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# ADM Energy

18th May 2020

## African oil & gas company set for rapid growth on the back of an increased stake in the Aje project, plus new development deals

**ADM Energy is the old MX Oil which in 2015 became involved in the "hot" Nigerian E&P space through the acquisition of a stake in the highly prized Aje field. Prospects in the West African Transform Margin look compelling moving forward. With a new management team at the helm, there now looks to be a real chance of the company beginning to see a material return on its investment in OML 113 ahead of a substantial increase in production, in addition to a well-planned expansion of the portfolio.**

### Good quality reservoir with high grade oil sold at a premium to Brent

Aje is a big gas project that lies in the relatively shallow waters off Nigeria. Recently, ADM has doubled its revenue interest here to 9.2% and is seeking to further increase its stake. New OML 113 partner PetroNor is set to inject some much-needed professionalism into this project and drive a large increase in oil production, as well as bring the big gas play on stream.

### Big oil and gas expansion likely to be project financed to limit dilution

Aje produces 2900 bopd from two wells, but plans are afoot to increase oil production to 6,000-8,000 bopd through drilling 3 wells in 2021 followed by bringing the gas on stream to take advantage of local US$3 – 7/mscf prices.

### Leveraging off the team's extensive African network to do more deals

The new management team is seeking to build a larger investment portfolio of undervalued projects by leveraging off their extensive network across Africa and originating deals for appraisal, development and producing assets which add production and material reserves/resources.

### Risked NPV suggests share price upside of more than 700%

ADM look grossly undervalued in our view. Our conservative valuation illustrates material potential upside in the stock. We update our coverage of ADM Energy with a target price of 19.21p and **Conviction Buy stance.**

*Table: Financial overview. Source: Company accounts & Align Research*

| Year to end Dec | 2017A | 2018A | 2019E | 2020E |
|---|---|---|---|---|
| Revenue (£'000) | 1,727 | 3,127 | 2,300 | 3,700 |
| PTP (£'000) | (3,435) | (849) | (1,314) | (300) |
| EPS (p) | (0.24) | (0.04) | (2.97) | (0.349) |

*This investment may not be suitable for your personal circumstances. If you are in any doubt as to its suitability you should seek professional advice. This note does not constitute advice and your capital is at risk. This is a marketing communication and cannot be considered independent research.*

## CONVICTION BUY – Price Target 19.21p

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**Key data**

| | |
|---|---|
| EPIC | ADME |
| Share price | 2.2p |
| 52 weeks high/low | 40.50p/1.80p |
| Listing | AIM |
| Shares in issue | 70.08m |
| Market Cap | £1.54m |
| Sector | Oil & Gas |

**12 month share price chart**



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**IMPORTANT:** ADM Energy is a research client of Align Research. Both Align Research & a Director of Align Research hold an interest in the shares of ADME. For full disclaimer information please refer to the last page of this document.

## Business overview

**ADM Energy Operations**

**ADM Energy** is a natural resources investment company targeting near-term production assets in proven oil and gas producing countries like Nigeria.

• **Nigeria** – The Aje Field is part of OML 113 where the company has a current 5% revenue interest, which is soon to increase to 9.2% following the acquisition of a further interest. OML 113 lies in the West African Transform Margin in offshore Nigeria and oil production commenced in May 2016. The field has extensive reserves and resources as confirmed by the latest CPR.

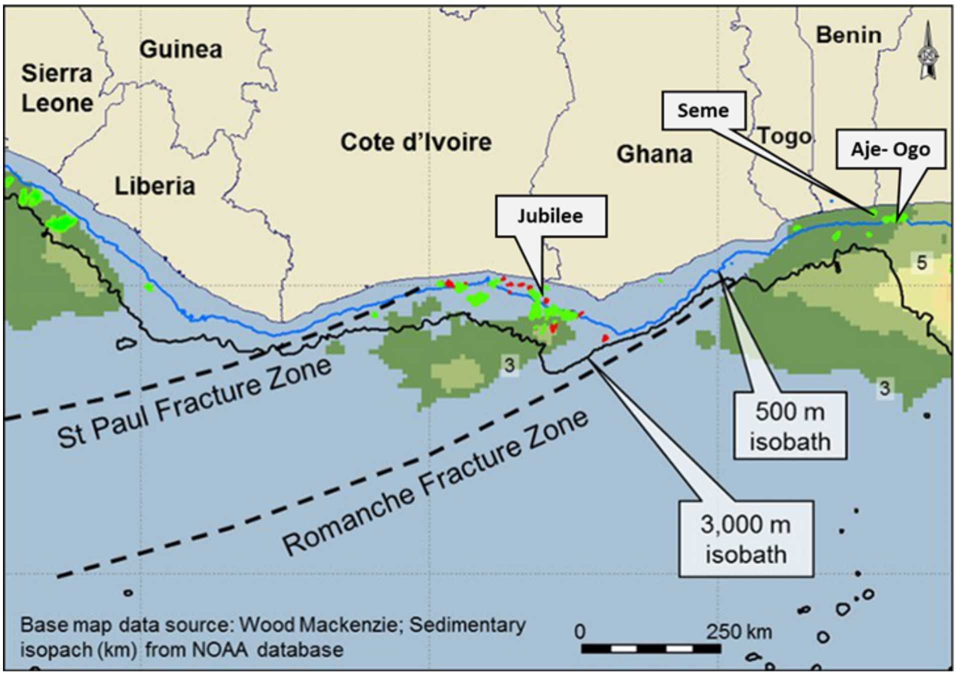
*The Pacific drillship. Source: Company*

