

Eco Atlantic Oil and Gas

Drilling the Atlantic Margin exploration hotspots

Commercially focused exploration company with catalysts

Eco Atlantic Oil and Gas (Eco) is a frontier exploration focused company with significant potential exploration upside in Guyana and Namibia. It is a lean organisation with a highly experienced management team, has a proven track record of exercising Petroleum Agreements and farm-outs, is fully funded for its current planned activity and beyond, has an early mover advantage in its blocks and, we think, management would sell for the right price.

Valuation: >100% upside to risked NAV and >15x unrisks upside

Our risked NAV for Eco of 103p/sh includes a core value of 12p/sh (cash and farm-in proceeds), with the remainder risked exploration based on 4 prospects. The unrisks valuation is >15x versus the current price. With the cash and carry available, Eco is well funded for the two highly likely exploration wells and will have cash left over for either further exploration or a new country entry, potentially with Africa Oil following their strategic alliance.

Catalyst rich story as wells are drilled near term across key assets

We see several specific catalysts for the stock over the next year. In Guyana we are watching for the appraisal of Exxon's Hammerhead discovery which extends onto Eco's block, Exxon's 3 rig drilling campaign, further prospectivity on Eco's Orinduik block (following the recent receipt of the final 3D data) and a firm drilling commitment for at least one well in Q3'19. In Namibia there will be readthrough from Chariot's well on Prospect S, to PEL 50 (Eco 80%); Tullow needs to decide by YE'18 whether it will drill a well on the Cooper block potentially in Q3'19 (Azinam has announced it would like to proceed). We also think a new country entry is likely at some point.

Guyana: better economics vs. the Permian and de-risked exploration

The frontier exploration discoveries of >4Bboe next to Eco's Orinduik block have de-risked the region, especially given their high quality and oily nature. The fiscal terms are attractive and the shallow water location means lower development costs. TOTAL's decision to farm-in without waiting the 120 days it had to decide, shows its confidence in the acreage. Eco's 15% stake in the Iatuk D prospect (just one of 10 prospects in the CPR) is worth >£2/sh unrisks, demonstrating the scale of the upside, with a well to be drilled in early Q3'19. Given the success rates on the Stabroek block we think a 22% geological COS is conservative.

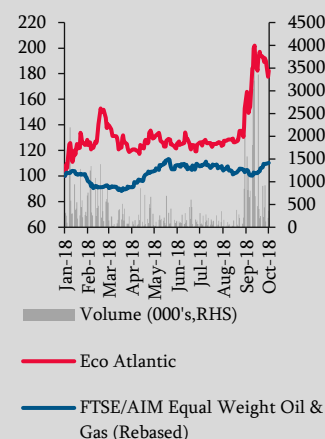
Namibia: proven hydrocarbon system in which Eco is well positioned

Namibia is truly a frontier oil and gas province with attractive fiscal terms. There was a wave of exploration activity ~5 years ago, which resulted in no commercial successes. Although the market took this negatively, the wells have de-risked the oil potential by proving a working source rock (as did the recent Tullow operated Cormorant dry hole). With the entry of supermajors such as Exxon/TOTAL and further wells planned this year by Chariot and Shell, any success should re-invigorate interest in the region. Eco has a first mover advantage with 4 well-positioned blocks and an alliance with the state oil company.

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GICS Sector	Energy
Ticker	AIM:Eco
Market cap 3-Oct-18 (US\$mm)	95.5
Share price 3-Oct-18 (GBP)	45

Riskd NAV	p/sh
Core NAV	11p
Guyana exploration	79p
Namibia exploration	13p
Total NAV	103p



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Investment Summary

Eco Atlantic Oil and Gas (Eco) is a frontier exploration focused company with significant potential exploration upside in Guyana and Namibia. It is a lean organisation with a highly experienced management team, has a proven track record of exercising farm-outs, is fully funded for its current planned activity and beyond, has an early mover advantage in its blocks and we think management would sell for the right price. Our riskd NAV of 103p/sh suggests 100% upside to the current share price and unrisked is >15x the current share price.

Valuation: Our riskd NAV for Eco is 103p/sh, which includes a core value of 12p/sh (cash/farm-in proceeds), with the remainder based on riskd exploration of only 3 prospects plus we include some riskd value for Exxon's Hammerhead discovery extending onto Eco's block. Eco is well funded for its two highly likely exploration wells and will have cash left over for either further exploration or a new country entry. Given the exploration only nature of the company, comparative multiple valuations aren't appropriate.

Hammerhead - Exxon's discovery could be a company maker for Eco:

Without even having drilled a well, Eco appears to have a large resource to appraise on its block (Eco has 3D over the whole discovery). Exxon's recent Hammerhead discovery in Guyana has the potential to be several hundred-million-barrels and based on the seismic it looks like a large part of the structure could be up dip on Eco's block. There are regulations in place (Petroleum Act) to ensure unitisation of the discovery if developed. Assuming a 500mmbbl discovery with 50% is on the Orinduik block, at US\$5/bbl it alone would be worth 88p/sh unrisked to Eco.

Good time to invest in exploration: We believe that it is a favourable time to invest in exploration, as the lack of drilling success in the last 5 years has meant that investor sentiment is low at a time when major oil companies are looking to rebuild exploration portfolios after huge cuts in spending. Lower costs of obtaining exploration acreage and drilling creates a better value proposition. Exploration gives investors exposure to uncorrelated returns that aren't available from US E&Ps. Exploration success rates should improve as operators are now more capital disciplined forcing them to only drill their best wells.

What are explorers chasing: Liza (Guyana) and Lula (Brazil) are examples of the huge value creation that is possible through frontier exploration. Exxon has discovered >4Bboe in Guyana to date and may still find significantly more. Assuming an un-risked valuation of ~\$5/boe - there is potentially \$20B+ of value, which was de-risked by an initial well that likely cost ~\$100mm.

Location, location, location: There have been many non-commercial wells drilled in both Namibia and the Guiana-Suriname basin so being in the right place is important. We see Eco as well positioned in both basins. In Guyana it is up dip of and on trend with the significant discoveries made by Exxon next door. In Namibia it was an early mover, allowing it access to its preferred blocks and its blocks can be de-risked by wells on adjacent blocks over the next year.

Plenty of catalysts: As we outline in detail on page 5, we see a catalyst rich next 12 months for the stock, which is important for exploration companies to get credit from the market. Eco's performance year to date is testament to that. The main catalysts surround farm-out activity, drilling near its blocks, de-risking of Eco's prospects, a potential new country entry and ultimately drilling of its prospects in 2019.

Lean and focused organisation: Eco runs a tight ship with low levels of G&A (<US\$1mm p.a.) relative to peers and a management team that is not afraid to stick to exploration rather than adding production to give cashflow, which often dilutes the focus of the organisation and can create more issues than it solves. It doesn't appear wedded to the assets either and we'd expect it to monetise assets or the entire company, if an attractive enough offer was made.

Attracting respected partners: Although only small, Eco has managed to attract large and respected partners into its blocks, over a time when other companies struggled to farm out exploration acreage. This has minimised the dilution for the equity holders and gives confidence that it will continue to do so in the future. In Namibia it has brought in Tullow and AziNam (PGS/Seacrest), plus ONGC also farmed in to the blocks it is in (pending partners and government approvals). In Guyana, Tullow and recently TOTAL are partners. It has also brought Africa Oil in as a major shareholder and this also gives it a funding partner for future deals.

Guyana: The frontier exploration discoveries of >4Bboe next to Eco's Orinduik block have de-risked the region, especially given their high quality and oily nature. The fiscal terms are attractive and the shallow water location means lower development costs. TOTAL's decision to farm-in to Orinduik without waiting the 120 days it had to decide, shows its confidence in the acreage. Eco 15% stake in the Iatuk D prospect alone is worth >£2/sh unrisks (CPR contains 10 prospects), demonstrating the scale of the upside, with a well due to be drilled in early Q3'19. Given the success rates on the Stabroek block we think a 22% geological COS is conservative.

Guyana development economics...better than the Permian: We think it is topical to compare the economics of Guyana's Liza Phase 1 with arguably the basin that has attracted the most capital in the last few years and should see the most growth in the near-term – the Permian. Guyana offers a lower cost of development, higher financial returns and more rapid cash paybacks. The reason being that the fiscal terms are some of the best in the world and the reservoirs rank amongst the highest quality in the world.

Namibia: Namibia is truly a frontier oil and gas province with attractive fiscal terms. There was a wave of exploration activity around 5 or so years ago, which resulted in no commercial successes – despite the market taking this negatively, the wells actually de-risked the oil potential (as did the recent Cormorant dry hole). With the entry of supermajors such as Exxon and further wells planned this year by Chariot and Shell, any success should re-invigorate interest in the region. Eco has a first mover advantage with 4 well-positioned blocks and an alliance with the state oil company. The lack of share price reaction from Eco to the Cormorant dry hole announcement, suggests little value in the share price for Namibia.

Balance sheet and funding: As of end June 2018, Eco had cash of C\$13mm and working capital of C\$0.6mm on the balance sheet. It will see a further US\$12.5mm (C\$16.2mm) after TOTAL completes its farm-in to the Guyana, by around YE'18. If Tullow exercises its further farm-in to Namibia it should get ~US\$0.75mm in back costs. Eco's net cost for the Namibia well is capped at US\$2.25mm and we estimate that a well in Guyana will cost ~ US\$5-6mm net to Eco.

Key risks: Investors should be aware that in the case of unsuccessful exploration in both Guyana and Namibia there will be little residual asset value in the company.

Catalysts

Timing	Event	Potential impact
Q4'18	Guyana: Exxon Hammerhead appraisal well	Prospect extends onto Orinduik and is potentially worth 88p/sh unrisked
Q4'18	Guyana: Exxon's 3 rig drilling campaign	Potential for further positive read-across data
Q4'18	Tullow CMD: 29th November	Updates on Tullow's view on Orinduik and Cooper blocks
Q4'18	Guyana: final 3D report and seismic	De-risking of western prospects on Orinduik and further Tertiary prospects
Q4'18	Namibia: Prospect S well on nearby block	Lowers risk on Eco's Namibian prospects (e.g. new 250mmbl prospect worth 15p/sh risked)
Q4'18	Namibia: Tullow decision on farm-in	\$0.75mm in back costs plus part carry on well (cash and carry worth ~2p/sh)
2019	Namibia: AziNam IPO	AziNam has announced its intention to float - will be a direct read-through into Eco
2019	Namibia: Tamar 3D shoot / farm-out	If Chariot's Prospect S is successful we could see a push to shoot 3D
2019	Namibia: well on Osprey at \$2.25mm net cost	Worth £1.50/sh unrisked
2019	Guyana: well in Guyana at \$5-6mm net cost	600mmbl prospect worth >£2/sh unrisked
2018/19	New country entry	Dependent on opportunity set

Source: H&P estimates

Q4'18: Guyana: Exxon Hammerhead appraisal well. Exxon plans to appraise the Hammerhead discovery later this year, after which we may get a size projection for the field, which it hasn't quantified yet. It has the potential to be a several hundred-million-barrel discovery and based on the seismic it looks like a large part of the structure could be up dip on Eco's block. Assuming 250mmbl on Eco's block it could be worth ~88p/sh net to Eco unrisked.

Q4'18 onwards: Guyana: Exxon's 3 rig drilling campaign. Exxon is bringing a 3rd rig into Guyana and will have a very active drilling programme over the next year. Exxon's next planned exploration well appears to be Pluma down at the south edge of its Stabroek Block, which is being spudded in October. Although it is further away from the Orinduik block than some of the other discoveries, further success nonetheless should be another positive read-through to Eco's exploration block.

Oct '18: Namibian exploration well on adjacent block. Chariot/Azinam are drilling directly to the east of Eco's Tamar Block in the southern margins of the Walvis Basin. Chariot's pre-drill estimate is 459mmbl for Prospect S, on PEL 71, in ~1,500m water depth, with a 29% chance of success. The well is testing stacked channel sand targets, within an overall structural trap and also the potential for an additional second source rock. If successful it could help lead to a successful farm-out of Eco's PEL 50/Tamar block (Eco will likely look to shoot 1,000sqkm of 3D over the block) and subsequent drilling on this block, where no prospects have been firmed up yet. Chariot is also looking to farm-out its block and any incoming party could also be interested in the Tamar block.

29th November 2018: Tullow Capital Markets Day. We expect two of the main regions that Tullow will focus on, from an exploration perspective, to be Guyana and Namibia and hence we should get further insight into the prospects and its view on the timing of wells. It may also give a clue on whether it intends to exercise its option to drill a well on the Cooper Block in Namibia.

Dec '18: Tullow Namibia farm-in. Tullow must exercise its option on a further 15% of Cooper block by mid-December 2018 (which is still likely in our view as the Cormorant well gave some encouraging signs that there was oil in the area). If this happens Eco will receive around US\$0.75mm covering back costs and be partly carried on the Osprey well. If it isn't exercised, Tullow will have to pay Eco ~US\$3-4mm instead and will return the entire WI to Eco, after having fully carried Eco for the 3D seismic shoot. Thus, the block will be drill ready and Eco can offer a large stake (it will have 57.5% by then) to a third party for probably at least 1 carried exploration well. The other partner Azinam announced it would like to proceed with exploration of the block.

