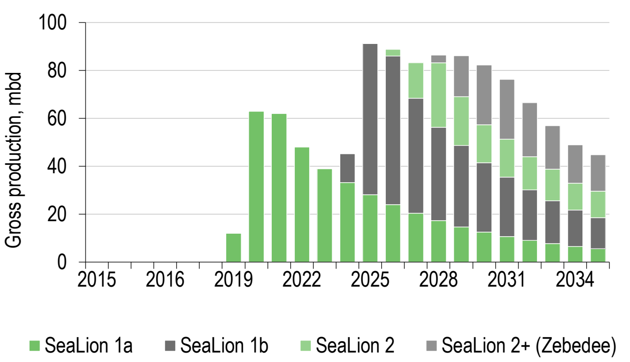
Exhibit 4: Sea Lion development



Source: Rockhopper

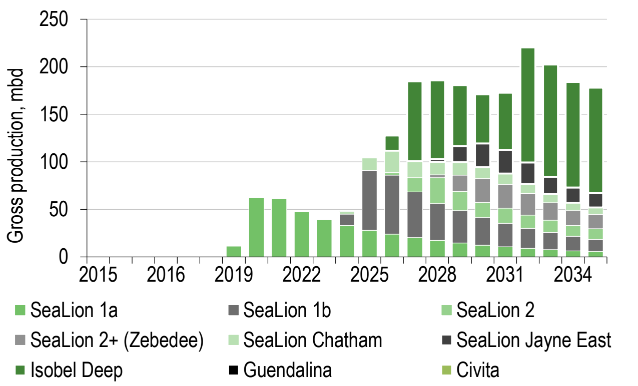
Beyond phase 2 – Successful drilling in 2015 so far has hinted that further development of Sea Lion beyond the two phases is possible. Isobel Deep is too far (40km away) to be folded into the Sea Lion complex and will require a standalone development. However Zebedee, Jayne East and others could easily augment the current plans.

Exhibit 5: Gross production of RKH assets, FI



Source: Edison Investment Research, PMO. Note: Excludes any Isobel development.

Exhibit 6: Gross production potential with exploration and Isobel Deep



Source: Edison Investment Research, PMO. Note: Includes preliminary modelling of Isobel development.

Funding for development

Phase 1a – The change in scope to phased developments has significantly reduced the expected capex to first oil to $1.8bn. For RKH, the carry available from PMO for Phase 1a of $337m should cover around half of the $720m net costs capital costs (pre-first oil). Funding for the rest of the capital is assured through the secondary funding from PMO, which amounts to a standby loan of up to $750m. The terms of this have altered slightly from the initial farm-down and we believe they are on a straightforward loan basis. RKH is free to seek alternative sources of finance, and we expect management to look to RBLs and corporate loan facilities closer to first oil to see if it can secure better terms than the PMO offer. However, PMO cash is available as a backstop if needed.

The JV anticipates that further savings can be realised as costs are reduced in the low oil price and weaker supplier market. For example, the current capex includes an estimated drilling expenditure of $0.7bn. With rig rates already down c 30-40%, there is potential to reduce this element by c 35%. (The remainder is $0.1bn pre-sanction capex, $0.7bn surf and installation, and $0.4bn project management).

Given the phased development of the field, the cash flows from Phase 1a will go some way to fund **Phase 1b**. For RKH investors, this is not a concern for the company (given the residual $337m carry from PMO under the terms of the farm-out), but it does increase the overall affordability of the project for PMO, as the company will be able to gain further debt (if required) based on Phase 1a cash flows.

After the start-up of Phase 1b, the project is strongly cash-positive, even accounting for capital required to bring on **Phase 2** (and beyond). We note that the capex will partially come from FOGL, which we assume contributes its fair share (WI is 40%). PMO currently guides for first oil from Phase 2 in 2026.

Beyond Phase 2 and Isobel Deep – The discovery of hydrocarbons at Isobel Deep (see later section) has the potential to alter plans for the development of Sea Lion. If confirmed by further wells, the Isobel Deep/Elaine complex has the potential for 510mmbbl (pMean). Given its size, it makes little sense to delay the development of such resources until the cash flows from Sea Lion can fund capital investments if other, better alternatives can be found. This may include a farm-down of current interests to fund an accelerated development.

Thoughts on PMO farm-down potential

Premier has indicated it is looking to farm-down the asset to reduce overall risk and financial exposure; however, it has said that a farm-down is not required and it will not hold up FID in mid-2016. Under the current assumptions of the delivery of Sea Lion, Rockhopper does not need further financing and so does not need to farm-down any of its interest.

For investors concerned about PMO's ability to fund the development, it has $292m in cash (at 31 December 2014) and, according to the May 2015 presentation, it has cash and undrawn facilities of $1,940m. We do not cover PMO and so cannot assess with more certainty its ability to fund Sea Lion or know other cash outflows due to other developments in the meantime, but these figures suggest a strong balance sheet. We note that debt maturities for drawn-down loans are $301m in 2017, $480m in 2018 and $973m in 2019.

Isobel Deep/Elaine complex (see section overleaf) may alter the picture for a farm-down. If further drilling proves up anything close to the pMean estimate of 510mmbbl, a fresh look at possible development scenarios is worth considering. Should discovered resource move towards 1bnbbl, the development will interest larger entities more capable to fund large-scale development less constrained by capital phasing. Under this scenario, it could very well be better for RKH to reduce its stake in return for accelerated (possibly carried) development of Sea Lion and Isobel than waiting for a phased development across the portfolio (driven by Sea Lion cash flows).

Under this scenario, any interested party is likely to want a larger portion than PMO may wish to farm-down. To facilitate the entrant of a larger party, it may be that RKH reduces its stake. If this happens, we would expect the deal to be accretive to RKH's value overall.

