

## Nigerian O&G

### The stakes are high

The following is an excerpt from a report released by Renaissance Capital on 16 February *Nigerian O&G – The stakes are high.*

**The under-investment and chronic infrastructure issues plaguing Nigeria's oil sector manifested in a multi-decade production low of <1.5mmbopd in December 2021. The recovery in January offers some optimism, we think, but the outlook remains uncertain: Shell's and Exxon's announced divestment plans in Nigeria, if completed, would transfer most of Nigeria's oil production from the onshore and shallow water terrains (~65% of total production in 2021) to indigenous control – at a time when global oil and gas financing is drying up. Whether or not the operatorship succession, if it happens, will result in a Nigerian oil sector renaissance remains to be seen, but we believe the stakes are high for Nigeria's oil sector. On the equity stories, we are more bullish as we think they offer some of the most compelling investment propositions in the international E&P universe.**

### This majors' disposals round is different

A decade ago, before the 'energy transition' and when peak oil supply theory still had proponents, the offering of assets and blocks in one of the world's most prolific hydrocarbon provinces was too attractive for investors to pass up, and financing was abundant. Now the majors are selling much larger assets (2020 SPDC gross production was 500kboepd and we estimate Exxon's shallow offshore assets at >200kbopd) when financing availability is much more restricted in what is a buyer's market globally. The first round was an opportunity for indigenous players and investors to develop peripheral, non-core assets neglected by the majors. This round is about transferring control of most of Nigeria's oil production from the majors to indigenous players, with the onus on the latter, to invest and grow Nigeria's oil sector.

### Sector outlook uncertain

Nigeria's production outlook has not appeared as uncertain as it does now, in our view, as most of the production operatorship control is set to change hands in onshore and shallow terrains, creating uncertainty with regard to future investment. We believe securing financing for the small/mid-sized indigenous players to complete the transactions will be challenging, let alone investing further for production growth in ageing assets of undetermined asset integrity. Add integration and operational risks to the mix and one can see why any of these deals might potentially be 'too big to chew' for any indigenous E&P. We expect 2022 production to be within the 1.60-1.75mmbopd range and our longer-term outlook is dependent on the level of investment. However, in the absence of major project start-up visibility, even with moderate investments, we expect declines to take their toll on production. With the likely start-up of new deepwater projects post 2025, we believe that Nigeria's production could average <1.5mmbopd by the second half of this decade.

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#### Decklar Resources (SR\*)

Bloomberg	DKL CN
Valuation range, CAD	1.05-1.75
Current price	0.65

Priced as of close 11 February

\* = SR - Sponsored research. Sponsored Research represents a product or communication where Renaissance Capital has received a fee from the company or issuer to produce the research

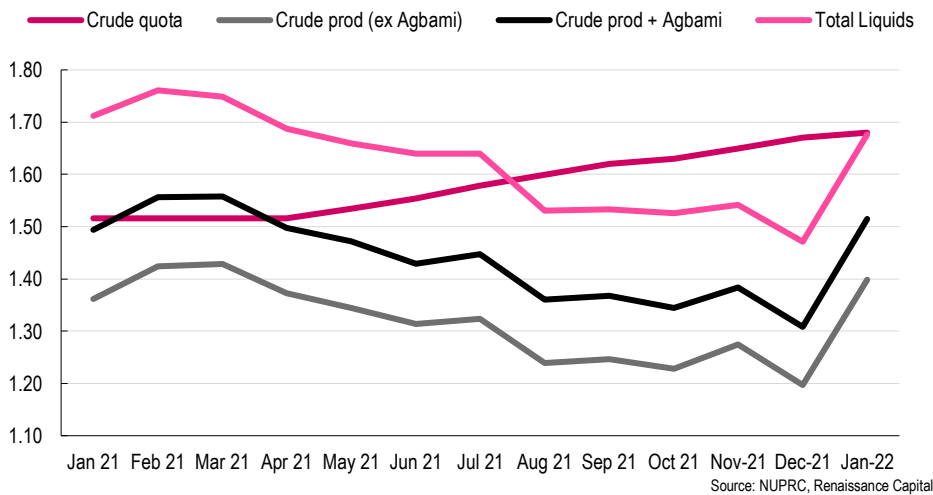
Source: Bloomberg, Renaissance Capital estimates