End 2018/early 2019: further prospects and de-risking of Orinduik. Eco received the depth migration seismic data for the western half of the block and will merge the data from the CGG and PGS seismic shoots and begin interpretation. After this we think there is a high probability that the chance of success increases and also we could see the prospect sizes increasing. Eco also sees several leads that weren't included in the CPR, which could become viable drilling candidates. Furthermore, the Tertiary potential was hardly evaluated and after the Hammerhead well we expect several Tertiary prospects to be considered by Eco.

New country entry. Following TOTAL's farm in, Eco has a bit of money to potentially put towards funding of a new country entry's exploration commitments. It currently looking at some deals and with Africa Oil has a ready partner willing to share some of the risk and financing cost. If it does enter a new country, we don't expect any significant up-front entry costs based on Eco's strategy.

2019: AziNam IPO: AziNam is a Namibian/South African exploration pure-play and partner and shareholder of Eco, with the largest direct offshore acreage position in the two countries. It has recently announced its intention to float in Oslo in the coming months, ahead of a multi-well drilling campaign across over the next 18 months (up to 8 wells over the next 3 years). It is currently raising pre-IPO funding.

Q3'19/Q1'20: Eco's Namibian exploration well. Eco has got the final approvals it needs for drilling a well and should move into well planning at the end of this year with the potential for a well in around a year or so. Assuming Eco Atlantic is diluted down to a 25% stake, we see >£1.50/sh in unrisks value from the Osprey prospect with an 18% geological COS, on which its net cost will be only US\$2.25mm.

Q3'19: Eco's Guyana exploration well/s. In Guyana the partners have confirmed that they plan to drill a well on the Orinduik block in Q3'19, with the potential for this turn into a multi-well programme. The prospect hasn't been finalised yet but assuming it is one of the ~600mmbbl targets, it would be worth >£2/sh unrisks to Eco. The net well cost to Eco will only be ~US\$5mm.

2019: Guy/Sharon Namibian block data. We expect to get further clarity on the prospectivity of the Guy/Sharon blocks in Namibia from the 3D seismic shoots as the current chance of success is <5% on the existing prospects. Any success on Chariot's Prospect S should have some positive read-through into Guy and Sharon, which are both in the vicinity. We currently carry just 5p/sh of value for these blocks based on the farm-in by Azinam. There is a huge amount of potential upside if the leads come good as there is currently ~3.8Bboe of prospective resource on the two blocks.

Valuation

Asset	Country	Interest	Net Mmboe	US\$/boe	Unrisked US\$m	Unrisked p/sh	Geological CoS	Commercial CoS	Risked US\$m	Risked p/sh
2018 G&A and opex					-\$3.0	-1.4p			-\$3.0	-1.4p
Warrants and options					\$2.1	1.0p			\$2.1	1.0p
End '17 cash					\$11.1	5.1p			\$11.1	5.1p
End '17 w/c					\$0.4	0.2p			\$0.4	0.2p
TOTAL Orinduik farm-in cash					\$12.5	5.7p			\$12.5	5.7p
Tullow Namibia option cash					\$0.8	0.3p			\$0.8	0.3p
Core NAV					\$23.7	10.9p			\$23.7	10.9p
Exploration										
Osprey	Namibia	25%	71	\$4.7	\$332	152p	18%	35%	\$19	8.5p
Hammerhead	Guyana	7.5%	38	\$5.2	\$193	88.3p	75%	50%	\$70	31.9p
Iatuk	Guyana	15%	95	\$5.2	\$490	224p	22%	50%	\$50	22.7p
KD	Guyana	15%	100	\$5.2	\$516	236p	22%	50%	\$53	24.0p
Guy, Sharon, Tamar	Namibia	Varies							\$10	4.6p
Exploration NAV					\$1,531	699.8p			\$201	91.7p
Total NAV					\$1,554	710.6p			\$224	102.5p

Source: H&P estimates, Company Data

Our risked NAV is 103p/sh. Given the exploration only nature of the company we see little merit in using comparative multiples either based on earnings/cashflow or on the resource size. Our favoured valuation methodology is a bottom-up risked NAV in which we have done a DCF valuation of the main prospects assuming they will be developed and then risked them for geological and commercialisation risk. In our base case scenario we use a US\$70/bbl flat oil price and a 12% discount rate from 1/1/2019. The main elements of the NAV are:

G&A: We estimate 2018 spend of C\$1.2mm on G&A and C\$2.8mm of operating costs, which has a negative impact of US\$3mm or 1.4p/sh.

Cash and w/c: At YE'17 Eco had US\$11.5mm in cash and working capital (~5p/sh).

Cash from farm-ins: We include US\$12.5mm from TOTAL and assume Tullow exercises its Namibian farm-in option, in total netting Eco ~US\$13mm (~6p/sh)

Guyana: We have included 3 prospects in Guyana. We assume that the Hammerhead discovery on the Stabroek block extends into the Orinduik block and is 500mmbbl with 50% on each block – we are assigning a 75% geological COS for Eco plus a 50% chance of commercialisation to take into account development risk as well as potential funding/dilution impacts. Overall we get 32p/sh in risked value for Hammerhead. We also assume two exploration prospects are drilled with the geological COS of 22% in line with the CPR and 50% commercial COS – each prospect has ~23-24p/sh in risked value. With further funding and/or discoveries there is room to add more exploration upside.

Namibia: We use a similar methodology for Namibia. The EV/boe (US\$4.7/boe) is lower given slightly worse fiscal terms than in Guyana. We assume that Tullow exercises its option for a further 25% stake, leaving Eco at 25%. The GCOS is in line with the latest CPR and the chance of commercialisation is lower than Guyana at 35%, given the lack of any developed oil industry. The well cost of Osprey is only US\$2.25mm net to Eco due to the carry from Tullow. The unrisked value is 152p/sh or 9p/sh risked. We also include US\$10mm or 5p/sh for the other blocks in Namibia that don't have any drill ready prospects identified yet but the value has been demonstrated by the farm-downs to Azinam.

Commodity price forecasts and assumptions

Our NAV calculations are based on our:

- Brent oil price assumption of US\$70/bbl flat
- US\$/GBP average exchange rate of 1.30
- CAD/US\$ average exchange rate of 1.30
- A 12% discount rate from 1/1/2019

Sensitivity of our NAV to oil price and discount rate

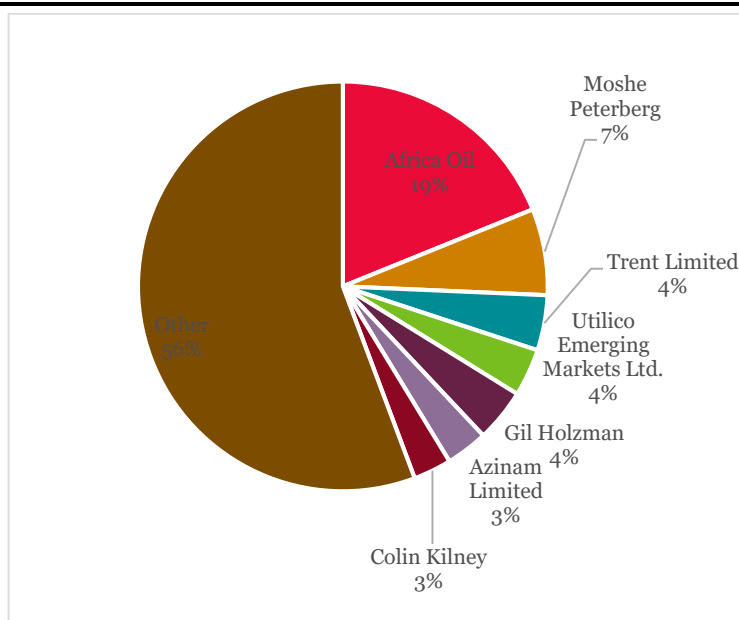
		Oil price				
		\$50.00	\$60.00	\$70.00	\$80.00	\$90.00
Discount rate	8%	96p	129p	162p	195p	226p
	10%	74p	102p	128p	155p	181p
	12%	58p	80p	103p	124p	146p
	14%	45p	64p	82p	101p	118p
	16%	36p	51p	67p	82p	97p

Source: H&P estimates

Company description

Eco Atlantic Oil and Gas is an international E&P company listed in Toronto (EOG CN) and London (ECO LN). The main assets of the company are exploration acreage located in Guyana and Namibia. In Guyana, the company has a 15% working interest in the offshore Orinduik licence, located adjacent to Exxon's Stabroek licence, which contains nine discoveries totalling >4Bboe in resource. In Namibia, the company has four licences in the offshore Walvis Basin (Sharon, Cooper, Guy and Tamar). All these licences are being matured to a drill-ready stage. Management is also looking at building up further acreage. The company is led by Gil Holzman, president and CEO, who has 12 years of mining and energy experience in Africa prior to founding the company. Colin Kinley is the COO with over 35 years of experience in the energy sector. The Board has recently been strengthened by the addition of Keith Hill, who built up Africa Oil Corp, as Independent Director. Africa Oil (AOI CN) owns a 19% stake in Eco Atlantic.

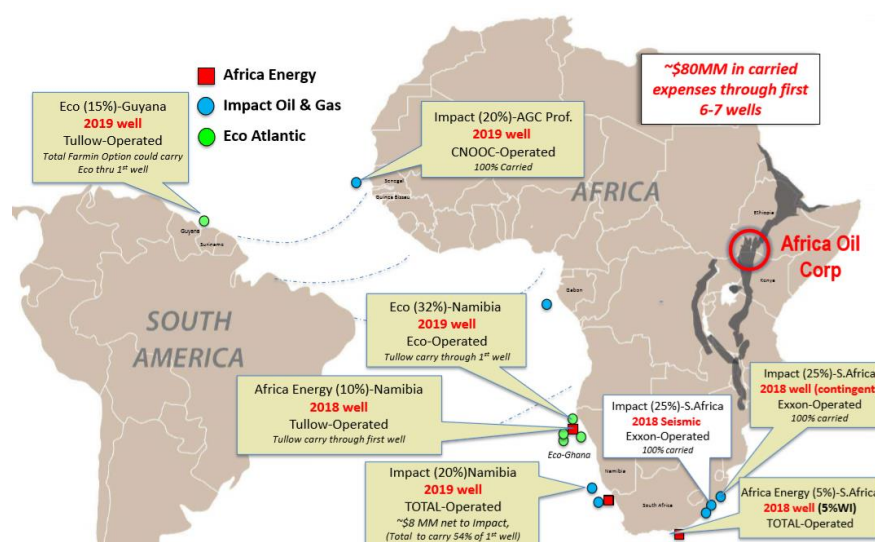
Key Shareholders



Source: Eco Atlantic, September 2018

The Africa Oil Corp Alliance

Africa Oil exploration exposure



Source: Africa Oil, September 2018

Eco announced in November 2017 that it reached a strategic alliance with Africa Oil Corp. Africa Oil took a 19.77% stake in Eco, subscribing to 29.2mm shares at a price of price of 29p/share. This represented a 28% premium to the closing price at the time. After costs, it gave Eco Atlantic a cash injection of C\$13.5mm. Having already secured financing for its potential work programmes in Guyana and Namibia this money can be earmarked for further expansion of the asset base of the company. Keith Hill, President and CEO of Africa Oil, joined the Eco board as a non-executive director.

Concurrent with the share subscription, Eco and Africa Oil entered into a Strategic Alliance Agreement. Africa Oil has the option to take an interest in any new asset, which will be at least equal to the percentage that it owns in Eco. For example, if Eco was to acquire a 50% stake in an exploration licence then Africa Oil would have the right to take an approximate 10% stake in this licence, with Eco Atlantic taking the remaining 40% of the licence. This is a minimum level of interest and we could see Africa Oil taking a larger share than its holding in Eco.

Africa Oil will also have the first right of offer on any asset that Eco is looking to farm out. It should be noted that Eco is already working on acquiring additional licences and here it might be reasonable to expect that Africa Oil might pay a premium given the work that Eco has already put into securing the acreage.

It gives the company sufficient funds to accelerate its growth going forward and also gives the management access to the expertise that has been built up within Africa Oil over the last decade. Africa Oil developed a significant operation onshore East Africa over the last nine years which has been farmed out to Maersk Oil and Gas (now part of TOTAL) with the company netting over US\$400mm. Africa Oil is looking at using this cash to rebuild its exploration base.

Why invest in exploration

Lower costs of obtaining exploration acreage and drilling the wells creates a better value proposition and also gives investors exposure to uncorrelated returns that aren't available from US E&Ps.

Deepwater cost of licence acquisition

Around 5+ years ago, in order to attain licences from Governments, heavy work commitments had to be bid (e.g. multiple wells within a few years, even in cases where seismic hadn't been shot) - e.g. in Angola signature bonuses and work programme commitments were as high as US\$0.5B. Farm-in conditions tended to be, at a minimum, a 2 for 1 promote and in many cases much more: for example in the heady days in 2011 we saw HRT acquire UNX, a Namibian pure play exploration company with no wells drilled on its blocks so far, for C\$720mm. The cost of licence acquisition fell substantially in the last few years with farm-outs generally going for just back costs, or in some cases even less and the work commitments stipulated by Governments were greatly reduced.