2015 exploration

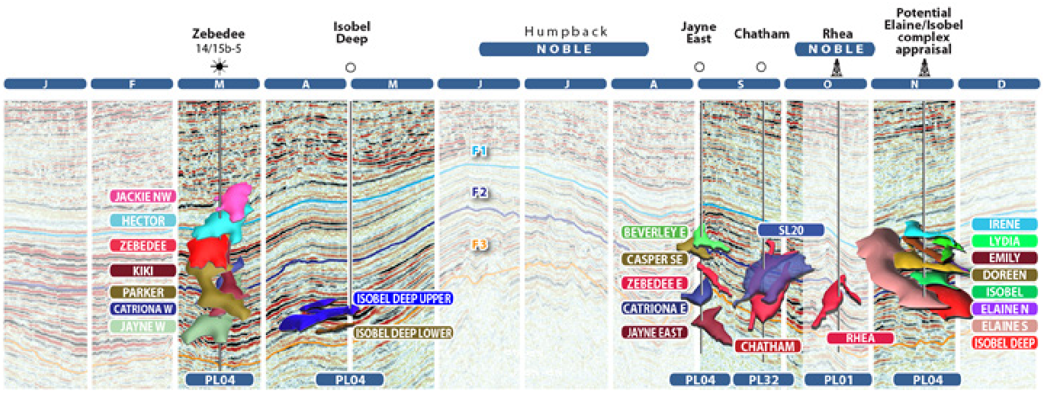
RKH maintained the subsurface lead in the joint venture (JV) for exploration and so carried out the majority of the mapping and prospect generation in preparation for the 2015 drilling campaign. With the Zebedee and Isobel Deep discoveries coming in on prognosis, the company has continued its impressive exploration record and has reinforced confidence in its interpretation of the subsurface. Most notably, the discovery of hydrocarbons at Isobel Deep (announced in early June) is perhaps the highlight of the 2015 programme and has the potential to add another leg to the RKH story.

Exhibit 7: Summary of drilling, 2015 programme

	Status	WI	Gross prospective resources, mmbbl			# of sands	Pre-drill GCoS	Comments
			P90	pMean	P10		%	
Zebedee	Discovery	24%	53	282	741	7	9-52%	Extension of Sea Lion fan play (DISCOVERY).
Isobel Deep	Discovery	24%	9	72	207	1	20%	High impact. Separate development required given distance from Sea Lion (32km).
Jayne East	Ongoing	24%	21	87	214	5	10-36%	Test proven reservoirs of Beverly and Casper South plus deeper Jayne fan. Close proximity to Sea Lion.
Chatham	Ongoing	40%		127		2	17%, 50%	Test presence/absence of gas-cap for Sea Lion. Deeper target may open play for other northerly fan systems. Would be accessible for Phase 1b.
Potential Elaine/Isobel Deep complex		24%	80	510	1,424	9	9-20%	The positive signs from results from the Isobel Deep well reduce the geological risk in this play, although further work will be required to de-risk the entire complex.

Source: Edison Investment Research

Exhibit 8: 2015 drilling schedule

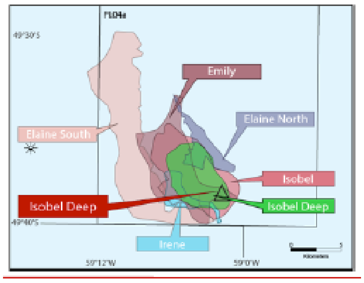


Source: Rockhopper

Isobel Deep/Elaine complex– bigger than Sea Lion?

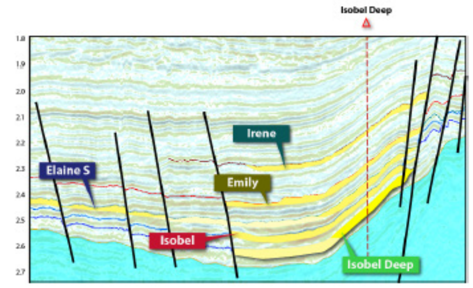
The May 2015 oil discovery at Isobel Deep has established the presence of oil in the deeper F3 sands in an untested area around 40km to the south of Sea Lion. Although the objective was a single large fan, success here has proved the concept for up to eight further stacked fans, known as the Elaine/Isobel complex. Prior to drilling, the complex was interpreted from seismic to be a lookalike to Sea Lion and on a similar scale, with Rockhopper estimating gross pMean resources of 510mmbbl.

Exhibit 9: Isobel Deep



Source: Rockhopper

Exhibit 10: Isobel Deep



Source: Rockhopper

The well encountered the upper 24m of oil-bearing F3 sands; however, the reservoir pressure in these sands was higher than expected and resulted in an influx of oil into the well. As a result of this new information, the JV decided to suspend the well, and will now consider the best way to appraise the discovery while the Eirik Raude rig moves to drill in the Southern Basin. The sands came in only 2m higher than predicted and from the mapped thickness would be expected to be around 75m thick at this location, so that potentially only a third of the reservoir has been drilled to date. Data gathered from the well are limited to 12m of logging while drilling (LWD) data, well cuttings and the fluid influx; however, this information is extremely encouraging and sufficient to significantly de-risk the complex.

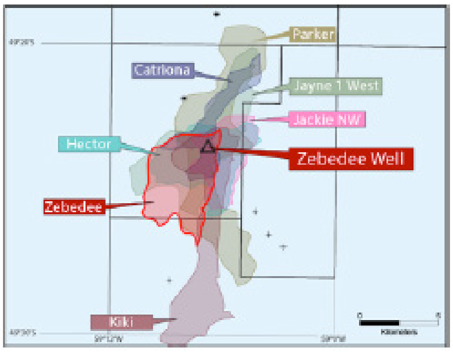
The oil that came into the well was recovered at surface and is being analysed but appears similar to that found in Sea Lion. This shows that the sands are oil-bearing and proves that the key pre-drill risk of the presence of a trap mechanism works here. Further appraisal will be required to definitively demonstrate the quality of the reservoir at this location; however, the LWD data and well cuttings analysis suggest the reservoir quality is promising. Options for appraisal could include: (i) return to the original well and complete drilling with an additional casing string; (ii) re-drill in a similar position; or (iii) re-drill down-dip to establish deeper oil down to.