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# Nigeria's production and outlook

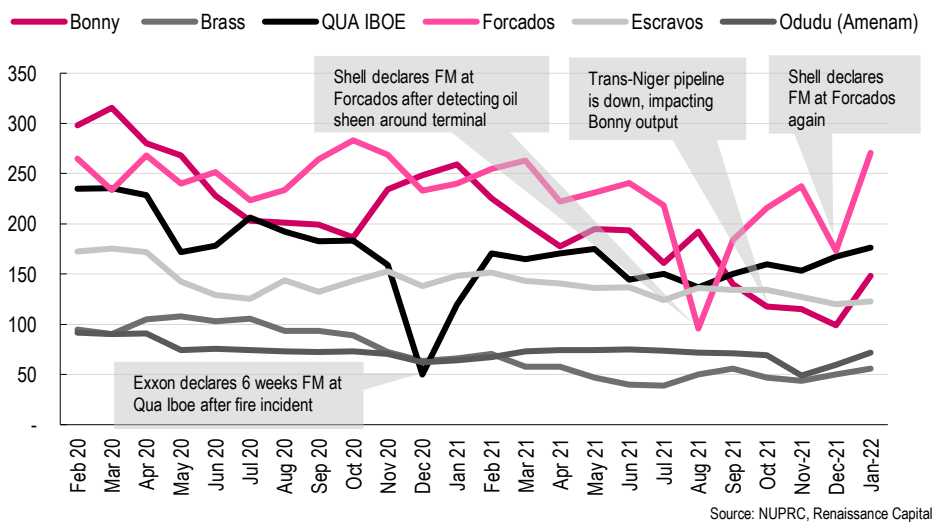
The early signs of optimism we had expressed, following the Petroleum Industry Bill's signing into law in August 2021, in hindsight appear premature as Nigeria's oil production (crude and condensates) continued to decline, averaging <1.5mmbopd in December 2021 – the worst performance in over a decade, and worse even than when the Niger Delta Avengers' militant attacks ravaged Nigeria's oil sector in 2016. Production experienced a sharp recovery in January 2022, across all terrains, to 1.68mmbopd, although still lower than the 2.0-2.1mmbopd pre-COVID levels and crude production (including Agbami grade) was some >150kbopd lower than Nigeria's OPEC quota. Nigeria has been unable to meet its quota since April 2021.

Figure 1: Nigerian crude production was >350kbopd lower than its OPEC quota in December, prior to recovering in January, mmbopd



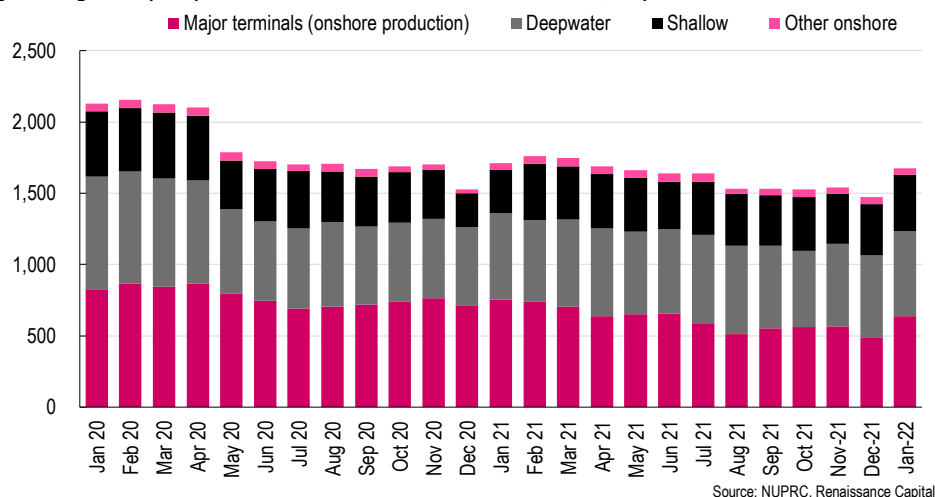
The underperformance, as we have flagged in the past, is a function of under-investment in Nigeria's oil sector, combined with low infrastructure uptime and sabotage/oil theft. In 2021 Nigeria witnessed material downtime at several major terminals, which not only restricts output but also deters further upstream investment as operators might experience issues in evacuating their crude, we believe. In January 2022, most major terminals experienced a sharp recovery in output, with Forcados in particular reaching pre-COVID levels, but with Bonny still lagging due to downtime at the Trans-Niger pipeline (TNP). Nigeria's ageing infrastructure, downtime and crude theft are chronic challenges for the onshore sector.