Deepwater cost of exploration and appraisal

Exploration costs have fallen dramatically in the last few years, as the cost of the service provision has come down (e.g. rig rates), the efficiency of drilling has improved (higher spec rigs and high grading of crews) and generally drilling has been focused in less hostile conditions (e.g. avoiding HPHT). Whereas a few years ago it wasn't uncommon for an exploration well in Angola to cost \$250mm, we are now seeing exploration wells in West Africa being drilled for <\$50mm (e.g. Ophir's Ayame well in Ivory Coast cost ~\$20mm).

Time taken to explore and appraise

Given the advances in both what you can do with seismic (e.g. Wide Azimuth) and more importantly the time taken to process seismic data, the lead time to identify drill-ready prospects has been reduced. Furthermore with a massive shift from under-supply to over-supply in the drilling market and with that also less of an issue with sourcing (now not so) "long-lead time" items; once a prospect is identified there is the ability to drill a prospect much quicker and also to come back and appraise the discovery. Whilst the value of accelerating the time from block acquisition to well spud is generally relatively low as the unproductive capital invested at this point is low - there is a disproportionate value for listed companies in acceleration as investors generally don't like to own companies with no catalysts or value creation events on the horizon.

Time taken to develop

There have been many deepwater developments that have taken over 5 years from FID to first oil. However, companies are now opting for simpler, cheaper designs, which are also quicker to implement than bespoke solutions and there is also the idea of phasing the investment so further phases can be funded out of cashflow and be de-risked by previous phases. Shortening the development cycle by 1 year, reduces breakeven prices by ~10% on average.

Shale context

Although there have been some recent "new discoveries" in US shale (e.g. Alpine High in the Permian basin from Apache) the consensus is that there is unlikely to be any significant new shale plays uncovered in the US. Hence, there isn't really an exploration angle that investors look at when analysing the US shale companies. There are still some plays or fringe areas that are in the appraisal stage but given the number of players in the US (E&Ps and investors) most of these have will have been heavily analysed with little room for investors to gain an advantage.

Guyana

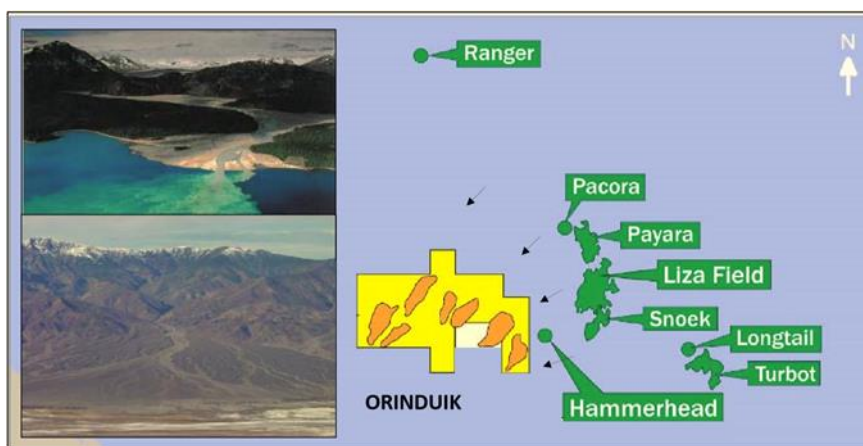
Attractive exploration province: key take-aways

- **TOTAL farm-in indicates its confidence in the exploration potential:** TOTAL farming in to the Orinduik block much earlier than it was obliged to (it had 120 days from the delivery of the final 3D seismic), clearly demonstrates the high level of confidence TOTAL has in the exploration block.
- **CPR unveils P50 resource potential of 3Bboe:** The report released in mid-September 2018 has identified ten large prospects with 2.9B boe of P50 resource on the Orinduik block, with an average 22.4% chance of success on the three largest prospects. 3D data has defined and confirmed significant channel and fan plays. KG, KD and Iatuk wells were identified with the highest prospective resource. There is further Tertiary potential that hadn't been assessed in the CPR that was proved with Hammerhead discovery (thought to be Miocene age), mentioned below.
- **Positive indications from Exxon's block:** Eco's block is inboard to Exxon's Stabroek Block where >4Bboe has been discovered (9 finds) to date with a 92% exploration success rate. The fields have exceptional reservoir quality with high production and recovery rates per well. This bodes well for exploration success on the Orinduik block and means there will be a developed oil and gas industry (>750kbb/d by 2025) for any future discoveries to benefit from.
- **Recent Hammerhead discovery very close to Eco's block:** In August 2018, Exxon announced its 9th discovery in Guyana, which was significant in the fact that it proved another new play concept (thought to be a shallower Miocene target) and the thick net pay of 60m suggests another large discovery to add to the >4Bboe already discovered. It supports Eco's thesis of the up dip oil potential in the Orinduik block and a shallower target makes for improved economics too. The discovery is just 6km from the Orinduik block and the majority of the structure may be on Eco's block and we believe could be worth ~85p/sh unrisks to Eco.
- **Attractive fiscal terms and politically stable:** The fiscal terms are some of the best in the world (Government take of just over 50%), meaning that there should be a high value for anything discovered and smaller discoveries will still be economic to develop, especially given the cost recovery framework. We estimate the break-even oil price for Liza on Exxon's block is <US\$35/bbl and NPV10 for the Liza discovery is ~US\$9/bbl at US\$70/bbl Brent.
- **Development costs should be low:** The well cost in the region is low, estimated to be just US\$30-35mm for an exploration well on the Eco Atlantic block and the recovery rates per well disclosed by Hess of over 50mmmbbl are very high compared to the average for offshore fields. Liza is being developed at US\$7/boe. Development well costs on Eco's block could be as low as US\$10mm if drilled by a jack-up given the shallow water setting.
- **Interest shown from majors:** Oil majors are generally struggling to find material liquids rich opportunities to develop given the lack of industry exploration success in the last 5 or so years. Therefore, we expect Guyana to be a region that the majors look to expand in, demonstrated by the interest shown by TOTAL in Eco's block.

Eco Atlantic Guyana Overview

The company currently has a 40% working interest in the Orinduik licence, with Tullow Oil owning the remaining 60% and acting as operator. Eco Atlantic is in the process of farming down its 40% interest to TOTAL, which will see Eco reduce its working interest to 15%, once necessary approvals are granted. This massive 1,800sqkm licence is in the Guyana-Suriname Basin, up dip from Exxon's Stabroek licence where, to date, nine discoveries have been made with the combined gross recoverable resource being >4Bboe. The first well is planned for Q3'19.

The Orinduik licence is located on the shelf and so in areas will have relatively shallow water depths of approximately 70m compared to Exxon's licence where the water depth is >1,500m. Eco's licence is located up dip of the Liza discoveries and it is believed that the oil will have migrated from the source of the Exxon's discoveries up through Eco's licence and will hopefully be trapped in structures on the licence.



Source: Company Presentation

As might be expected, the industry is once again excited by the region. To this end, Eco announced in September 2017 a farm-out deal. TOTAL took an option to acquire a 25% stake in the Orinduik licence, reducing Eco's stake to 15% from 40%. TOTAL paid an option fee of US\$1mm and then, subject to the processing of the 3D seismic data (which was completed and delivered in September '18), had 120 days to exercise the option but did so almost immediately, netting Eco a further cash payment of US\$12.5mm by YE'18.

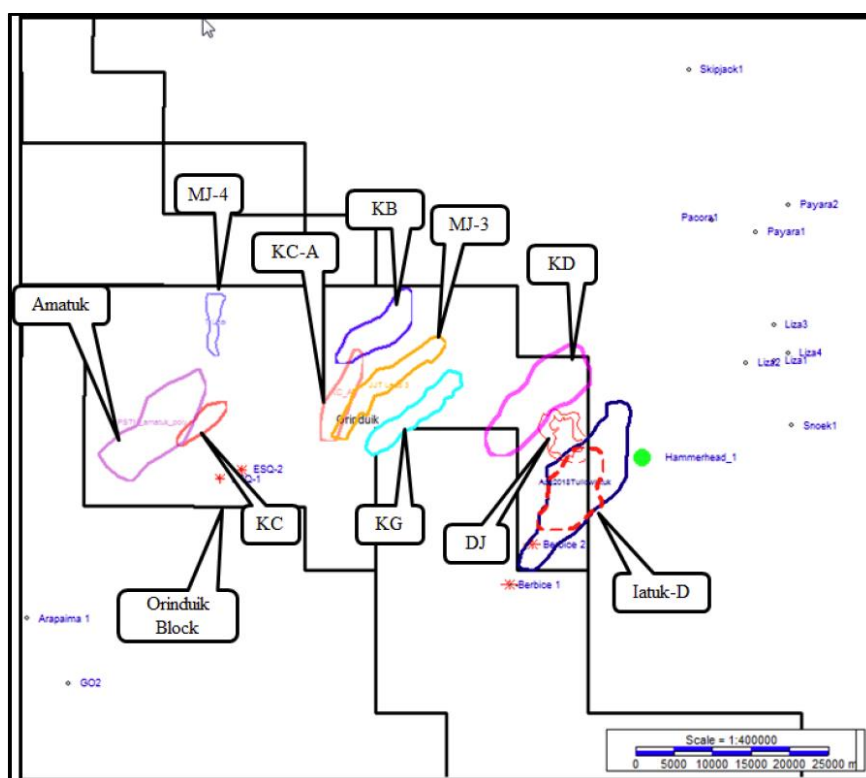
The payment by TOTAL should be put in context of the expected well cost of ~US\$35-40mm – a net cost to Eco Atlantic of ~US\$5-6mm, covering the cost of 2 wells. Eco had already been partially carried for the costs of the 2D and 3D seismic survey costs by Tullow Oil. An important part of this farm-out deal for Eco is that the company receives cash rather than being carried for the potential work programme and so it gives the management the flexibility to use these funds in other areas. Also, if the partners decide not to progress at any stage, the company still retains the cash.

Orinduik CPR – September 2018

	KB	DJ	KG	KD	Iatuk D	KC	Amatuk	MJ-3	MJ-4	KC-A	Average
Trap	70%	70%	80%	80%	80%	80%	80%	80%	80%	80%	78%
Seal	40%	40%	40%	40%	40%	40%	40%	40%	40%	35%	40%
Reservoir	75%	75%	70%	70%	70%	60%	60%	60%	60%	60%	66%
Presence of HC	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Overall	21.00%	21.00%	22.40%	22.40%	22.40%	19.20%	19.20%	19.20%	19.20%	16.80%	20.30%
P50 Gross Unrisked Prospective Resources (mmboe)	243	150	634	668	629	41	229	229	27	63	291
Risk size	51	32	142	150	141	8	44	44	5	11	63
Drainage area sqkm	27	24	30	51	50	11	68	25	5	9	30
Play type	Strat Trap	Strat Trap	Strat Trap	Strat Trap	Strat Trap	Strat Trap	Channel Fill	Strat Trap	Strat Trap	Strat Trap	
Age	Tertiary	U. Cret	U. Cret	U. Cret	U. Cret	U. Cret	U. Cret	U. Cret	U. Cret	U. Cret	
Average Depth, m	3,700	4,160	3,900	4,250	4,850	2,460	2,415	3,700	2,120	3,225	3,478
Gross pay, m	70	50	275	140	125	40	40	95	40	75	95

Source: Eco Atlantic September 2018 CPR

The report covers the assets on the Orinduik Block offshore Guyana. Bottom line, the report has identified ten large prospects with 2.9Bboe of P50 resource, with an average 22.4% chance of success on the largest prospects. Most of these leads are considered analogous to the Stabroek Liza plays. The partners plan to commence the drilling of a well by Q3'19.



Source: Eco Atlantic September 2018 CPR

The main take-aways from the CPR are:

2.9Bboe of prospective resource of which 2.5Bbbl and 2.5Tcf. The 2.5Bbbl of oil is using an average recovery factor of 27%. Oil and associated gas would be expected to be encountered on the Orinduik Block based on the discoveries on the neighbouring Stabroek Block.

For comparison - previously Eco has indicated that the main two leads are called Amatuk and Kurutuik where the initial estimates of mean recoverable prospective resources were approximately 700 mmboe and 200 mmboe respectively. Today's CPR shines a light on 9 prospects. Interestingly the KG, KD and Iatuk wells were identified with the highest prospective resource.