The final decision will, however, depend on an analysis of the technical data together with the agreement of all the JV partners. The JV could exercise an option to return to appraise Isobel Deep at the end of the remaining four firm wells in the campaign, ie Humpback (Noble/FOGL in Southern Basin), Jayne East, Chatham and Rhea (Noble/Argos to the west of Sea Lion). If taken up, we estimate that this would occur around November 2015, but would likely depend on a successful downward renegotiation of the existing rig rates.

Zebedee discovery

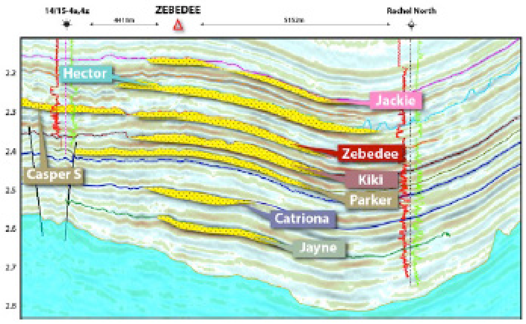
Well 14/15b-5, Zebedee, is located immediately to the south of Sea Lion in PL04b and was drilled in March 2015 to explore fans adjacent to the existing satellite discoveries. The well targeted multiple reservoirs covering the F2 and F3 sands and was the only well in the campaign to target the shallower F1 sands. All seven of the predicted sands were encountered in the well, together with an additional oil-bearing sand in the F2. Three F2 fans were hydrocarbon bearing including the primary Zebedee fan, while good oil shows were also recorded in the deeper F3 targets.

Exhibit 11: Zebedee



Source: Rockhopper

Exhibit 12: Zebedee seismic



Source: Rockhopper

The Zebedee sand was encountered with 25.3m of net oil pay and reservoir quality reported as among the best to date, with no oil water contact observed. As such, the company expects that the gross resources could be c 10% higher than the pre-drill estimate of 50mmbbl.

The shallower F2 Hector sand found 18.5m of net gas pay with good reservoir properties. The possibility of Hector being gas-bearing had been identified prior to drilling, given that it sits above the gas-oil contact (GOC) in the Sea Lion appraisal well 14/15-4. No GOC was found, and work is ongoing to establish if the gas gradient here is slightly different to that found previously in Beverley and Casper South. If confirmed, it could point to the presence of a bigger oil leg than previously anticipated down-dip, with the company estimating that this could be around 25mmbbl oil. A further F2 reservoir was found to be oil-bearing. Mapped by RKH as Ninky South, the 6.4m sand contained 2.6m of net oil pay. The sand was not included in the pre-drill estimate as it was tagged in a marginal position.

Prior to drilling the well, the key risks for the deeper F3 sands were expected to be the reservoir quality and that the sands could be water bearing. The presence of good oil shows here established that the sands are hydrocarbon-bearing, but the reservoir quality was poor at this location.

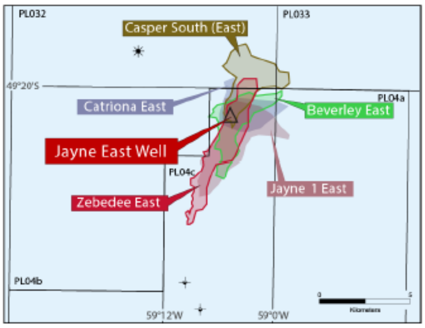
2015 exploration – ongoing drilling

Jayne East – low-risk extension on eastern flank

Well 14/15c-6, Jayne East, sits in PL04c immediately to the south of Sea Lion and east of Zebedee, and is planned to target five separate fans across the F2 and F3 sequences. The primary objective is to test the F2 sands on the east flank of the syncline, including the known Zebedee, Beverley and Casper South fans, which are oil- and gas-bearing on the west flank. Two deeper F3 targets, Catriona East and Jayne East, will look to establish better reservoir quality than in Zebedee.

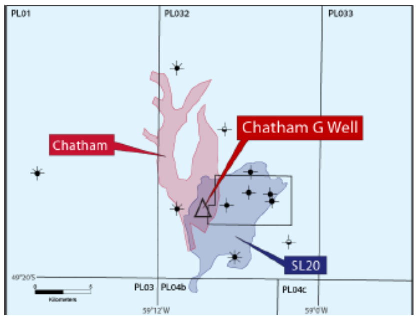
The top hole section has already been drilled in the well and a 30” conductor set at 541m, while operations could not continue at Isobel Deep due to BOP (blowout preventer) issues. The rig is expected to return to drill in August once work is completed on Noble Energy’s Humpback well in the Southern Basin.

Exhibit 13: Jayne East



Source: Rockhopper

Exhibit 14: Chatham



Source: Rockhopper

Chatham – gas-cap appraisal and deeper exploration

The Chatham well (14/10-10) is primarily an appraisal of the western flank of Sea Lion to determine the presence or absence of a gas cap in the SL20 sands. This is of importance as if no gas is present in the well, around a further 65mmbbl can be added to the Sea Lion resources (if the well does encounter a gas cap, the location (though not the well) could instead be used for gas reinjection during production if required). The well will then continue on to the deeper Chatham exploration prospect (GCoS 17%), which will test a deltaic fed channel/fan system. Together, these prospects are targeting 127mmbbl pMean unrisked gross resources. The well has already been drilled to the 13 3/8" casing point at 1,388m to make the best use of rig time while the BOPs were being repaired, so we expect the remainder of the well to be drilled in around two weeks once drilling is resumed. Given the location, RKH has indicated that a development of Chatham could occur during the Phase 1b stage.