Figure 2: Major terminal production and incidents, kbopd



But while Nigeria's infrastructure/sabotage are often presented by stakeholders as the culprit behind Nigeria's inability to meet its OPEC quotas, the dramatic declines are evident in other terrains (shallow and deepwater), where production is not (as) affected by pipeline or terminal downtime. Compared to 1Q20, the quarter prior to OPEC+ cuts, 4Q21 onshore production was down 36%, deepwater 28% and shallow water 20%, with none of the fields constrained by OPEC quotas. January's performance was better, with onshore production down 24%, deepwater 23% and shallow water 13%, compared to 1Q20 – although it is too early to say if these levels can be sustained.

Figure 3: Nigerian liquids production – material declines across all terrains, kbopd



## Nigeria's sector challenges

Nigeria's oil sector is facing an unprecedented level of under-investment, with declines reflecting a near halt of upstream investment across all terrains since the pandemic's outbreak. Since the start-up of Egina (200kbopd capacity) in late 2018, only one or two new oil projects have come onstream. The near-term project pipeline screens thin, with Total's Ikike (~40kbopd), Amni's Tubu (~30kbopd) and Shell/Seplat's ANOH (30-40kbopd of condensates) some of the scheduled 2022 start-ups. In total, Rystad, an oil and gas consultancy, estimates Nigeria's project pipeline to add up to 100kbopd of production by the mid-2020s, not enough to offset declines.

To some extent, the under-investment theme is consistent with other hydrocarbon provinces (in both emerging and developed markets), due to oil and gas financing drying up globally and societal pressures towards decarbonisation driving the investment budgets of the majors and E&Ps alike. Although the argument for a "just transition" for Africa has many sympathisers and advocates that recognise the importance of oil and gas for the prosperity of African countries, international financiers seem less sympathetic to the cause, in our view. Adding to global trends, Nigeria's oil sector challenges are exacerbated by the following:

- **A challenging operating environment:** Nigeria's onshore oil sector is probably one of the most challenging operationally in the industry, with issues such as local opposition, oil spills, militant activity, crude evacuation constraints and logistical bottlenecks. Navigating Nigeria's onshore oil sector requires strong know-how and indigenous partners, qualities and connections which only a handful of companies possess, thereby raising high barriers to entry for new entrants. Recent new international investors into Nigeria's onshore oil and gas sector include Savannah Energy (not covered) and Decklar Resources.
- **Unattractive fiscal terms:** Nigeria's onshore fiscal terms are some of the least attractive globally: Oil royalty is at 20% and Petroleum Profits Tax at 85%. The

Petroleum Industry Bill (now Petroleum Industry Act - PIA) was in the making for nearly two decades, resulting in a prolonged fiscally uncertain environment, and was only signed into law in August 2021. The combination of punitive fiscal terms and fiscal uncertainty deterred investment in both upstream development and exploration, especially in onshore and shallow offshore terrains. The PIA has improved fiscal terms across all terrains, but its implementation is slow and we have not seen yet a positive response from the sector. For more information, please refer [here](#) and [here](#).