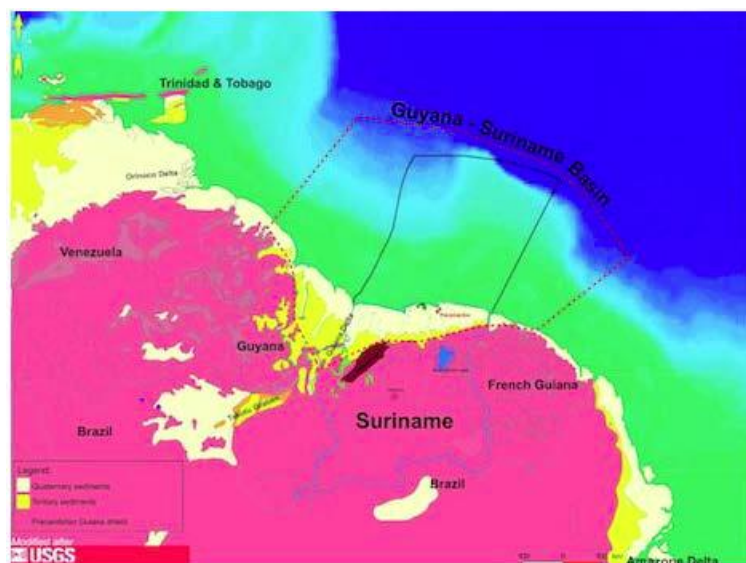
Water depth ranges from 300-1,250m although majority is <500m. The target sandstone reservoirs are shelf margin, slope and basin turbidite fans and carbonates reservoirs in the form of reefs and shallow water limestones. They are of Cretaceous age and younger. The wells drilled by Exxon have reportedly found hydrocarbons in the Upper Cretaceous and Tertiary.

The Hammerhead discovery <7km east of the Orinduik Block boundary proved the Tertiary section (thought to be Miocene aged) has commercial accumulations of hydrocarbons in stratigraphic sand traps. The Tertiary prospectivity hasn't been focused in the CPR. In light of the Hammerhead discovery, the Tertiary section will be evaluated in the near future and we would expect a number of new leads to be identified.

Several additional leads have been identified by Eco and their partners, which have not been evaluated at the time of this report. The standard assumptions that have been used are an oil gravity of 35, a GOR of 1,000, porosity of 22-25%, water saturation of 30%, net to gross of 45% and a recovery factor of 28%.

Due to the stratigraphic nature of the traps, the predominant risk in the subject block relates to the presence of intact seals both vertical and lateral, and the quality of the reservoir rock for the creation of commercial accumulations of oil and gas.

Guyana exploration history



Source: USGS

Located in the north-eastern corner of South America, the Guianas comprises two independent states (Guyana and Suriname) and an overseas department of France, French Guiana. The basin not only stretches along the interior and coastal areas of both Suriname and Guyana but also extends into French Guiana and Venezuela. In 2001, the United States Geological Survey (USGS) estimated that ~15Bbbl of oil and ~42Tcf of gas of yet to find potential in the Guyana–Suriname borders. Currently, the Calcutta and Tambaredjo fields, onshore Suriname, are the only producing assets within the basin.

The fiscal regime within Guyana is a favourable production sharing contract (PSC), with close to a 50% contractor take. Although there is a 1% royalty payable it can be claimed back through cost oil and there is no corporate tax payable. The profit oil share for the contractor varies between 40–50% depending on the production level. There has been some backlash within the country over the benign terms of Exxon’s fiscal terms in the light of the huge quantities of oil discovered to date and so there is the risk, as with anywhere, that the Government attempt to increase its take. We estimate an NPV₁₂ of ~ US\$5/bbl based at US\$70/bbl Brent.

Until recently, there was limited success in finding hydrocarbons, both offshore and onshore. Regional activity was halted from 2000–2007 as the Surinamese Navy prevented CGX (Canadian E&P), from spudding a well due to a maritime border dispute between Guyana and the Suriname in 2000. The dispute was eventually settled by the United Nations International Tribunal for the Law of the Sea (ITLOS) in 2007. The lack of capital investment and drilling hiatus left the basin underexplored. The size of the potential prize (200–2,000mboe prospects) and opening of the West Africa Transform Margin, reignited interest in the region’s hydrocarbon industry from 2008.

A decade ago the area basin was one of the global hot spots with industry players looking at emulating Tullow Oil’s Jubilee discovery in Ghana. Tullow Oil made the Jubilee discovery in 2007 and this opened a new play in the Atlantic Transform Margin. The play was based on the Lower Cretaceous sedimentary basins being formed as the African and American landmasses separated to form the Atlantic Ocean. This led to significant interest from the oil industry. However, success

proved to be very elusive. Following on from Tullow Oil's successes in Ghana, 24 consecutive wells were drilled and none of these found commercial quantities of oil and gas. This drilling programme is believed to have cost the industry US\$3.4B while adding in other costs (such as seismic) the cost is likely to have topped US\$6B. As could be expected, with the lack of success, the area fell out of favour and this allowed Tullow and Eco to sign up the Orinduik licence in January 2016.

Equatorial Atlantic Transform Margin

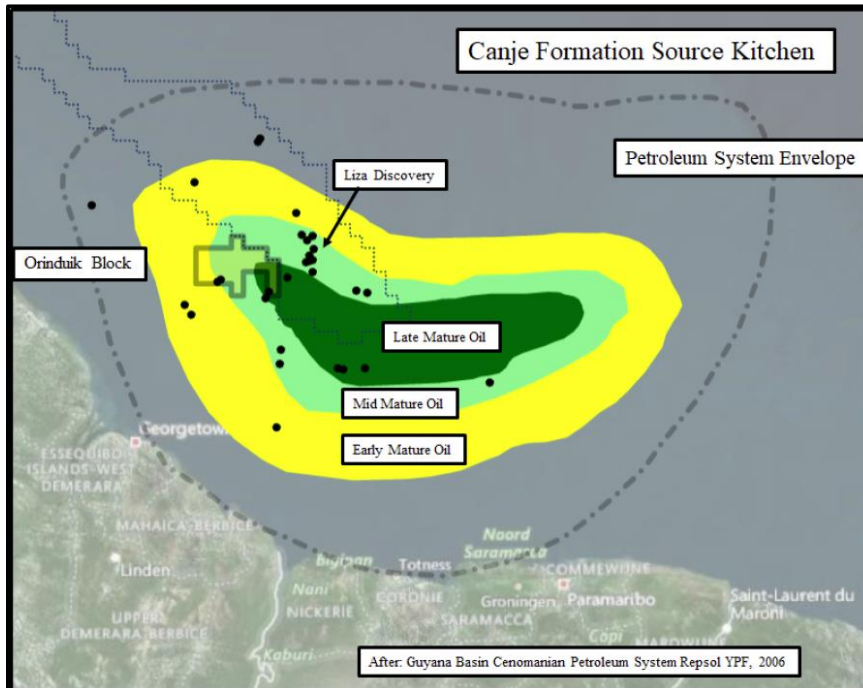


Source: Tullow Oil

At the onset of the Aptian age, 122Ma, South America and Africa began to drift apart. By the Cenomanian/Turonian age, 93Ma, both continents were completely separated. Consequently, there are identifiable analogies between the West African offshore petroleum system and the Guyana-Suriname offshore petroleum system. Both basins demonstrate strong similarities with regards to source, timing, burial, compaction and trap mechanisms.

However, there are significant differences between the Guyana-Suriname and West African basins. Particularly, West African reservoirs are not as deep as the reservoirs in the Guianas. For instance, the Jubilee reservoir is in a Turonian interval at a depth of ~12,000ft. The Turonian interval in the Guyana – Suriname basin is comparatively deeper, located beneath ~21,000ft of sediment. This difference in depth can cause the reservoirs to have different characteristics.

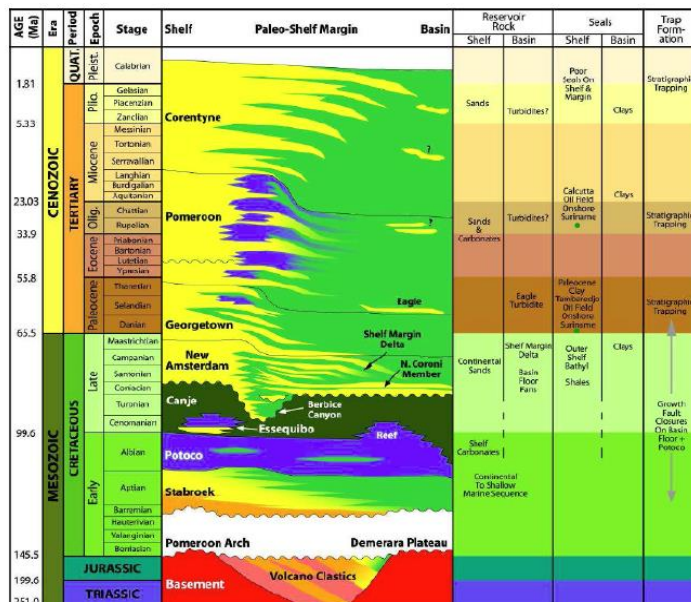
The Guyana-Suriname Basin, comprising onshore and offshore sections, extends into Venezuela, Guyana, Suriname and French Guiana and is known to contain the Canje Formation - a Late Cretaceous / Cenomanian age oil and gas generating marine source rock. This Canje Formation is like the hydrocarbon generating rocks of West Africa, Eastern Venezuela and Trinidad and Tobago.



Source: Eco Atlantic September 2018 CPR

Furthermore, numerous gas and oil shows as well as up dip heavy oil accumulations within Suriname, confirm the presence of an active hydrocarbon system. While onshore has been relatively explored with over 1,250 wells drilled, offshore is considerably underexplored. Notable historic wells include Shell's Abary-1 well and Elf's North Coronie-1 well. Drilled in 1975, the Abary-1 well encountered light oil (37° API) and gas shows at a depth of ~13,000ft.

Guyana-Suriname Basin stratigraphy



Source: CGX

Recent exploration

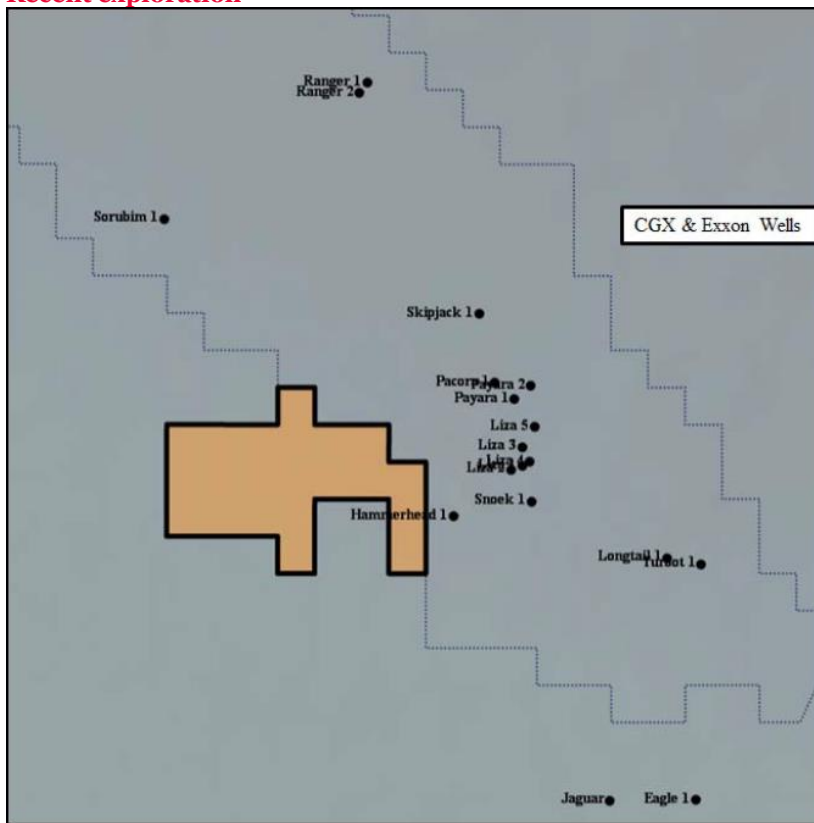
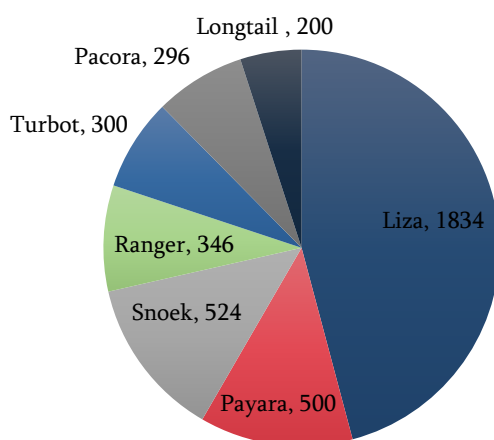


Figure 3-52 Location of Exxon and CGX Wells

Source: Eco Atlantic Guyana CPR, September 2018

The area has come back into favour again with Exxon drilling the Liza-1 discovery in May 2015, which had 90m of high quality, oil-bearing sandstones. This was followed by an appraisal well drilled in July 2016 where the company announced that recoverable resources were between 0.8-1.4Bboe. Exxon has made a further 8 discoveries (Liza Deep, Payara, Snoek, Turbot, Ranger, Pacora, Longtail and Hammerhead).