## West African Transform Margin

In 2007, Kosmos Energy discovered the Jubilee oilfield in deep-water off western Ghana, an area previously thought to have little potential for hydrocarbons. Anadarko Petroleum worked with Kosmos Energy on Jubilee and two years later, in 2009, discovered hydrocarbons with a deep-water well drilled offshore Sierra Leone. The thinking at the time deemed these areas to be unattractive for oil and gas exploration. However, these two discoveries, more than 1,000 kilometres apart, led to the development of the latest phase of the West African Oil industry.

The geological setting for such oil and gas deposits resulted from continental drift, plate tectonics and subsequent deposition and associated subsidence. The transform faults lie at the plate boundaries and its motion is predominately horizontal as two tectonic plates slide past one another. The transform margin is where the continents meet the transform faults.

Oil is found in this location due to a combination of reasons. Firstly, transform margins are often characterised by having little oceanic circulation. Secondly, anoxic conditions exist whereby the sea water is depleted of dissolved oxygen, which means that organic material remains well preserved. Thirdly, provided that this organic material gets buried sufficiently deep enough, hydrocarbons will be generated.




*Principle oceanic transform fault 'fracture' zones and sedimentary isopach (km). Source: Gecexpro.com*

Plate-tectonic extension started during the Early Jurassic and continued during the Cretaceous (around 200 to 100 million years ago (Ma)). This resulted in extensive rifting in the Seme, Aje and Ogo area which was followed by steady and even subsidence during the Albian (113 - 100 Ma) and continued through to Cenomanian-Turonian (100 – 90 Ma). During this period thick shallow marine sands were deposited on top of a hydrocarbon source rock of Albian age which forms the characteristics of the Aje petroleum system.

Post Turonian (90 Ma to Present) the rate of subsidence continued in the Seme, Aje and Ogo area leading to over steepening of the Shelf and Continental Slope, which resulted in the formation of submarine canyons and excessive slumping during the Oligocene (34 – 23 Ma).

Exploration on the West African Margin seems to have gone through a number of discrete phases over the years. In the beginning, it was all about wells that were drilled on the shelf and shallow water which targeted syn-rift and early post-rift plays. Next up, was the drilling of wells in successively deeper water with the post-salt exploration of the basins along the coast from Angola to Gabon. More recently, the trend has been in post-rift Cretaceous fan plays on the transform margin which has been well-illustrated by the Jubilee discovery in Ghana and the pre-salt plays of Angola and Gabon. Pre-salt is the term which is used to define layers of sedimentary rock which occur under the thick salt layer of the continental platform, which distinguishes them from hydrocarbons that occur above the salt and which are termed post salt.

It is the potent cocktail of regional geological factors that have created a favourable setting for major oil and gas discoveries. Today, the African Transform Margin is now well established as a petroleum province and there is little doubt that the West African Transform Margin is being seen as a new centre of oil exploration in that continent. There have been a number of Cretaceous oil discoveries along the Transform Margin which includes the Aje field in OML 113, offshore Nigeria.

## Background

The company joined AIM in 2005 as Pan Pacific Aggregates which went onto become Astar Minerals and then MX Oil when a change in strategy and management saw the company seeking to become actively involved in oil and gas.

In July 2015, the company announced the acquisition of a 5% revenue interest in the OML 113 Licence, offshore Nigeria, which includes the Aje Field, from Jacka Resources. This represented a substantial development project with proven and flow tested discoveries.

The company acquired this project by assuming US$3 million of debt, satisfied by issuing 43.38 million shares at 4.5p per share, plus a commitment to fund US$11 million of project costs. This was accompanied by a placing that successfully raised £6 million at 4.5p. Production at the Aje field began in May 2016 with oil being produced from two wells.