- **Limited major project pre-Final Investment Decision (FID) pipeline:** We do not consider any of Nigeria's terrains as frontier, with production in onshore and shallow for at least five decades and deepwater production for over two decades. There are still under-explored basins, in particular in the deepwater and northern Nigeria. The limited exploration activity of the past decade translates to a thin project pipeline, with only a handful of potential new pre-FID oil projects, most in deepwater, which could offset declines and add meaningful volumes to production. Both onshore and shallow offshore terrains have material untapped contingent resources, both oil and (especially) gas as undeveloped small discoveries, stranded gas or shallower/deeper reservoirs, which could theoretically add to production if infrastructure and funding limitations are resolved. There are some bigger discoveries in deepwater, which we discuss later.
- **Divestment disrupts upstream development.** The majors' exodus from Nigeria, in particular Exxon's from shallow water and Shell's (from SPDC) are disrupting upstream activity, with current operators limiting upstream investment as this transition is ongoing and production suffering as a result.

## The majors' divestment

As international investors, in particular the majors, are divesting their exposure from Nigeria's upstream sector, the onus now is on the indigenous companies and Nigerian National Petroleum Corporation (NNPC) to inherit operatorship, invest and grow production. The majors' divestment theme is not new in Nigeria and has been ongoing for over a decade now, leading to the creation of many indigenous companies, some of which invested and increased production from the acquired assets (the success stories), while some others achieved little progress. For stakeholders in Nigeria's upstream sector, the hope is for a Nigerian oil sector renaissance to follow post the majors' divestments, with indigenous companies successfully taking over by investing in and growing production.

### This majors' disposals round will not be like the last one

A decade ago, before the 'energy transition' and when peak oil supply theory still had proponents, the offering of assets and blocks in one of the world's most prolific hydrocarbon provinces was too attractive for investors to pass up. Financing from investors and banks was abundant – Seplat raised \$500mn from its IPO in 2014, the biggest in Africa at the time, valuing it at \$1.9bn. A decade later, the majors are selling much larger assets when financing availability is much more restricted in what is a buyer's market globally. **The first round was an opportunity for indigenous players and investors to develop peripheral non-core assets neglected by the majors. This round is about transferring control in most of Nigeria's oil production from the majors to indigenous players. The stakes are high for Nigeria's oil sector.**

The two main assets confirmed to be in the market are Shell's 30% stake in SPDC (~500kboepd of gross oil and gas production in 2020) and Exxon's shallow offshore assets (>200kboepd of gross production, we estimate), but other IOCs could potentially have all or some of their assets on the market, including Equinor, TotalEnergies, Eni and Chevron.

According to various media reports, the current roster of indigenous Nigerian finalists for Shell's or Exxon's assets, include Seplat, Chappal, Sahara Group, Heirs O&G and ND Western. To say that acquiring Shell's or Exxon's assets would be transformational for each of these companies would be an understatement, in our view. In fact, financing a deal that could be in the billions is what we view as the main challenge for the ownership succession of these assets. But even if such a financing solution presents itself, the indebted buyers will then be required to fund significant capex to arrest declines and bring production back to growth.

### Deepwater – in deep trouble?

Moving on to deepwater, which is firmly the majors' territory, the potential billion-dollar-plus price tags for greenfield developments are outright unaffordable for indigenous companies without material backing from financiers and other partners. Although the majors have been vocal about their intent to leave onshore and shallow offshore terrains, some have shown a commitment towards deepwater – which is a good thing for Nigeria's sector, as deepwater contains the largest pre-FID major developments which, in our view, could put Nigeria's oil sector back on a growth trajectory. The passing of the PIA paved the way for licence renewals for Nigeria's 1993 PSCs and we had previously expressed our optimism that new deepwater project sanctions could follow in the next two-to-three years. Some of the majors deepwater projects include Shell's Bonga fields, TotalEnergies' Preoweï, Eni's Zabazaba-Etan, Chevron's Nsiko and Exxon's Owowo – the development of which has been muted in recent years.