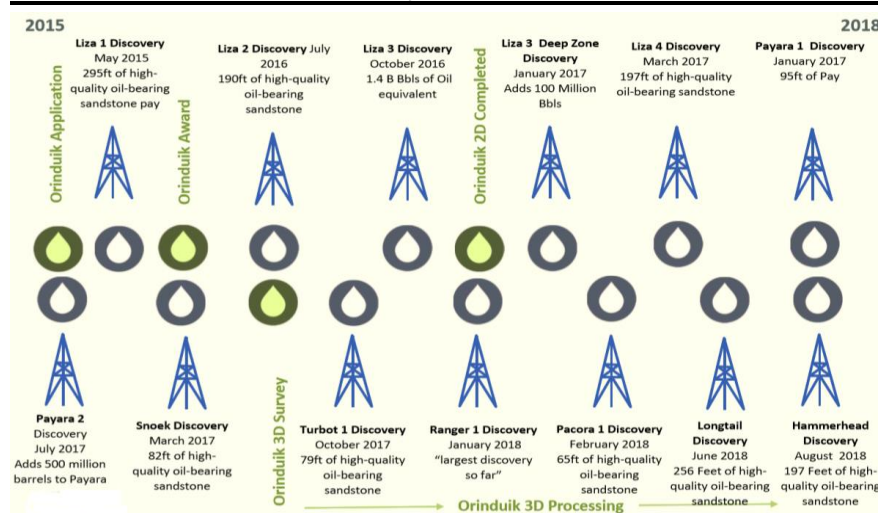
Exxon's discoveries and estimated sizes (excludes Hammerhead)



Source: Eco Atlantic Guyana CPR, September 2018

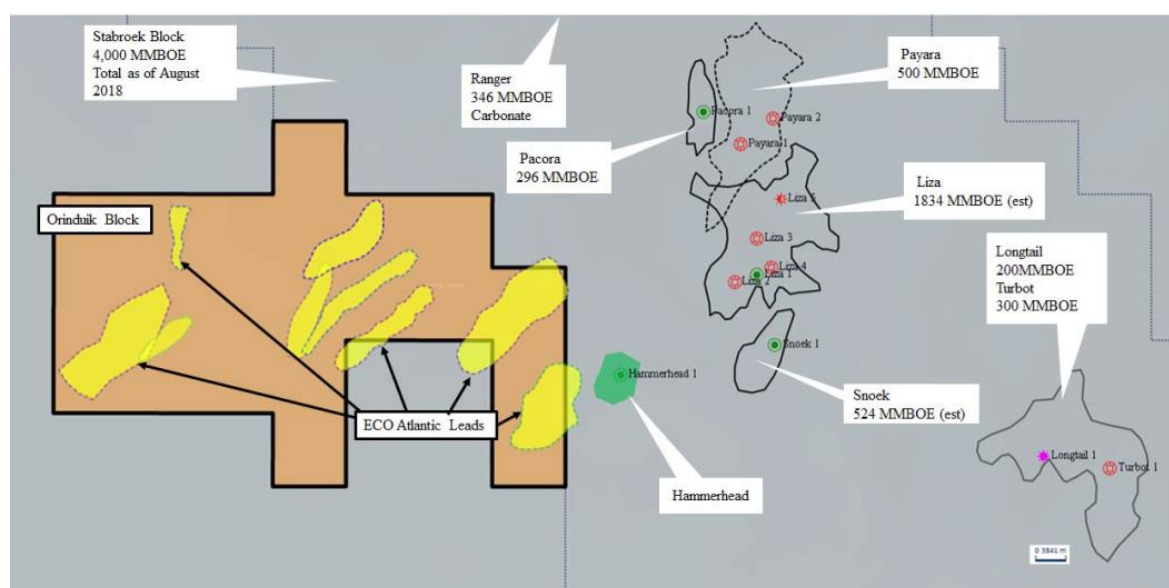
Overall Exxon estimates that the discovered gross recoverable resources are >4 billion barrels of oil equivalent from its eight discoveries excluding Hammerhead. Given that these are world-class discoveries, the partners are eager to get production on stream quickly and they sanctioned the first development phase in mid-2017 with first production from Liza expected in 2020 – a mere five years after making the initial discovery. Production from the first phase is expected to be 120,000 bbl/day and could increase to >750,000 bbl/day by 2025 with incremental phases.

Exxon's Stabroek block discovery timeline



Source: Eco Company Presentation

Making this region more exciting is Exxon's exploration well on the Ranger prospect which encountered 70 metres of high quality reservoir. This is important given that this is a carbonate structure whereas the other discoveries have all proved to be turbidite plays. This opens a significant new play in the basin and would have important ramification for the prospectivity of Eco Atlantic's acreage in the adjacent block and could open up carbonate prospects on top of its existing turbidite prospects.



Source: Eco Atlantic Guyana CPR, September 2018

Guyana development economics

Orinduik block potential developments

We have done a detailed model of a potential development on the Orinduik block. We estimate an NPV₁₂ of \$5/bbl for ~600mm bbl development at US\$70/bbl flat and a start-up date of 2025. We assume a slightly lower development cost of \$6/bbl than for Liza given the shallower setting of the block. We estimate a total contractor take of ~45% of the pre-tax FCF from the block.

Stabroek block developments

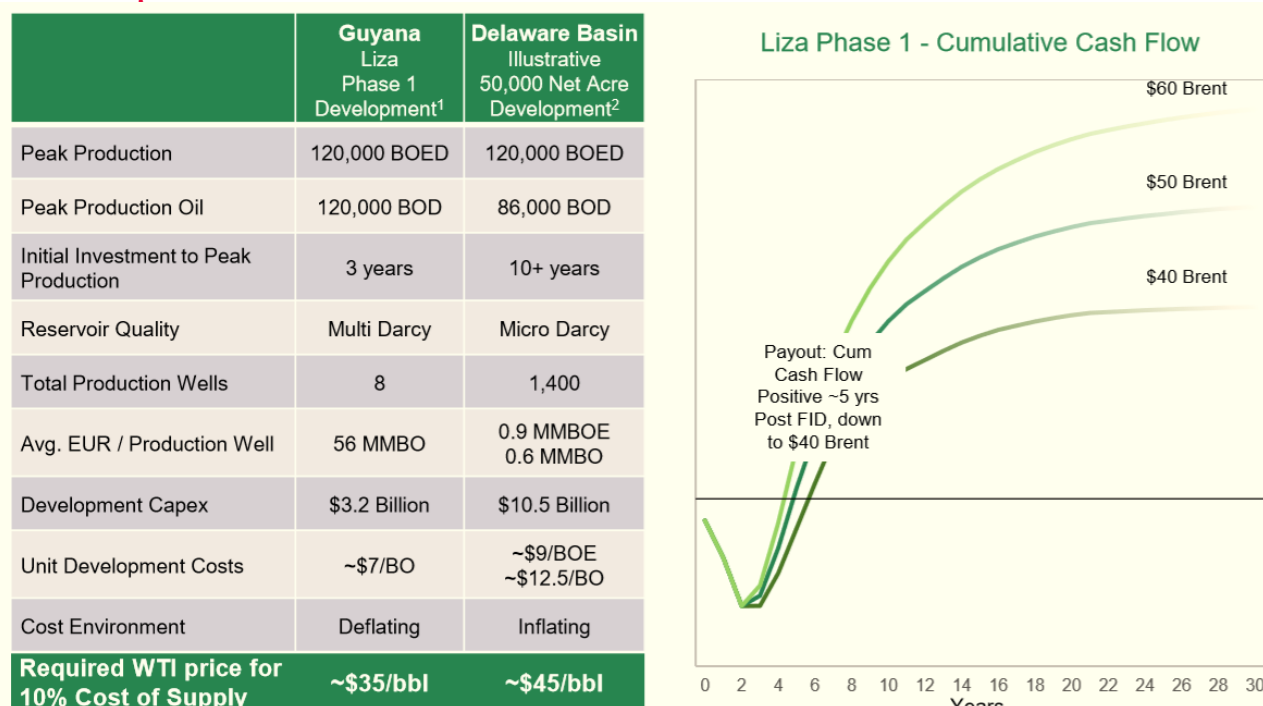
We have modelled out the phase 1 development of the Liza field on Exxon's Stabroek block and estimate an NPV₁₀ of ~\$9/boe (at US\$70/bbl Brent) from the point of FID given the world class reservoirs and fiscal terms. This also leads to a <US\$35/bbl Brent break-even price and a point forward IRR of >40%. The block's partners see the potential for up to 5 FPSOs to produce on a gross basis more than 750,000 bbl/d by 2025.

Liza was discovered in May 2015 and FID was taken in June 2017, a remarkably fast progression from discovery to FID, especially given it is a frontier province with no offshore production. Production is expected to begin in March 2020, less than five years after discovery of the field.

The Liza Phase 1 development includes a subsea production system and a floating production, storage and offloading (FPSO) vessel designed to produce up to 120,000 bbl/d. Phase 1 is expected to cost just over US\$4.4B (which includes FPSO lease capitalization cost of ~US\$1.2B). Four drill centres are envisioned with a total of 17 wells, including 8 production wells, 6 water injection wells and 3 gas injection wells. The gas is anticipated to be reinjected in the reservoir because in the Liza complex the gas is miscible. So there will be recovery uplift as a result of putting that gas in the reservoir.

The fiscal terms are some of the best in the world and the reservoirs rank among the highest quality in the world, with high porosity and permeability, that are expected to deliver very high recovery factors (average EUR per production well is 56mm bbl) and production rates. Also, since the producing horizons are relatively shallow, the wells can be drilled in approximately 1/3 of the time and cost of those in the deepwater US Gulf of Mexico. Another thing is there's no salt, so from an imaging standpoint that helps and there's less casing string. So the exploration wells and the development wells cost less. In addition, development is set to occur at what is expected to be the bottom of the offshore cost cycle.

Liza development economics versus the Permian



Liza Phase I offers breakevens superior to the premier U.S. shale plays

¹ Figures gross. Leased FPSO. EUR 450 MMBO.

² Figures gross. Assumes zero acquisition cost. 1,400 horizontal well locations: 30 risked wells per section. GOR 2.5 mscf/bbl. Average forward \$7.5 MM DC&F cost for ~7,000' laterals (variable by operator). EUR based on Decline Curve Analysis for ~810 horizontal Delaware wells online from Jan 2017 (data source RS Energy) & assumption of same EUR per well on average for all 1,500 forward Wolfcamp and Bone Spring wells. EUR 1,190 MMBOE, 780 MMBO.

Source: Hess

We think it is topical to compare the economics of Guyana Liza Phase 1 with arguably the basin that has attracted the most capital in the last few years and should see the most growth in the near-term – the Permian. Hess, which has interests in both Guyana and US onshore shale assets has analysed the economics of Liza versus the Delaware Basin in the Permian. With US\$7/bbl development cost for Liza Phase 1 and a cash payback in ~3 years at a US\$50/bbl, Hess sees its opportunity in Guyana as one of the most attractive in the world today.

The figure above compares 2 world-class investment opportunities, Liza Phase 1 and an illustrative 50,000 acres development in the Delaware Basin. The assumptions here are both developments to a gross production rate of 120,000boe/d and exclude acquisition costs. The Delaware Basin development assumptions are based upon 1,400 well locations, US\$7.5mm for drilling, completions and facilities costs, 7,000ft laterals and EURs based upon decline curve analysis on historical data from RS Energy.

Results show a few interesting comparisons: initial investment to peak production for Liza, 3 years, versus Delaware, over 10 years; reservoir quality, multi-Darcy versus micro-Darcy; 8 production wells versus 1,400; average EUR per well, 56mmboe versus <1mmboe; development capex, \$3.2B versus \$10.5B.

While both are world-class investments, Guyana offers a lower cost of development, higher financial returns and more rapid cash paybacks. And with the discounts to WTI that are occurring in the Permian Basin it's also important to note that Guyana will get Brent pricing exposure, with no discounts off that given it is high quality light, low sulphur oil.

Namibia

Key issues and fiscal terms

Although the dry holes a few years ago have tarnished Namibia from an investor stand-point, it was interesting to see some previous Namibian sceptics (arguments being lack of proven source, reservoirs and traps; plus those that thought it was a gas province) taking encouragement from the dry holes (e.g. Tullow) and Exxon entered the block containing the Wingat dry hole. The understanding of the basin has come significantly since the beginning of the 2012 drilling campaign.

Namibia has a good operating environment and existing infrastructure (deepwater port/logistics hub) at Walvis Bay. Along with its long established regulatory regime set in a politically stable environment, Namibia's legal framework and O&G code in general are investor friendly. There have only been ~15 offshore wells drilled to date. It has an attractive fiscal regime: a 5% royalty, 35% tax rate and 25% additional profit tax (APT) when the project IRR is over 15%. We estimate an NPV₁₂ of ~US\$4/bbl at US\$70/bbl Brent.