April 2019 saw the arrival of a strategic investor in the form of the Private Office of His Highness Shaikh Ahmed Bin Dalmook Al Maktoum, a UAE prince. He took a then 29.8% stake by subscribing for £534,000 worth of shares at 0.04p per share and became President of the company.

This move was heralded as a brand-new future for MX Oil and was followed by a 1-for-100 share consolidation and a name change to ADM Energy plc. However, within months, Al Maktoum resigned as President and sold off all his 13.35 million shares in the market, which caused the share price to fall substantially.

Over this period and subsequently, there have been a series of board room changes which resulted in the appointment of Peter Francis as Chairman, Osamede Okhomina as CEO, Richard Carter as COO and Manuel Lamboley as Non-Executive Director.

In August 2019 there was a Placing and Offer to raise £500,000 at 16p per share. This was followed in September 2019 by the announcement of a Conditional Subscription to raise £832,000 at 7p per share from the independent brokerage boutique Zark Capital and other investors, where the shares came to the market in a number of separate tranches. The proceeds were planned to be used for general working capital purposes as well as allowing the company to appraise further investment opportunities and to provide funds for investment.

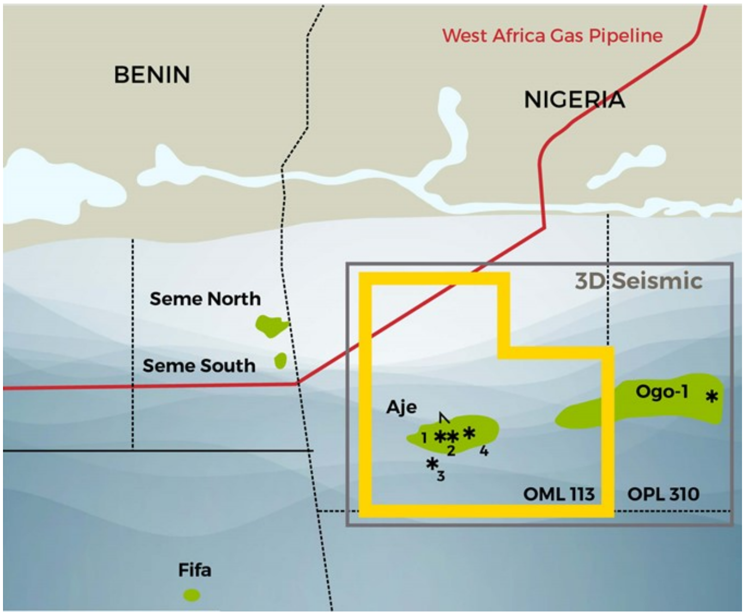
Early February 2020 saw the announcement that an MOU had been signed to create a proposed strategic alliance with Trafigura to enable the development and financing of energy projects in Africa. **Under the terms of this deal, Trafigura would provide ADM with conditional pre-financing of up to US$100 million for approved projects.** At the time it was also anticipated that Trafigura may subscribe for up to US$20 million in convertible loan notes in ADM as definitive agreements and project funds for such projects are agreed.

In late-February 2020, ADM was able to report the acquisition of an additional stake in the Aje project. **The company acquired a participating interest of 2.25% from EER (Colobus) Nigeria Limited for US$3 million which consisted of US$2 million in new shares at 7p plus US$1 million in cash at the time of completion**. On completion ADM will see its revenue and cost bearing interests increase to 9.2% and 12.3% respectively.

## Operations

ADM Energy has a 9.2% revenue interest (following the completion of the recent acquisition of an increased stake) in the OML 113 licence offshore Lagos in Nigeria which contains the Aje development project, along with a number of exploration prospects. There is a farm-in element here and once Yinka Folawiyo Petroleum (YFP) has recovered its costs, the company's revenue interest will increase to 12.3%.

OML 113 covers an area of 858km² offshore at the western part of Nigeria, close to the Benin border and forms part of the Dahomey Embayment. Water depths range from 100 to 1,000 metres. The project lies 24 kilometres south of the Nigerian coast and just 12 kilometres from the West African Gas Pipeline (WAGP). In addition, the Lagos state gas market, with a population of more than 16 million people, is just 64 kilometres away.