Mediterranean portfolio

In August 2014, RKH completed the acquisition of Mediterranean Oil & Gas. As a result, it gained a large Mediterranean portfolio (centred around Italy) from which it intends to expand over time. Onshore assets are spread among the northern, eastern coastal and southern tip of Italy, while the offshore are mainly in the northern/central Adriatic, although it also holds blocks offshore Malta.

The current levels of production, revenues and value are relatively small when compared to the Falkland Island assets, but provide low-risk cash flow and high-value barrels (Italian gas prices are around $8.5/mcf and Italy has attractive fiscal terms). The cash flow should go some way to covering G&A, though exploration success is needed to add more materially to the NAV value.

The offshore **Guendalina** field (20% WI, northern Adriatic) is currently producing around 1,100boe/d of gas through two intervals (a short string and long string) of one well. In the other well, the operator (ENI 80% WI) is planning a sidetrack in H215 (which has been shut in since 2012) and this will target a more up-dip location, boosting production and ultimate recoverable gas. It is hoped it could increase net production from around 223boe/d to around 400boe/d. We have modelled the field as starting this increased production in early 2016 and producing another 2.5mmboe of gas over its lifetime (which we model ending in around 2021).

The onshore **Civita** gas development (100% WI) requires a small amount of capex in 2015 before coming online. Around $3m will be spent to start-up production of the field, which will drain a small, but valuable gas resource. Rockhopper expects first gas to start in Q415, which will feed a main Snam Rete Gas pipeline network.

The **Ombrina Mare** field (central Adriatic) has audited 2C resources of 25.1mmbbl (and 8bcf gas), and appraisal wells could see this oil volume increase towards 40mmmbls. The field holds very significant value for RKH if the company's planned appraisal well proves up the resource and shows deliverability. The historic wells tested between 900-1,000bbl/d of 17-19 API oil with very clean gas (99% methane) from a shallower zone. As a result, the company expects to require around five wells to drain the reservoir with a platform and FPSO. The key steps for the field are the approvals for drilling and development permits. We currently model production starting in 2020, though this is subject to significant uncertainty, given Italian delays are likely.

Exhibit 15: Mediterranean portfolio

Source: Rockhopper

The **Monte Grosso** exploration prospect (WI 22.89%) is estimated to contain over 200mmbbls of gross pMean resource. The prospect is believed by the company to be "robust" and one of the largest remaining onshore oil prospects in Western Europe, on trend with Val d'Agri and Tempa Rossa. The company (MOG pre-acquisition) applied a GCoS of 23%. The company plans to drill the prospect in 2017, subject to Italian permitting.

Croatia

In January 2015, RKH added a 40% interest in Block 9 offshore Croatia and continues its strong relationship with operator ENI. The shallow water block will require early-stage G&G investigation, seismic acquisition and processing in the first three years, before a well (if elected).

Management

Non-executive chairman: Dr Pierre Jungels CBE – a certified engineer with a PhD from CALTECH. He was CEO of Enterprise Oil from 1996 to 2001 and prior to that was MD of Exploration and Production for BG in 1995 and worked for 23 years with Petrofina, including eight years on the main board. He is a non-executive director of Baker Hughes and chairman of Oxford Catalysts. He was twice president of the Institute of Petroleum, from 1987-89 and 2002-03.

CEO: Sam Moody – a co-founder of Rockhopper and has been responsible for building and managing the group from its formation in early 2004. He previously worked in several roles in the financial sector, including positions at AXA Investment and St Paul's Investment Management.

COO: Fiona MacAulay – Fiona is a geologist with over 25 years' experience including time at Mobil, Amerada Hess and BG. She joined Rockhopper in 2010 immediately following the Sea Lion discovery and was an integral member of the senior team that managed the appraisal of the Sea Lion field and discovered the Casper, Casper South and Beverley fields.

CFO: Stewart MacDonald – prior to joining Rockhopper, Stewart was a director in Rothschild's global oil and gas group and spent 12 years advising clients in the sector on a range of M&A and financing transactions. Stewart was appointed to the board in March 2014.

Sensitivities

Reservoir risk: Sea Lion has been extensively appraised so reservoir distribution here is understood and the waxy nature of the Sea Lion crude known. Similar appraisal and analysis will be required at the Isobel/Elaine complex.

Funding: given the funding made available from Premier, Rockhopper has debt capital available to fund the development of Sea Lion Phase 1a and Phase 1b, while cash flows from these should fund any further development. Cash and term deposits of around $200m at year end are substantial and will fund ongoing activities for some time.

Oil price risk: as an E&P, RKH's value will depend on the (expected) oil prices it will be able to realise, once production has started up in 2019 or later. Please see our valuation sensitivities section for further details. Gas volumes will be re-injected and not sold.

Fiscal regime change: the Falkland Islands has one of the most attractive fiscal regimes in the world, and history has shown that governments have a habit of increasing their stakes when oil exploration is successful, or when oil prices increase markedly. We do not think a fiscal regime change is likely, but it is possible.

Argentina: under President Cristina Kirchner, Argentina has returned to a vocal claim on the Falklands, even resorting to suing companies involved in exploration off the Islands. It is possible, although, we believe unlikely, that this may escalate and RKH assets may be affected. We do not try to quantify this risk directly, and leave investors to make their own estimation.