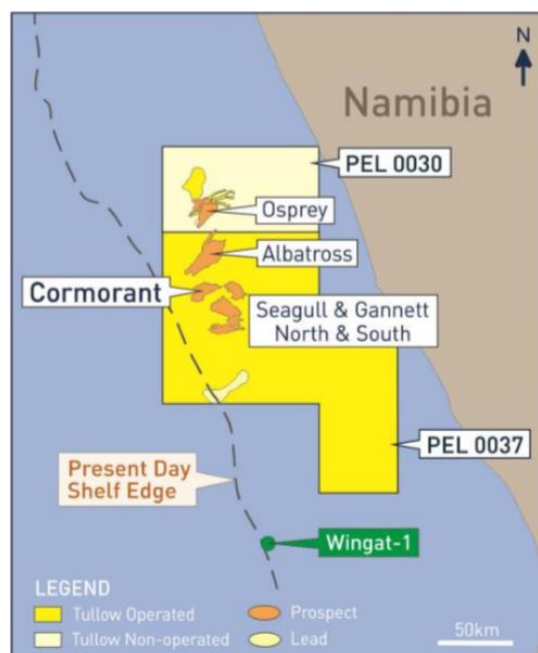
Key players

There have been new entries from: Exxon, Shell, Tullow, TOTAL and ONGC. Repsol, Petrobras, BP, Murphy and OMV have pulled out. HRT having snapped up Namibian pure-play exploration company UNX Energy Corp for C\$720mm, pulled out in 2016. BW Offshore farmed into Kudu in Feb '17 – yet another attempt to develop this gas field.

- In the northern Walvis Basin: PanContinental /Tullow/ONGC/Africa Energy are partners in PEL 37. GALP took PEL 82 in 2016 and farmed down to Exxon in early 2018. Eco Atlantic/ AziNam/Tullow/ONGC are in PEL 30. AziNam has stakes in 6 other blocks PEL 33/34 (AziNam/Eco Atlantic); PEL 71 (AziNam/Chariot/Ignitus) PEL 44/45 (AziNam/Maurel et Prom). Oranto Petroleum is farming out PEL 43. Azinam has built up over 90 leads and prospects.
- In the Orange Basin in the south: in 2014 Shell bought block PEL 39 on the border with South Africa in the Orange Basin from Signet Petroleum. Adjacent to this, TOTAL farmed into Impact's PEL 56 and to the North, GALP has PEL 82/83 and Chariot is slightly further north with blocks PEL 67/72. Canadian listed Windfire Petroleum has PEL 79. Calima, Trago Energy and Harmattan Energy were awarded PEL 55 (2813B). Serica is looking to farm out PEL 47 in the Luderitz Basin including the drill ready B prospect (700mm bbl). Lekoil has Block PEL 059.

Recent exploration

In September 2018, Tullow and partners drilled the unsuccessful Cormorant exploration well. Despite being non-commercial, encouragement could be taken from the wet gas signatures, indicative of oil, encountered in the overlying shale section. It should be noted that it is unlikely dry gas discoveries will be commercial in the near term.

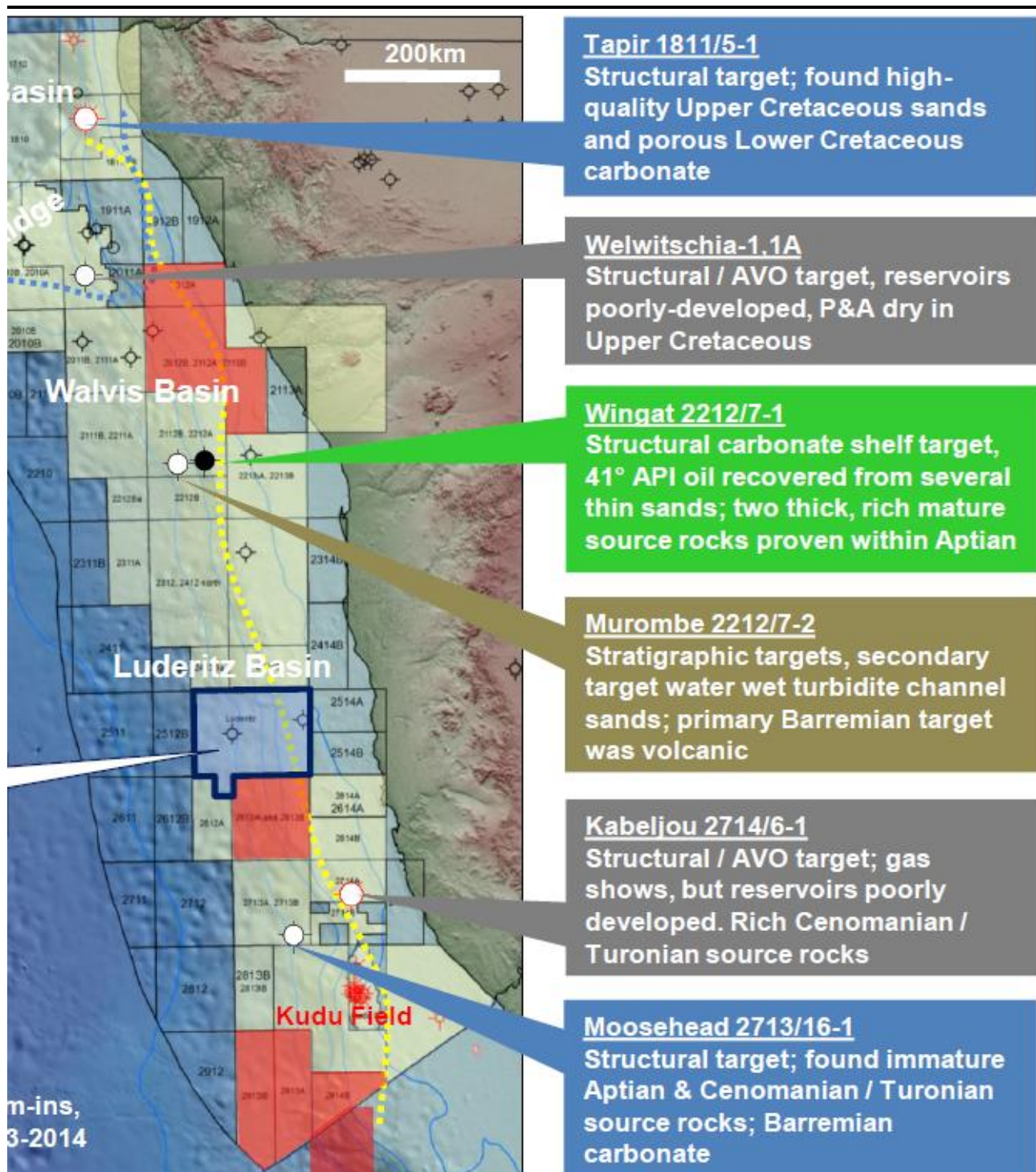


Source: Tullow Oil

There were 6 unsuccessful wells drilled in 2012-2014 with the effort being led by Chariot and HRT focused on the Namibe (Tapir South), Walvis (Wingat, Murombe, Welwitschia) and Orange Basins (Kabeljou and Moosehead). The wells confirmed the presence of clastic and carbonate reservoirs and also proved an oil-based working petroleum system with two thick, rich mature source rocks within the Aptian Interval. 3D seismic has been shot by the likes of Shell, Impact and Chariot recently. Azinam said it has 13,000sqkm of 3D over its blocks with 10Bboe of prospective resources identified.

Perhaps the most important well for the players was the Wingat-1 well in licence 2212A in the Walvis Basin. This was drilled by HRT and GALP in 2013. Whilst drilling, the exploration well penetrated two well-developed source rocks. In the main exploration target, the reservoir was found to be saturated with a light 38-42° API oil, which was recovered to surface. However, there was low porosity in the reservoir. This well proved source rock and demonstrated a working hydrocarbon system in the basin. 270 meters of good to excellent oil prone source rock was logged in the Block 1911/ 10-1 well drilled by Norsk Hydro in 1995.

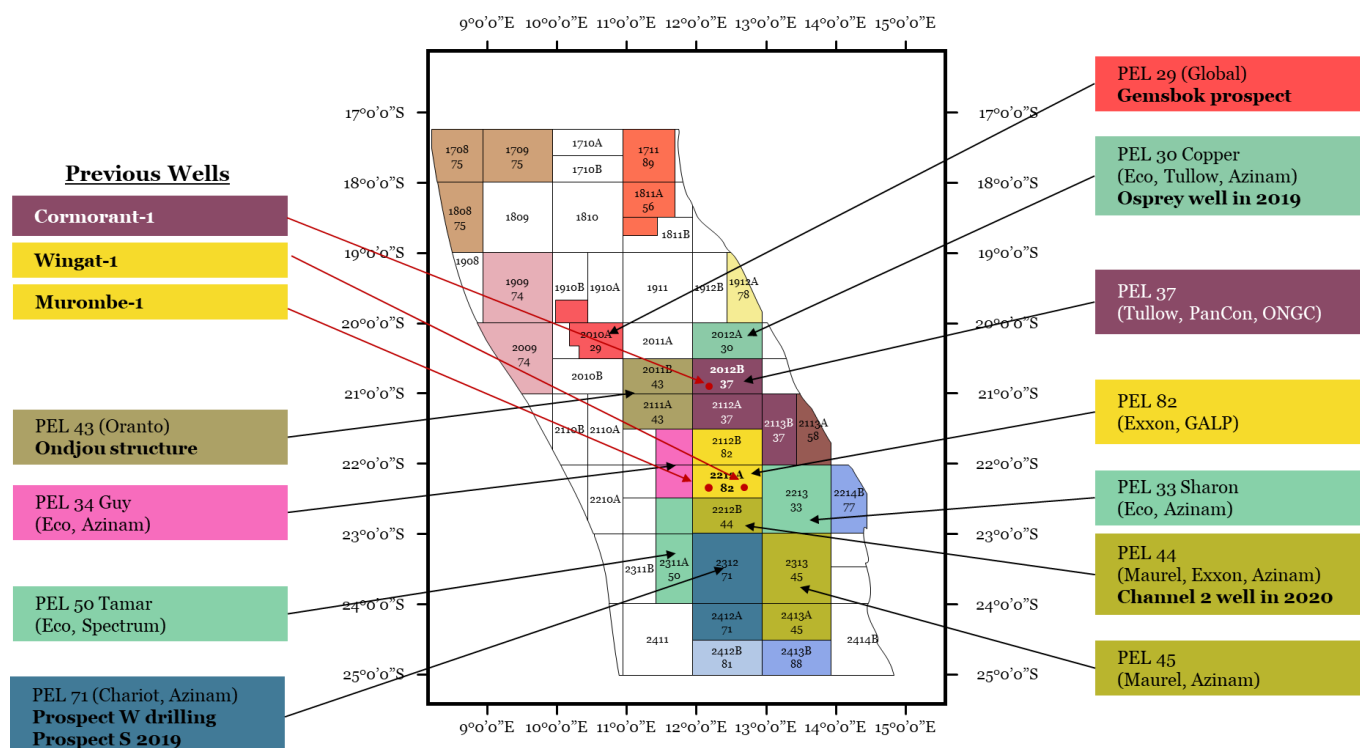
The Morombe well not only de-risked the source rock presence, clastic reservoir quality has also been de-risked. Although there is no reservoir encountered at the primary target levels in the Morombe well. However, the secondary target at the Morombe well, a turbidite sands channel Santonian age (Baobab sands), encountered 242 m gross section with a 15% n/g ratio and average porosity of 19%, though was water wet. This indicates that Late Cretaceous turbidites are having high quality reservoir sands.



Source: Chariot Oil and Gas

Planned activity

Namibia's Walvis Basin Block map with historic and planned wells



Source: Company data

Following the recent Cormorant well there is a lot of potential exploration drilling activity over the next 18 months including Eco's planned Osprey well at some point in 2019:

- Chariot plans to drill the 459mmbbl Prospect S (29% Pg) in October 2018 on PEL 71, which it is trying to farm-down and the 284mmbbl Prospect W could follow in 2019.
- Shell will drill 2 exploration wells in the northern portion of its licence area too following Chariot's Prospect S.
- Azinam announced in May '18 it is planning a 24 month, multi-well program on the blocks it is involved in.
- Impact/TOTAL plan to drill in H2'19 on a basin floor fan with multi-billion barrel potential.
- Windfire Capital is planning to drill Meerkat-1 in PEL 79.
- Global Petroleum is looking to farm out PEL 29 to fund 600sqkm of 3D to derisk the Gemsbok prospect.
- On PEL 44, a well is planned on a >1Bboe prospect in 2020 by Maurel, Exxon and Azinam.