Figure 4: Shell upstream portfolio and major projects

Project	Country	Shell share %	Peak production kboe/d	Shell-operated
<b>Under construction – Start-up 2022-2023</b>				
Mero 1 [A]	Brazil	20	180	
Mero 2 [A]	Brazil	20	180	
Timi	Malaysia	75	50	✓
Pierce post Depressurisation	UK	93	30	✓
Penguins Redevelopment	UK	50	45	✓
PowerNap	USA	100	20	✓
Vito	USA	63	100	✓
<b>Under construction – Start-up 2024+</b>				
Mero 3 [A]	Brazil	20	180	
Mero 4 [A]	Brazil	20	180	
Jerun	Malaysia	30	95	
Whale	USA	60	100	✓
<b>Pre-FID options</b>				
Gato do Mato	Brazil	50	70	✓
Sururu Main [A]	Brazil	24	140	
Kashagan Phase 2B	Kazakhstan	17	190	
Marjoram/Rosmari	Malaysia	75	100	✓
Bonga South West	Nigeria	43	150	✓
HI Development	Nigeria	40	75	✓
Bonga Main Life Extension & Upgrade	Nigeria	55	60	✓
Bonga North Tranche 1	Nigeria	55	120	✓
Jackdaw	UK	74	40	✓
Dover	USA	100	30	✓
Fort Sumter	USA	100	30	✓

Source: Shell 4Q21 results presentation

According to [Upstream](#), Shell's announcement that the FID of the Bonga South West Aparo project will now be deferred until 2025, the earliest, delivered a blow to Nigeria's upstream sector, we believe, as this was Nigeria's most matured for FID deepwater project, capable of moving the needle. Shell's announcement follows an early licence renewal for OML118 (Bonga fields) in May 2021, before the PIA became law. The company might choose to prioritise other OML118 developments such as Bonga North, infill drilling or an extension/upgrade of Bonga Main, but in a rhetorical response a spokesman for Shell Nigeria said that, "*The execution of the deepwater agreements and renewal of OML 118 remain critical to deep-water investments and strengthened relationships with stakeholders,*" possibly alluding to delays in the implementation of the PIA and bilateral agreements between the JV and the government.

Shell's Nigerian pre-FID projects rank high in its portfolio, we believe, despite the delays. Deepwater fiscal terms are attractive and OML118 ringfencing offers fiscal synergies with existing producing fields. Shell for years had been exhibiting the Bonga fields as some of its pre-FID major project options and we think they will be developed eventually. Besides inter-project competition, Shell's upstream budget decisions are also driven by its energy transition agenda. The company has a target of 1-2% pa oil production decline to 2030 and a sizable pipeline of new projects coming onstream. We believe the sanctioning of the Bonga fields will also be dependent on the upstream disposal progress the major has achieved, especially SPDC.

Although Shell offers some visibility around the Bonga fields, the other majors do not seem to rank their Nigerian pre-FID options high, we believe, muting them for years. This creates a challenge for Nigeria's deepwater direction as we do not believe that indigenous players have the financial and technical capability to take over these expensive greenfield projects, but then again deepwater does not face many of the challenges of Nigeria's onshore sector and could potentially attract other international players.