Valuation

We generally value oil companies using an asset-by-asset NAV derived from detailed DCF modelling. Core value includes production, development and contingent resources that could be developed, while exploration is valued only if wells are planned and funded in the next 18 months. Rockhopper is both a funded developer and an explorer, and is in a strong position to estimate value as dilution risk is not as likely as in much of the E&P universe.

We apply risking that aims to take account of geological, technical and commercial uncertainties. If a company lacks funding or production that could provide cash for development, we assume a dilution of its WI to get through appraisal/development. This dilution is impossible to accurately estimate, and so we arbitrarily apply a 50% commercial CoS (this is consistent across our coverage universe) for unfunded development. Our overall CoS applied would therefore be materially lower than any geological CoS for exploration.

For commodity pricing, we assume real $80/bbl long-term inflated for Brent (after a recovery from current prices). For Sea Lion development, we model transport costs of $4/bbl and a 4% discount to Brent. For Phase 1a and 1b, we assume capex of $15/bbl and opex of $35/bbl. The resulting core NAV is significantly above the current share price.

Exhibit 16: NAV summary

Asset	Country	WI (%)	CoS (%)	Recoverable reserves Gross	Recoverable reserves Net	NPV/boe	Net risked value	
				mmboe		$/boe	$m	/share
Net (debt)cash – December 2014							200	44
G&A (NPV10 of 3 yrs' G&A)							(25)	(6)
2015 exploration							(25)	(6)
Production								
Guendalina	Italy	20%	90%	2.6	0.5	12.0	5.6	1.2
Civita	Italy	100%	90%	0.2	0.2	5.0	0.8	0.2
Development								
Sea Lion 1a	Falkland Islands	40%	45%	160	64	8.9	255	57
Sea Lion 1b	Falkland Islands	40%	45%	160	64	6.4	185	41
Sea Lion 2	Falkland Islands	24%	45%	80	19	3.6	31	7
Sea Lion 2+ (Zebedee)	Falkland Islands	24%	30%	87	21	3.2	20	5
Core NAV							**648**	**144**
Sea Lion Chatham	Falkland Islands	40%	25%	65	26	1.6	10	2
Sea Lion Jayne East	Falkland Islands	24%	25%	87	21	1.7	9	2
Isobel Deep	Falkland Islands	24%	30%	523	125	3.2	121	27
Faseto	Italy	11%	13%	3	0.4	0.0	0	0
RENAV							**788**	**175**

Source: Edison Investment Research. Note: We have assumed a conservative resource number at Chatham, as although the total resources number is 127mmbbl, there is more immediate upside of 65mmbbl if the appraisal prospect is composed of an oil cap, rather than gas cap. We model the resource at Sea Lion based on the 160:160:80 given by Rockhopper, rather than the production profiles given by PMO (which imply slightly higher volumes at 1a than at 1b). We show Isobel Deep complex resources to give an idea of potential. We give it a risking of 30% given positive drill results in May 2015.

In addition to the NAV, the company is looking to drill exploration prospects, though the timing is uncertain. Given Italian regulatory regimes, delays are very possible. We do not include exploration unless it is funded to be drilled in 18 months or less.

Exhibit 17: Exploration and other prospects

Asset	Country	WI	CoS	Recoverable reserves Gross	Recoverable reserves Net	NPV/boe	Net risked value	
		%		mmboe		$/boe	$m	p/share
Ombrina Mare (appraisal)	Italy	100	20	25.1	25.1	9.7	49	10.9
Monte Grosso	Italy	23	12	200	46	8.8	46	10.3

Source: Edison Investment Research. Note: Although Ombrina Mare is an appraisal asset, due to uncertainty of Italian permitting, we exclude it from RENAV at this point.

This valuation is the starting point of the investor's approach, and the sensitivity of the value to various factors is critical, especially in light of recent oil price volatility.

Exhibit 18: Sensitivity to oil prices and discount rates (core NAV), p/share

		Discount rate			
		8%	**10%**	**12%**	**14%**
Brent oil price, $/bbl	**50**	70	58	50	45
	60	121	98	82	70
	70	170	137	113	95
	80	220	176	**144**	120
	90	269	215	175	145
	100	317	254	206	171
	Strip	127	104	75	66

Source: Edison Investment Research

The tax and royalty regime means that the value is levered towards oil prices, with a $10/bbl move in long term prices resulting in a 22% move in value. Equally, a discount rate change of 2% (from 12% assumed) would result in a 17-22% change. We note that if the company were valued at the current strip, our valuation would fall by 39%.

Exhibit 19: Sensitivity of core NAV to capex and opex

		Capex					
		(40%)	(20%)	0%	20%	40%	60%
Opex	(40%)	36%	30%	23%	16%	9%	2%
	(20%)	25%	18%	11%	4%	(3%)	(10%)
	0%	13%	7%	0%	(7%)	(14%)	(21%)
	20%	2%	(4%)	(11%)	(18%)	(26%)	(33%)
	40%	(9%)	(16%)	(23%)	(30%)	(37%)	(44%)
	60%	(21%)	(27%)	(34%)	(41%)	(49%)	(56%)

Source: Edison Investment Research

Value implied by the share price

We can back-calculate the possible risk applied by investors implied by the current share price.