Eco Atlantic Namibia Overview

Eco Atlantic's blocks offshore Namibia - Summary

	Cooper licence	Sharon licence	Guy licence	Tamar licence
Eco Atlantic	32.5%*	60.0%	50.00%	80.0%
NAMCOR	10.00%	10.00%	10.00%	10.00%
AziNam	32.50%	30.00%	40.0%*	-
Tullow Oil	25.00%			-
Spectrum				10.00%
TOTAL	100.00%	100.00%	100.00%	100.00%

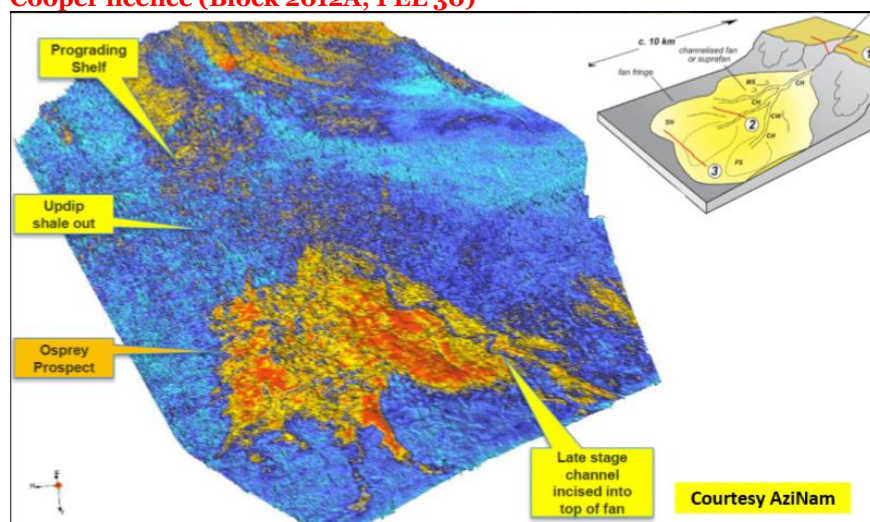
Source: Company data

Note: * If Tullow exercises its option Eco's stake in Cooper will drop to 25%

Eco Atlantic has built up a significant portfolio of acreage offshore Namibia since picking up most of its blocks in March 2011. The company now has four offshore licences – Cooper, Sharon, Guy and Tamar. The Tamar Block was obtained more recently from Pan African who had obtained the license in March 2012. Eco's strategy was to partner up with state oil company Namcor which enabled it to get access to all the seismic data and to get the pick of the blocks it wanted. It originally had some onshore assets but disposed of them as it was difficult to find a market for gas. The strategy has been to maintain a careful and cautious pace, to fully and completely understand the region and to de-risk each asset by using industry learnings, successes and experience.

The attractiveness of the blocks has been evidence by Eco attracting Tullow, AziNam and indirectly ONGC into its blocks. Eco has high equity interests in these blocks where it currently acts as the operator of three of the blocks. These are all located in the Walvis Basin, which is thought by many to be the best area for making a commercial oil discovery with Eco seeing higher gas risk in the Orange Basin to the south. Although according to the CPR there is multi-billion barrel potential on its blocks, so far it only has one high-graded prospect, Osprey (285mmboe gross prospective resource). The majority of the leads in the CPR had very low (single digit CoS). The CPR is now 2 years old so there are likely to be further prospects, especially coming from the Guy block where 3D has been shot and processed.

Cooper licence (Block 2012A; PEL 30)



Source: Company Presentation

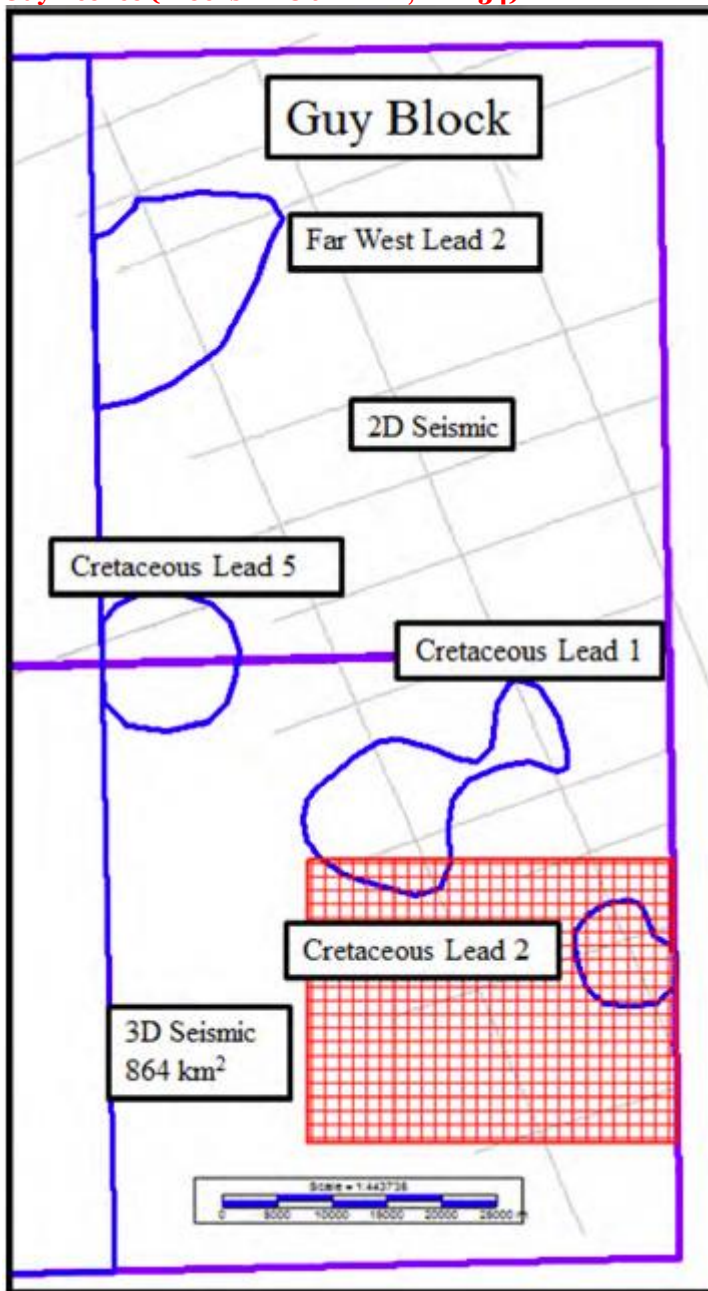
In the Cooper licence, Eco Atlantic has a 32.5% working interest and is operator partnered with Tullow and AziNam. Tullow has the option to elect to participate in drilling a well on the block, in which case Tullow will take an additional 7.5% stake from EcoAtlantic, reimburse part of the past costs (~US\$1mm) and Eco will only have to pay US\$2.25mm (versus the US\$8.75mm based on a 25% paying interest) towards a well costing up to US\$35mm gross. Based on the speed the Cormorant well was drilled it is unlikely to cost more than this. If Tullow doesn't exercise the option it will have to pay ~US\$3-4mm to Eco instead. The final environmental clearance to drill a well has been received and Eco has said it is planning for a well in Q3'19 or Q1'20.

This 5,000sqkm block lies to the North of the Walvis basin with a water depth of <500m across the block. The group has acquired and processed 1,100 sq.km of 3D seismic (Eco was largely carried by Tullow and AziNam) and is now moving forward to get ready to drill a well. There is a commitment to drill a well by March 2020.

Oil seeps have been observed in the offshore area near the Cooper Block. Early Aptian source rock is located on Cooper Block down dip to the leads. A preliminary study by PGS based on geothermal gradients derived from the existing well information indicates that the Turonian–Cenomanian aged source rock could be in the oil window in the western part of the Cooper Block and the Aptian aged source rock could be within the oil window throughout most of the Block. The reservoirs consist of sandstones deposited in marine, channel-fan complexes on the slope. Reservoir rocks on the block are expected to be Cretaceous in age with good properties.

The block contains 882mmboe of gross unrisks prospective resource, however most of the leads have <5% chance of success. The top-ranking prospect on the block is the 285mmboe Osprey prospect (18% geological chance of success), which is interpreted to be of Apto/Albian age, within a sand filled channel and fan system. On 3D it pinches out at the base of the slope forming a stratigraphic trap. Based on our US\$4.7/boe NPV12 at US70/bbl flat, we see this prospect worth ~150p/sh unrisks.

Guy licence (Blocks 2118 & 2211A; PEL 34)



Source: Namibia Resource Report, October 31, 2016

In the 5,000sqkm Guy licence, Eco Atlantic has a 50% working interest and AziNam has a 40% stake. To date, the partners have carried out 1,000 km of 2D seismic and 870 sq. km of 3D which has been processed and is being interpreted by the operator AziNam. The deep part of the Guy block is thought to be prospective with a syn-rift source rock, which is expected to be in the oil window. The partners are progressing with getting ready to drill a well and this is likely to be somewhat dependent on the result of the Chariot operated well to the East. Given its large equity interest, we believe that Eco Atlantic would look to farm down a share of its equity in this licence to reduce its capital commitment for a potential well. We see the potential for a well in early 2020 on the block although the well commitment doesn't require drilling until March 2021.

Sharon licence (Blocks 2213A & 2213B; PEL 33)

In the Sharon licence, Eco Atlantic has a 60% working interest with AziNam on 30%. AziNam fully funded a 3,000 sqkm 2D seismic shoot over the block and will fund 55% of a 1,000sqkm 3D shoot over the block. This is required by March 2020 with an expected gross cost of US\$8mm (would be US\$5.3mm net to Eco).

Tamar licence (Blocks 2211B & 2311A; PEL 50)

In the 7,500km² Tamar licence, Eco Atlantic has an 80% working interest (Eco carries Spectrum's 10% interest). Eco holds this licence through PAO Namibia in which it recently bought out the minorities to increase its stake to 100% from 90% through the issuance of 300,000 shares (~US\$200k in value giving an implied value of US\$2.5mm for the block).

This licence lies adjacent and to the south of the Guy licence. This block was acquired through the acquisition of Pan African Oil Ltd in January 2015. The economic structure is not as favourable as the other licences in that Eco Atlantic is paying all the costs on this licence. The next target on the block is to shoot a 3D seismic survey (there is a commitment to shoot 250sqkm of 3D by end Oct 2020).

If there is success on the Chariot well, this block is likely to have the most positive read-through and hence we'd expect Eco to accelerate plans to shoot 3D. Eco is considering the same channel and fan systems that lead on to the north end of PEL 50 from PEL 71, where Chariot is drilling the S prospect. If the partners decide to drill on the licence, we would then expect to see Eco Atlantic farm down to reduce its financial exposure.

Unrisked Prospective Resource Estimate by Block

	Prospective oil resources (mmbbl)			Associated gas resources (BCF)		
	Low	Best	High	Low	Best	High
Gross						
Cooper	434	753	1,242	405	736	1,275
Guy	489	1,581	4,010	478	1,545	3,932
Sharon	702	2,212	5,518	668	2,176	5,466
Total	1,626	4,546	10,770	1,551	4,457	10,673

Source: Namibia Resource Report, October 31, 2016

Using the best estimate for prospective resources, Gustavson estimate that prospective recoverable resources are more than 4.5 billion barrels of oil and 4.4 TCF of associated gas, however the chance of success is currently very low. On a net basis to Eco Atlantic, this equates to 2.3 billion barrels of oil and 2.3 TCF of associated gas.

Eco Atlantic Oil & Gas - History

- 2012 - Farm-out agreements with AziNam, which acquired a 20% working interest in Eco's Namibia licences and contributed C\$3m in cash towards a placing undertaken by the company at that time
- 2013 – Approval of an extension of the initial exploration period for the Sharon Licence and the Guy Licence
- 2014 – One-year extension to March 14th, 2016, was also granted by the Ministry of Namibia in respect of the Cooper Licence
- 2014 - Eco entered into a farm-out agreement with Tullow Oil for a 25% interest in the Cooper license in return for a carry of Eco through a 3D program. Tullow also has an option to acquire a further 15% in return for paying the full cost of an exploration well on the block. Eco earned US\$4.7mm for a transfer of some of its interests in the Cooper, Sharon and Guy blocks to AziNam.
- 2015 – The company completed a share merger with Pan African Oil Ltd., which held cash resources of approximately C\$3m and three licence interests including the Tamar Licence (the others having since been relinquished).
- 2015 - Eco as the operator completed the processing of 1,097km² of 3D seismic survey on the Cooper block
- 2016 - Eco and Tullow jointly acquired the Guyana license for the Orinduik block with the company securing a 37.6% interest
- 2016 - The company announced the completion of an 870km² 3D survey on the Guy block.
- 2016 - The company's Namibia licenses were extended into the first renewal phase until March 14th, 2018
- Feb 2017 – Eco lists on AIM market in the UK
- Sep 2017 – Eco entered into a Guyana farm-out option agreement with Total for an initial payment of US\$1.0mm. TOTAL has the right to farm-in to the Orinduik block for an additional payment of US\$12.5mm to earn a 25% working interest that reduce the company's interest to 15%
- Nov 2017 - Eco secured a strategic investment from Africa Oil for approximately C\$14m at an issue price of C\$0.48/sh or GBPO.29/sh. ONGC enters Cooper block in Namibia.
- June 2018 – Eco granted extension on the Tamar Block.
- Aug 2018 – Hammerhead discovery made by Exxon which is thought to extend onto the Eco block.
- Sep 2018 – CPR on Orinduik block released. TOTAL exercises option to farm-in to Orinduik, netting Eco US\$12.5mm.

Management Profiles

Board of Directors & Key Management

Eco runs a tight ship with low levels of G&A (<US\$1mm p.a.) relative to peers and a management team that is not afraid to stick to exploration rather than adding production to give cashflow, which often dilutes the focus of the organisation and can create more issues than it solves. It doesn't appear wedded to the assets either and we'd expect it to monetise assets or the entire company, if an attractive enough offer was made.