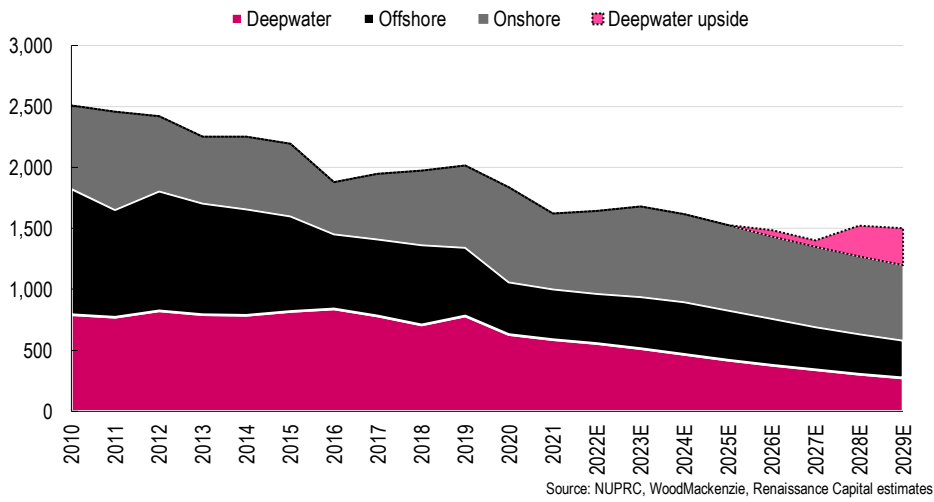
## Production outlook

Despite the improved fiscal clarity, post PIA, Nigeria's production outlook continues to remain uncertain, in our view, as most of the production operatorship control is set to change hands in onshore and shallow terrains, creating uncertainty with regard to future investment. But what this analyst is certain of is that Nigeria's production will not reach the government's 3mmbopd target and we think it highly probable that it might not recover to the pre-COVID >2mmbopd either.

We expect 2022 production to be within the 1.60-1.75mmbopd range, assuming recoveries to onshore production (itself a function of infrastructure uptime) and declines in deepwater and shallow offshore to be flat YoY. We expect the latter's declines to be offset by the start-up of Ikike and Tubu.

Our longer-term outlook is also dependent on the level of investment, but in the absence of major project start-up visibility, even with moderate investments, at best we expect declines in the range of 5-7% for shallow terrains (post 2023) and 7-10% for deepwater, while onshore production will always be constrained by infrastructure reliability. With the likely start-up of new deepwater projects post 2025, we believe that Nigeria's production could average <1.5mmbopd by the second half of this decade.

Figure 5: Nigeria's oil production outlook – in the absence of major investments we expect production to reach <1.5mmbopd by mid-2020s





## Decklar Resources (Sponsored Research, valuation range CAD1.05-1.75)

For more information please refer to our initiation [Decklar Resources: Marginal field specialists](#)

Decklar Resources is a Canadian-listed E&P company, whose focus and strategy is the development of marginal fields in Nigeria via Risk Service Agreements (RSA) with existing operators. Nigeria is one of the most prolific hydrocarbon provinces in the world, offering excellent subsurface opportunities, but its challenging operating environment raises barriers to entry for international investors without the know-how. By pursuing this niche business model with its experienced team, Decklar aims to take advantage of these opportunities. The company has RSA agreements for three fields: Oza (OML11), Asaramatoru (OML11) and Emohua (OML22) where it will finance their development for a share of cash flows.

### Oza updates

According to an update on 11 February, Decklar confirmed that it has received \$4.75mn from San Leon with a further \$2mn due by 30 April 2022. Following the completion of the transaction with San Leon, Decklar Petroleum will be owned 85% by Decklar Resources and 15% by San Leon. Decklar Petroleum has an RSA with Millennium for the Oza field.

In 2021, Decklar re-entered the Oza-1 well and reported positive test results in three zones (two oil and one gas). The well had been completed since November and was ready to start producing once logistics and export activities were finalised. According to the 11 February update, the downtime at TNP delayed production, with the company exploring alternative crude evacuation routes, including a combination of trucking to a storage facility and associated exporting pipelines, and barging from the Oza field to an offshore floating storage facility. The company also reported that it is in advanced stage negotiations with local firms to secure exports through both the alternatives. Decklar has ~20,000 bbls of oil in storage on site, awaiting export and sale. Once Oza-1 is brought onto commercial production, Decklar expects a stabilised flow rate of between 1.2 kbopd and 1.5 kbopd.

### 2022 outlook

Decklar's 2022 development plans for Oza Field include:

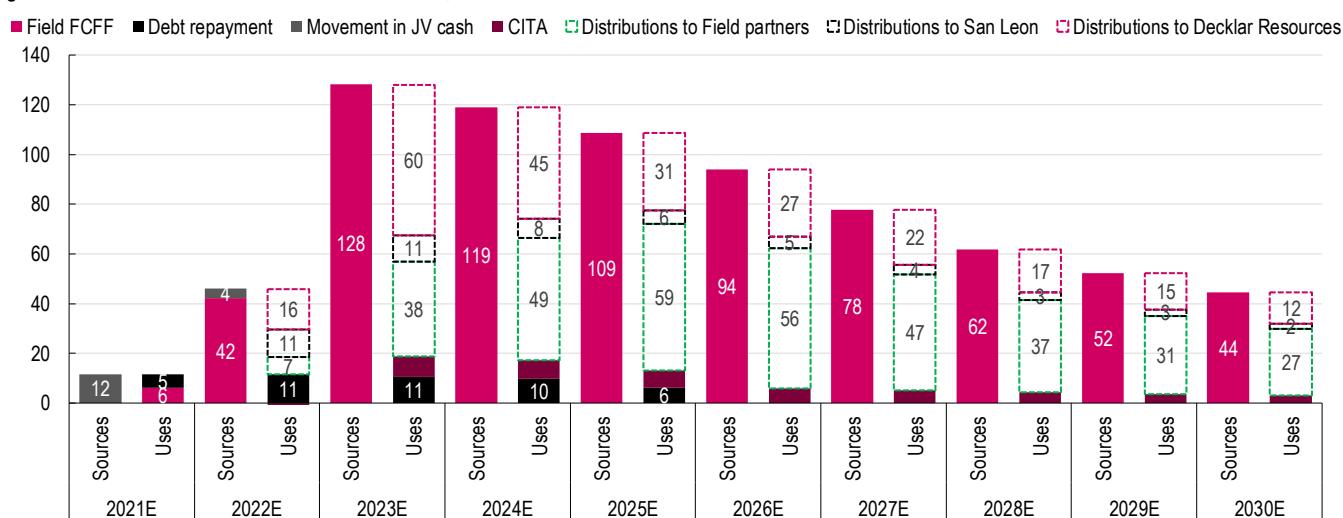
- Finalising arrangements with local communities to begin construction of the access road and associated infrastructure for a new drilling pad
- Drilling the first new development well
- Re-entry, re-completion, and flow testing of the other two existing wells (Oza-2 and Oza-4), including a tie-in to existing production facilities
- Installation of a Central Production Facility and infrastructure tie-ins for new well locations to replace the current Early Production Facility
- Completion of an inter-field evacuation pipeline and all related infrastructure
- Drilling of up to two additional development wells

Development plans for the Oza Field beyond 2022 include up to five additional development wells. We expect 2022 capex to be ~\$30mn, mainly discretionary, and funding will be via production, San Leon receipts, offtake financing and bank debt.

Commencing commercial production at Oza is a critical catalyst for Decklar, transforming the company into an explorer. Assuming an \$85/bbl oil price, we forecast Oza to generate material FCF for Decklar.



Figure 6: Oza field sources and uses of cash at \$85/bbl, \$mn



Source: Company data, Renaissance Capital estimates

For Asaramatoru, Decklar is still in discussions to enter an RSA for the remaining 49% held by Suffolk. 2022 development plans include a re-entry, re-completion and flow testing of the existing Asaramatoru-1 and Asaramatoru-2 wells and the installation of a modular, barge-mounted production facility and well location tie-ins to infrastructure. At Emohua, Decklar is in the process of finalising the acquisition of Westfield, according to terms announced on 6 October 2021. Decklar is also currently finalising the purchase of additional equity in the Emohua Field and anticipates having RSAs covering a minimum 83% with potential to have RFTSA's up to 100%.

## Valuation

Our rounded valuation range for Decklar is CAD1.05-1.75/share, based on oil prices of \$50-75/bbl and 10-15% discount rates.

Figure 7: Decklar Resources valuation sensitivity, CAD/share

		LT oil price, \$/bbl				
		50	55	60	65	70
Discount rate	10%	1.24	1.42	1.58	1.74	1.77
	11%	1.20	1.38	1.53	1.69	1.71
	12%	1.16	1.33	1.48	1.63	1.66
	13%	1.13	1.29	1.44	1.58	1.61
	14%	1.09	1.25	1.39	1.53	1.56
	15%	1.06	1.21	1.35	1.49	1.51

Source: Company data, Renaissance Capital estimates

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