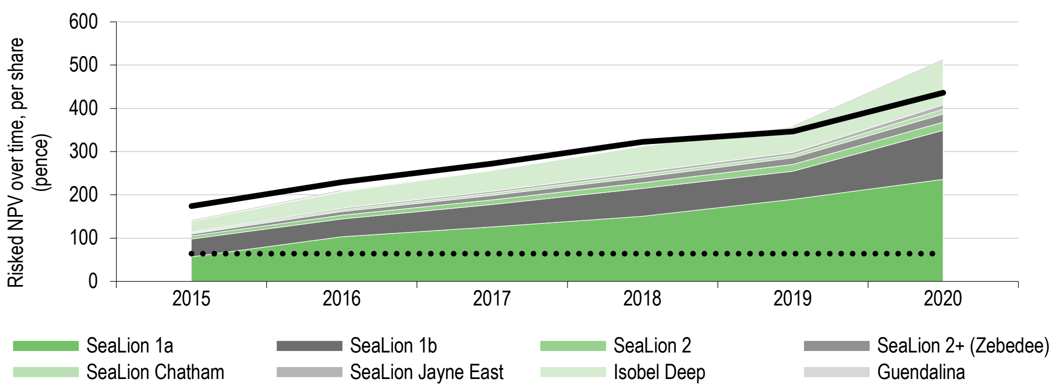
Using our price deck, this works out as 12%, while it moves to around 25% on the futures strip. Another way is to ignore cash (as investors may choose to assume it will be used on exploration, the results of which are uncertain) and purely look at core assets. The current share price is underlined by just Phase 1a/1b of Sea Lion, risked at 13% (or 60% on the strip).

Finally, based on our current risking, the share price would be justified by a long-term oil price of $55/bbl (for core NAV constituents).

Value over time

It is important to view the shares over time. As Sea Lion (and other developments) moves towards production and de-risks, the value of the company should increase. We can roll-forward our valuation (using our assumptions) to see how this would evolve.

Exhibit 20: NAV summary over time



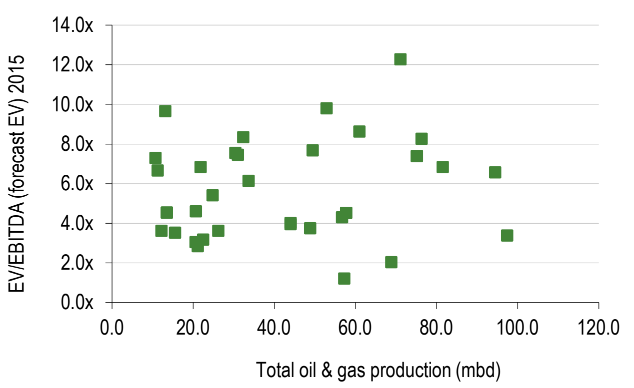
Source: Edison Investment Research. Note: Does not include Ombrina Mare and Monte Grosso, as these are outside our RENAV. Does include Isobel Deep complex

Such an analysis is dependent on the underlying assumptions, but our analysis indicates a 2015-20 CAGR of around 20%. This is a substantial return, even ignoring the considerable discount that the share price trades on currently.

Cash flow comparisons and other metrics

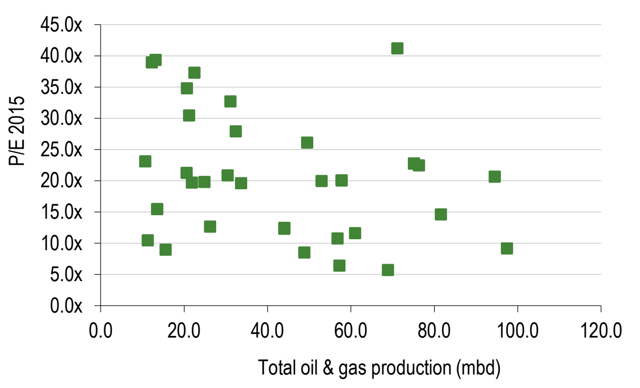
We can cross-check the valuation techniques against comparable analysis with peers (currently producing). This could give us an idea of possible valuations that Rockhopper may achieve once production starts up.

Exhibit 21: EV/EBITDA for oil producers in 2014



Source: Bloomberg, Edison Investment Research

Exhibit 22: P/E for oil producers in 2014

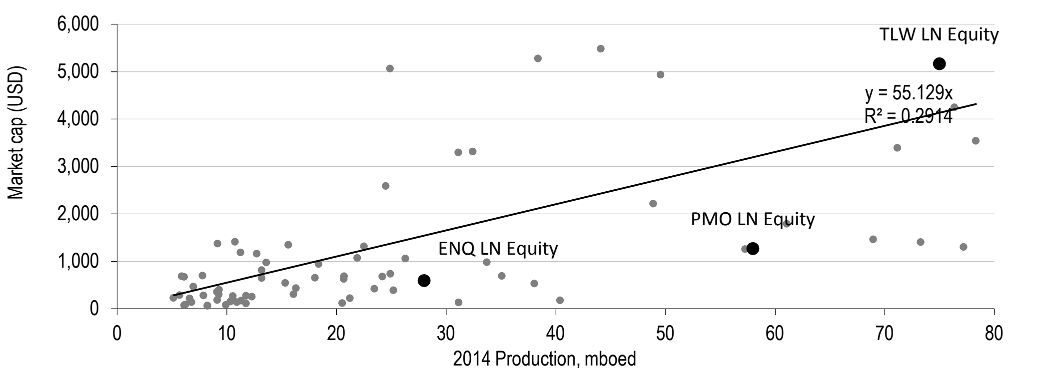


Source: Bloomberg, Edison Investment Research

- For EV/EBITDA, if we apply peer multiples of between 3-8x to our 2020 EBITDA estimate generating a range of c $1100-2,900m, this would imply a CAGR of share appreciation of over 23% to over 50% 2015-20.
- For P/E, a range of 10-20x would imply market capitalisation of $700-1,400m. This would imply a CAGR of share appreciation of over 17-35% in 2015-20.

Using London and Canadian companies as peers, we can plot market cap ($m) against net 2014 production (mboe/d) (Exhibit 23).

Exhibit 23: Production against market cap



Source: Edison Investment Research, Bloomberg. Note: In 2020, Rockhopper's net production will be around 22mbbls/d.