Name	Title	Profile
Gil Holzman	Chief Executive Officer	<ul style="list-style-type: none"> Significant experience in the mining and energy resource sectors throughout South America and Africa Co-founder of Eco Managed a portfolio of private and publicly-listed resource and energy companies
Colin Brent Kinley	Chief Operating Officer	<ul style="list-style-type: none"> CEO of Kinley Exploration LLC, providing professional, technical and oversight expertise to resource companies Over 35 years of international expertise in energy project management and new energy company development Senior executive to several E&P companies and oilfield service companies Non-executive director at Coro Mining, (TSX-V:MIN) and Excelsior Mining Corp. (TSX-V:MIN)
Gadi Levin	Finance Director	<ul style="list-style-type: none"> He has acted as financial controller for Eco on a consultancy basis since November 2014 and was appointed as Finance Director of the company on 28 November 2016. CFO of TSX-V listed companies; Vaxil Bio Ltd., Briacell Therapeutics Corp. and Adira Energy Ltd.
Moshe Peterburg	Non-Executive Chairman	<ul style="list-style-type: none"> Over 25 years of experience in Africa (Nigeria, Equatorial Guinea, Ghana, Namibia and others) He is the founder of Peterburg Holdings, a private investment company with a broad portfolio across many sectors including infrastructure, mining and oil and gas.
Keith C. Hill	Non-Executive Director	<ul style="list-style-type: none"> Currently President and CEO of Africa Oil Corp., Director of Africa Energy and Chairman of Petrovita Energy. Over 30 years' experience in the oil industry including 18 years with the Lundin Group Senior positions at Occidental Petroleum and Shell
Kangulohi Helmut Angula	Non-Executive Director	<ul style="list-style-type: none"> Over 20 years' experience in the Namibian Government Served as Deputy Minister of Mines & Energy He is a consultant to the mining, energy, infrastructure and real estate industries in Namibia.
Peter William Nicol	Non-Executive Director	<ul style="list-style-type: none"> 30 years' experience in the banking industry, with 20 years specializing in the oil and gas sector Headed the Oil and Gas Research team at Goldman Sachs, GMP Securities Europe and Tristone Capital Initiated coverage of over 36 international E&P companies
Alan Friedman	Executive Director	<ul style="list-style-type: none"> A South African qualified attorney, has been connected with the North American public markets for 15 years President of Rivonia Capital, a company involved in the business of identifying, financing and managing a portfolio of companies across a wide range of sectors.

Investment Risks

Eco Atlantic faces risks common to oil & gas companies such as resource, construction / development, production, commodity price, geo-political, environmental and cost risks. In addition, we see some key company specific risks such as:

- In Namibia, the drilling of the well is somewhat dependent on the outcome of the well drilled by Tullow Oil and planned to be drilled by Chariot Oil and Gas in H2'18.
- Partners' risk: While Eco Atlantic is the operator of three licences in Namibia, Tullow Oil is the operator of the Orinduik licence in Guyana and AziNam is the operator of the Guy licence in Namibia. The work programme and spending are going to be very much going to be dictated to by these operators.
- Financing risk: Eco Atlantic, as a relatively small company has limited financing capacity in the event it has to move ahead with a major appraisal programme and development project on the back of exploration success.
- Key personnel risk: Eco Atlantic relies on a small senior leadership team. This team has been key to securing and running the assets. The exit of members of this management team could put the company at risk, in our view.
- Asset concentration risk: Eco Atlantic's assets are highly concentrated. As a result, material changes in the geo-political situation in the country could significantly impact the earnings and value of the company.
- Geo-political risk: Operating in Namibia and Guyana comes with inherent political risks. There is also a risk that fiscal regimes might be changed.

Financials (Canadian dollars)

Profit and loss

	2015	2016	2017	2018E	2019E	2020E
Income from option agreement	-	-	\$1,248,000	-	-	-
Operator Fees	\$7,551	-	-	-	-	-
Income from farm-out agreement	\$5,595,007	\$554,400	-	\$17,225,000	-	-
Interest income	\$40,767	\$4,494	\$51,539	\$85,791	\$113,653	\$56,168
Revenue	\$5,643,325	\$558,894	\$1,299,539	\$17,310,791	\$113,653	\$56,168
Operating expenses:						
Compensation costs	\$1,332,649	\$485,299	\$896,327	\$711,984	\$711,984	\$711,984
Professional fees	\$1,317,876	\$314,393	\$377,897	\$258,730	\$258,730	\$258,730
Exploration data acquisition and consulting	\$14,841,283	\$3,586,907	\$5,114,463	\$1,638,569	\$1,638,569	\$1,638,569
Technical Consulting and Evaluation	-	-	-	-	-	-
Exploration license fees	\$596,423	\$358,287	\$205,476	\$728,771	\$728,771	\$728,771
Travel	\$320,461	\$168,347	\$236,907	\$220,665	\$220,665	\$220,665
Recovered under JOAs	(\$13,414,514)	\$588,971	(\$746,849)	\$191,352	-	-
Operating costs	\$2,343,653	\$4,702,512	\$4,809,997	\$2,779,357	\$2,588,005	\$2,588,005
Occupancy and office expenses	\$582,068	\$118,763	\$19,918	\$68,864	\$68,864	\$68,864
Travel expenses	\$357,088	\$145,029	\$173,468	\$354,346	\$354,346	\$354,346
Public company costs	\$112,936	\$66,070	\$456,972	\$548,826	\$548,826	\$548,826
Insurance	\$123,418	\$62,442	\$38,717	\$71,491	\$71,491	\$71,491
Financial services	\$23,841	\$9,592	\$15,305	\$23,863	\$23,863	\$23,863
Advertising and communication	\$9,424	\$3,011	\$7,288	\$132,767	\$132,767	\$132,767
Depreciation	\$5,817	\$482	\$842	-	-	-
Recovered under JOAs	(\$203,152)	(\$45,342)	(\$20,554)	(\$20,930)	-	-
General and administrative costs	\$1,011,440	\$360,047	\$691,956	\$1,179,227	\$1,200,157	\$1,200,157
Share-based compensation	\$1,140,662	\$918,628	\$2,583,310	(\$19,923)	(\$19,923)	(\$19,923)
Foreign exchange loss (gain)	(\$559,221)	(\$375,695)	\$360,406	(\$545,993)	-	-
Expense Reimbursement	-	-	-	-	-	-
Total expenses	\$6,587,059	\$6,405,184	\$9,719,893	\$4,363,382	\$4,738,953	\$4,738,953
Net loss from continuing operations	(\$943,734)	(\$5,846,290)	(\$8,420,354)	\$12,947,409	(\$4,625,300)	(\$4,682,785)
Write down of license	-	(\$1,195,684)	-	-	-	-
Discontinued operations income	-	\$821,452	(\$3,805,591)	-	-	-
Net loss and comprehensive loss	(\$943,734)	(\$6,220,522)	(\$8,753,333)	\$12,947,409	(\$4,625,300)	(\$4,682,785)
Equity holders of the parent	(\$858,499)	(\$6,304,015)	(\$8,745,368)	\$12,947,409	(\$4,625,300)	(\$4,682,785)
Non-controlling interests	(\$17,400)	\$15,658	(\$7,965)	(\$176,292)	-	-

Balance sheet

	2015	2016	2017	2018E	2019E	2020E
Assets:						
Cash and cash equivalents	\$5,285,149	\$1,141,402	\$14,376,535	\$27,715,520	\$12,995,297	\$8,292,589
Short-term investments	\$100,000	\$49,818	\$74,818	\$74,818	\$74,818	\$74,818
Government receivable	\$44,396	\$22,494	\$23,997	\$19,768	\$19,768	\$19,768
Accounts receivable and prepaid expenses	\$757,553	\$1,542,777	\$838,703	\$806,960	\$806,960	\$806,960
Current assets	\$36,654,579	\$2,756,491	\$15,314,053	\$28,617,066	\$13,896,843	\$9,194,135
Petroleum and natural gas licenses	\$4,298,037	\$1,489,971	\$1,489,971	\$1,489,971	\$1,489,971	\$1,489,971
Equipment	\$5,230	\$842	-	-	\$10,075,000	\$10,075,000
Total Assets	\$50,645,894	\$4,247,304	\$16,804,024	\$30,107,037	\$25,461,814	\$20,759,106
Liabilities:						
Accounts payable and accrued liabilities	\$1,954,285	\$558,089	\$394,312	\$169,363	\$169,363	\$169,363
Amounts owing to license partners	-	\$784,445	\$39,722	\$56,708	\$56,708	\$56,708
Current liabilities	\$13,536,963	\$1,342,534	\$434,034	\$226,071	\$226,071	\$226,071
Equity:						
Share capital	\$20,876,274	\$20,698,713	\$42,814,406	\$44,952,511	\$44,952,511	\$44,952,511
Shares to be issued	\$176,581	\$355,427	-	-	-	-
Restricted Share Units reserve	-	\$782	\$113,355	\$70,393	\$70,393	\$70,393
Warrants	-	-	\$238,236	\$167,931	\$167,931	\$167,931
Stock options	\$2,356,419	\$2,943,564	\$3,051,042	\$2,983,828	\$2,963,905	\$2,943,982
Non-controlling interest	(\$83,980)	(\$68,323)	(\$76,288)	(\$57,076)	(\$57,076)	(\$57,076)
Accumulated deficit	(\$14,789,214)	(\$21,025,393)	(\$29,770,761)	(\$18,236,621)	(\$22,861,921)	(\$27,544,706)
Total Equity	\$37,108,931	\$2,904,770	\$16,369,990	\$29,880,966	\$25,235,743	\$20,533,035
Total Liabilities and Equity	\$50,645,894	\$4,247,304	\$16,804,024	\$30,107,037	\$25,461,814	\$20,759,106

Cash flow statement

	2015	2016	2017	2018E	2019E	2020E
Cash flow from operating activities						
Net loss from continued operations	\$2,126,263	(\$6,988,066)	(\$8,474,262)	\$12,947,409	(\$4,625,300)	(\$4,682,785)
Net loss from discontinued operations	-	\$767,544	(\$279,071)	-	-	-
Write-down of license	-	\$1,195,684	-	-	-	-
Shares issued for services	-	-	-	\$17,500	-	-
Share-based compensation	\$97,248	\$918,742	\$2,583,196	(\$19,923)	(\$19,923)	(\$19,923)
Depreciation	\$3,811	\$4,388	\$842	-	-	-
Changes in non cash working capital:						
Government receivable	(\$44,396)	\$21,902	(\$1,503)	\$4,229	-	-
Accounts payable and accrued liabilities	(\$9,246,111)	(\$2,976,658)	\$126,048	(\$242,449)	-	-
Accounts receivable and prepaid expenses	(\$191,346)	(\$785,224)	\$704,074	\$31,743	-	-
Amounts owing to license partners	(\$214,748)	\$784,445	(\$744,723)	\$16,986	-	-
Cash flow from operating activities	(\$7,469,279)	(\$7,057,243)	(\$6,085,399)	\$12,755,495	(\$4,645,223)	(\$4,702,708)
Change in non-cash w/c relating to discont. ops	-	\$1,605,752	(\$272,325)	-	-	-
Acquisition of new license	(\$1,612,382)	-	-	-	-	-
Equipment acquired and well cost	-	-	-	-	(\$10,075,000)	-
Purchase of minority interest in subsidiary	-	-	-	(\$254,800)	-	-
Short-term investments	-	\$50,182	(\$25,000)	-	-	-
Cash flow from investing activities	(\$1,612,382)	\$50,182	(\$25,000)	(\$254,800)	(\$10,075,000)	-
Net change in investment from discontinued ops	-	\$1,612,382	-	-	-	-
Proceeds from issuance of share capital	\$3,012,317	-	-	-	-	-
Proceeds from Brokered Private Placement	-	-	\$14,016,000	(\$7,526)	-	-
Proceeds from the Exercise of Stock Options	-	-	-	\$360,000	-	-
Proceeds from the Exercise of Warrants	-	-	-	\$485,816	-	-
Costs incurred on Brokered Private Placement	-	-	(\$721,792)	-	-	-
Proceeds from AIM Listing	-	-	\$8,390,250	-	-	-
Costs incurred on acquisition	(\$68,885)	-	-	-	-	-
Costs incurred on AIM Listing	-	-	(\$2,044,946)	-	-	-
Share repurchases	(\$748,925)	(\$354,820)	(\$21,655)	-	-	-
Shares purchased held in treasury	(\$29,700)	-	-	-	-	-
Cash flow from financing activities	\$2,164,807	(\$354,820)	\$19,617,857	\$838,290	-	-
Increase (decrease) in cash and cash equivalents	(\$6,916,854)	(\$4,143,747)	\$13,235,133	\$13,338,985	(\$14,720,223)	(\$4,702,708)
Cash and cash equivalents, beginning of year	\$12,202,003	\$5,285,149	\$1,141,402	\$14,376,535	\$27,715,520	\$12,995,297
Cash and cash equivalents, end of period	\$5,285,149	\$1,141,402	\$14,376,535	\$27,715,520	\$12,995,297	\$8,292,589

Source: H&P estimates, Company Data

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