*Location of Aje field. Source: Company*

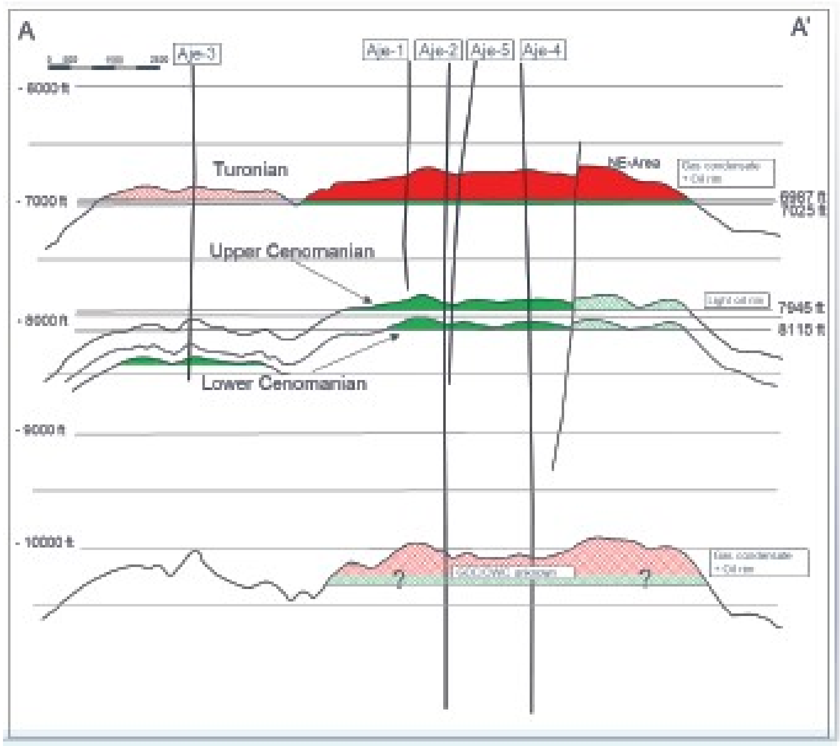
### Introduction

The Aje field was discovered in 1997 and boasts multiple oil, gas and gas condensate reservoirs in the Turonian, Cenomanian and Albian sandstones. Aje represents one of the many Cretaceous discoveries along the West African Transform Margin. The best-known fields on this trend are probably the producing Jubilee oil field and Sankofa in offshore Ghana plus Greater Tortue in offshore Senegal and Mauritania.

**There are five partners in OML 113 which are: YFP, NewAge, PetroNor, Energy Equity Resources (EER) and ADM Energy.** YFP and PetroNor now jointly look after the technical work, although in the early stages of the project most such work was undertaken by Chevron and VITOL.

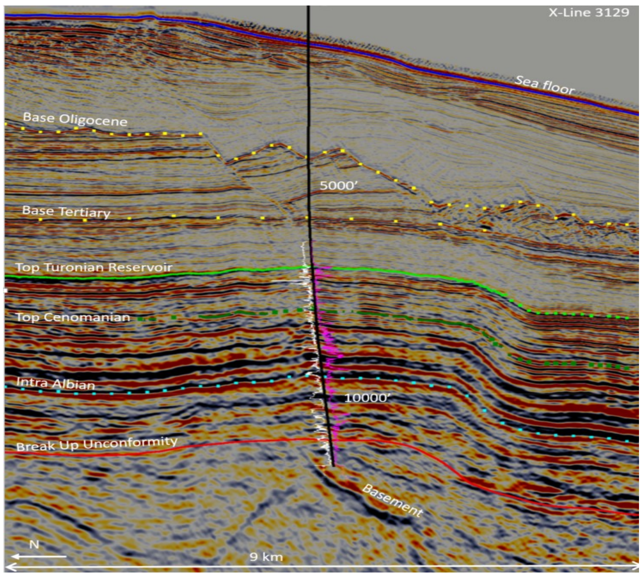
**Drilling**

At the time of the acquisition in July 2015 four wells had been drilled where Aje-1 and Aje-2 had both flow tested oil and gas condensate at high rates, whilst Aje-4 had intersected significant pay in four productive reservoirs. Today, Aje-4 and the recently drilled Aje-5 have both been completed.