Again, this relationship is unsurprisingly loose as it will encompass companies with assets at all levels of maturity, with many companies expected to increase production over time, and others seeking to replace declining volumes. However, if we take the linear relationship shown (Exhibit 23) and interpolate the expected market cap for RKH (for 2020 net production of 22mb/d), the suggested market capitalisation is around $1,300m, suggesting a CAGR of around 31% from the current share price. However, we note that the relationship is extremely loose and that most companies with net production of c 20mboe/d have market capitalisations below this level.

The table below details metrics based on current 2015/16 expectations for the London-listed peers. We do not cover any of these companies and so refrain from pronouncing on specific reasons for the differences.

Exhibit 24: London-based peers

Company	EV/EBITDA 2015	EV/EBITDA 2016	P/E 2015	P/E 2016	P/CF 2015	P/CF 2016
Rockhopper Exploration	-11.9x	-14.7x	-27.4x	-34.2x	-35.3x	-49.8x
Premier Oil	3.6x	3.0x	20.0x	9.1x	1.9x	1.5x
Cairn Energy		10.4x				30.5x
EnQuest	2.8x	1.9x		11.0x	1.3x	1.1x
Genel	2.8x	2.5x	13.9x	11.4x	5.5x	4.8x
Ophir Energy	1.3x	0.7x			13.3x	9.7x
Soco International	2.5x	2.0x	15.4x	11.7x	6.9x	6.4x
Tullow	6.3x	4.3x	22.8x	10.3x	3.9x	2.8x

Source: Edison Investment Research, Bloomberg consensus

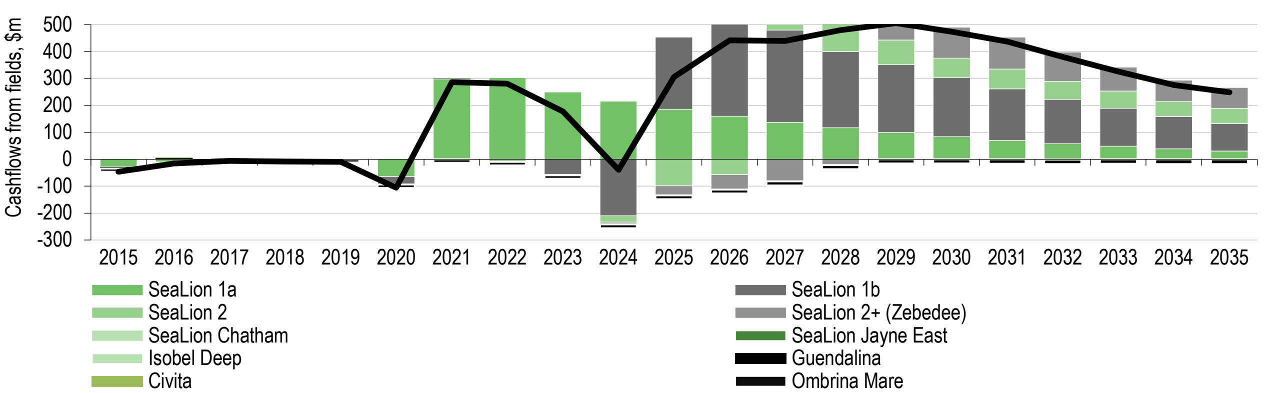
Financials

The company is well funded with cash (and term deposits) of around $200m at year end. The expenditures in 2015 will likely total around $70-75m (made up of $28m pre-sanction costs, $8-10m in costs in the Mediterranean development, $25m exploration costs and $10m in G&A). This will leave c $125m at FY15, which will provide the company with significant ongoing resources, even given the G&A bill of c $10m per year.

In Italy, Guendalina and Civita will provide some cash flows but will not cover the company's G&A entirely in 2016.

As part of the farm-down deal, Premier is providing a $722m development carry for Sea Lion, split between Phase 1a ($337m) and Phase 1b (assumed $337m, as $48m of the carry has already been spent). We model this as a straightforward loan at a 15% interest rate. Given the funding available from Premier, Rockhopper has capital to fund the development of Sea Lion Phase 1a and Phase 1b without needing external capital. Cash flows from these should fund any further development, though much depends on timing. Accelerated development on Phase 1b, Phase 2 (and beyond) could require more capital than the company currently has available. Once production nears, the company's access to bank financing will increase. This is important as it could fund development of valuable Italian assets, which will require material upfront capital.

Exhibit 25: Cash flows from fields and G&A over time

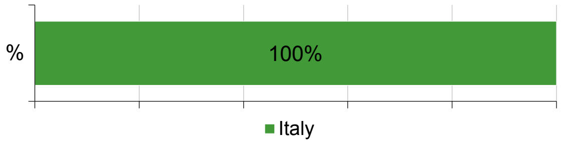


Source: Edison Investment Research. Note: Does not include Isobel Deep/Elaine complex, Chatham, Jayne East or Faseto. Does not include non-field costs such as exploration, but does include G&A. We exclude fields that are not in our core NAV.

Exhibit 26: Financial summary

$000s	2011	2012	2013	2014	2015e	2016e
Dec	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS						
Revenue	0	0	0	1,910	3,428	10,426
Cost of Sales	0	0	0	(3,970)	(731)	(952)
Gross Profit	0	0	0	(2,060)	2,696	9,474
EBITDA	(55,123)	(12,924)	(16,948)	(5,845)	(10,304)	(1,801)
Operating Profit (before amort. and except.)	(55,278)	(13,191)	(17,230)	(8,031)	(12,184)	(6,849)
Intangible Amortisation	0	0	0	0	0	0
Exceptionals	0	58,668	0	0	0	0
Other	0	0	0	0	0	0
Operating Profit	(55,278)	45,477	(17,230)	(8,031)	(12,184)	(6,849)
Net Interest	1,496	1,640	1,499	657	164	42
Profit Before Tax (norm)	(53,782)	(11,551)	(15,731)	(7,374)	(12,020)	(6,807)
Profit Before Tax (FRS 3)	(53,782)	47,117	(15,731)	(7,374)	(12,020)	(6,807)
Tax	0	(122,359)	(62,542)	(5)	687	2,110
Profit After Tax (norm)	(53,782)	(133,910)	(78,273)	(7,379)	(11,333)	(4,697)
Profit After Tax (FRS 3)	(53,782)	(75,242)	(78,273)	(7,379)	(11,333)	(4,697)
Average Number of Shares Outstanding (m)	284.2	284.2	284.3	292.6	296.5	296.5
EPS - normalised (p)	(18.9)	(47.1)	(27.5)	(2.5)	(3.8)	(1.6)
EPS - normalised and fully diluted (p)	(18.9)	(47.1)	(27.5)	(2.5)	(3.8)	(1.6)
EPS - (IFRS) (p)	(18.9)	(26.5)	(27.5)	(2.5)	(3.8)	(1.6)
Dividend per share (p)	0.0	0.0	0.0	0.0	0.0	0.0
BALANCE SHEET						
Fixed Assets	303,684	152,540	154,009	227,816	289,936	311,888
Intangible Assets	303,296	151,957	153,656	204,164	261,764	287,414
Tangible Assets	388	583	353	12,146	16,666	12,968
Investments	0	0	0	11,506	11,506	11,506
Current Assets	108,944	299,582	249,723	207,979	135,525	109,901
Stocks	0	0	0	2,188	2,188	2,188
Debtors	1,787	1,559	1,932	4,681	4,681	4,681
Cash	103,263	297,741	247,482	199,726	127,272	101,648
Other	3,894	282	309	1,384	1,384	1,384
Current Liabilities	(6,419)	(34,921)	(110,140)	(119,797)	(119,797)	(119,797)
Creditors	(6,419)	(34,921)	(110,140)	(119,797)	(119,797)	(119,797)
Short term borrowings	0	0	0	0	0	0
Long Term Liabilities	0	(85,304)	(39,137)	(60,960)	(60,960)	(60,960)
Long term borrowings	0	0	0	0	0	0
Other long term liabilities	0	(85,304)	(39,137)	(60,960)	(60,960)	(60,960)
Net Assets	406,209	331,897	254,455	255,038	244,705	241,033
CASH FLOW						
Operating Cash Flow	(30,827)	(14,029)	(12,834)	(11,237)	(8,454)	1,376
Net Interest	0	0	0	0	0	0
Tax	0	0	0	0	0	0
Capex	(238,521)	208,792	(41,312)	(10,588)	(64,000)	(27,000)
Acquisitions/disposals	0	0	0	(24,037)	0	0
Financing	70,632	24	34	234	0	0
Dividends	1,191	(3,918)	3,853	(1,155)	0	0
Net Cash Flow	(197,525)	190,869	(50,259)	(46,783)	(72,454)	(25,624)
Opening net debt/(cash)	(268,757)	(103,263)	(297,741)	(247,482)	(199,726)	(127,272)
HP finance leases initiated	0	0	0	0	0	0
Other	32,031	3,609	0	(973)	0	0
Closing net debt/(cash)	(103,263)	(297,741)	(247,482)	(199,726)	(127,272)	(101,648)

Source: Company accounts, Edison Investment Research. Note: In 2014, the company altered its year end to December. Prior to this its year end has been April. No adjustments or restatements have been made to historical reported figures.

Contact details	Revenue by geography
Hiltop Park Devizes Road Salisbury SP3 4UF UK www.rockhopperexploration.com	

Management team

Non-executive chairman: Dr Pierre Jungels CBE	Chief executive officer: Sam Moody
Dr Jungels is a certified engineer with a PhD from CALTECH. He was CEO of Enterprise Oil from 1996 to 2001; prior to that he was MD of Exploration and Production for BG in 1995, and worked for 23 years with Petrofina including eight years on the main board. He is a non-executive director of Baker Hughes and chairman of Oxford Catalysts. He was twice president of the Institute of Petroleum, from 1987-89 and 2002-03.	A co-founder of Rockhopper and has been responsible for building and managing the group from its formation in early 2004. He previously worked in several roles within the financial sector, including positions at AXA Equity & Law Investment Management and St Paul's Investment Management.
Chief operating officer: Fiona MacAulay	**Chief financial officer: Stewart MacDonald**
Fiona is a geologist with over 25 years' experience including time at Mobil, Amerada Hess and BG. She joined Rockhopper in 2010 immediately following the Sea Lion discovery and was an integral member of the senior team that managed the appraisal of the Sea Lion field and discovered the Casper, Casper South and Beverley fields. Fiona was appointed to the board in March 2013.	Prior to joining Rockhopper, Stewart was a director in Rothschild's global oil and gas group and spent 12 years advising clients in the sector on a range of M&A transactions as well as debt and equity financings. Stewart was appointed to the board in March 2014.

Principal shareholders	(%)
Odey AM	10.0
UBS Investment Bank	7.4
Fidelity	7.3
Royal London	6.2
Carlson Capital	6.0
Credit Suisse	4.9
DE Shaw	4.6

Companies named in this report

Premier Oil

Frankfurt +49 (0)69 78 8076 960	London +44 (0)20 3077 5700	New York +1 646 653 7026	Sydney +61 (0)2 9258 1161	Wellington +64 (0)48 948 555
Schumannstrasse 34b	280 High Holborn	245 Park Avenue, 39th Floor	Level 25, Aurora Place	Level 15, 171 Featherston St
60325 Frankfurt	London, WC1V 7EE	10167, New York	88 Phillip St, Sydney	Wellington 6011
Germany	United Kingdom	US	NSW 2000, Australia	New Zealand