*Five wells drilled at the Aje Field. Source: Company*

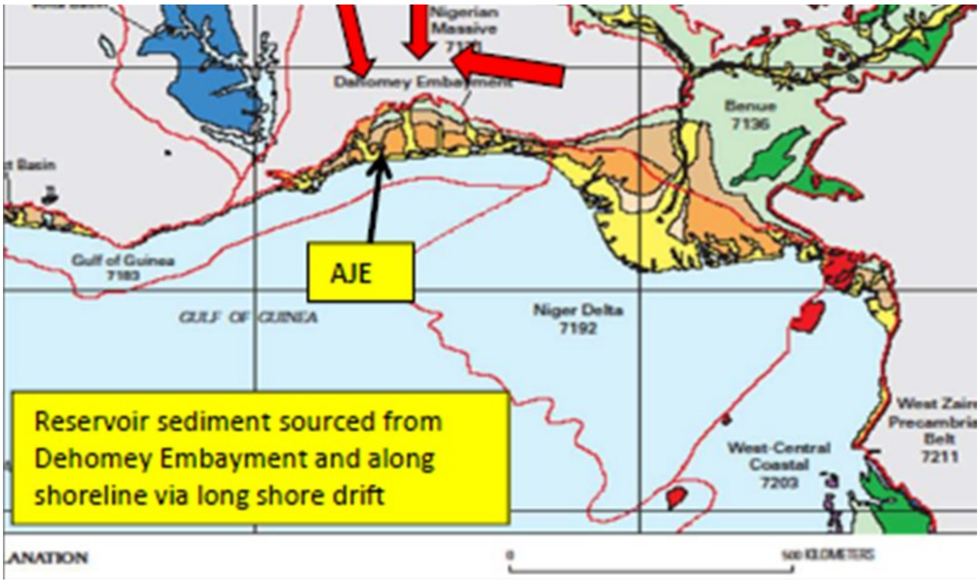
Work on interpreting newly acquired 3-D seismic data has helped in planning the full field development as well as evaluating the exploration potential that exists over the complete OML 113 licence. **There is potential for a syn-rift exploration play which may have been de-risked after the 2013 Ogo discovery on contiguous block OPL 310 to the east.**



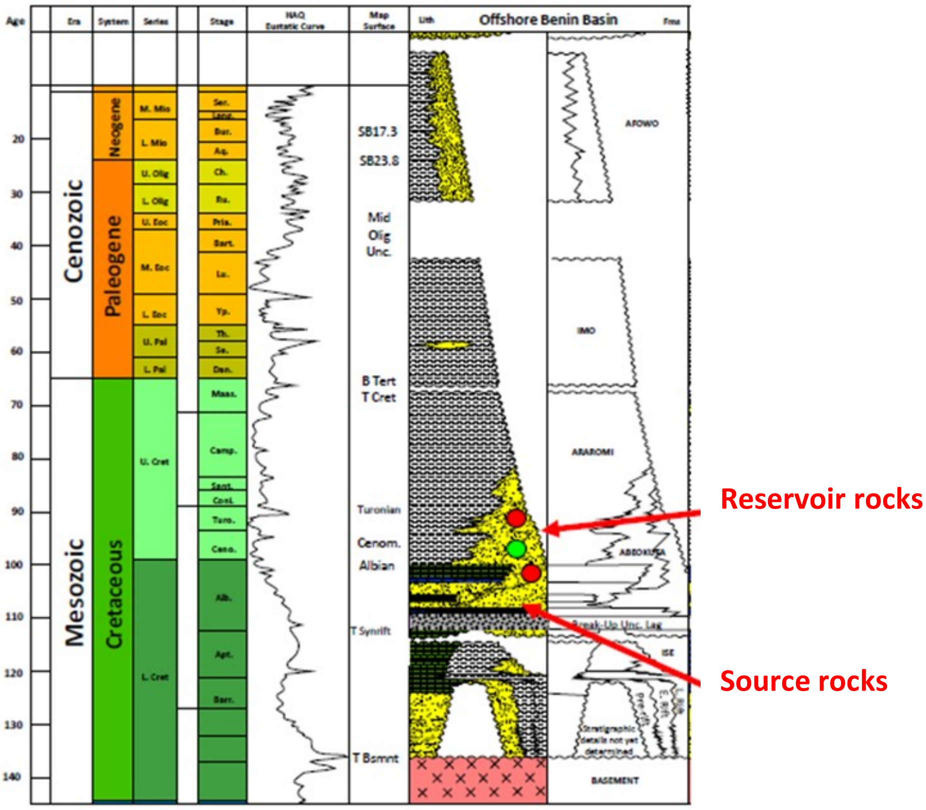

*N-S Seismic at Aje field through the Aje-4 well. Source: Company*

**Stratigraphy**

The reservoir sediments are sourced from basement outcrops in the North and deposited in the Dahomey Embayment and have moved along the coast via longshore drift. The producing reservoir rocks are of Upper Cretaceous Turonian and Cenomanian age, with high multi-Darcy permeabilities in the Turonian interval. The source rocks are organic rich deposits of Lower Cretaceous Albian age that have generated significant oil and gas volumes.




*NW African Margin: Benin & Nigeria Basins. Source: Company*




*Stratigraphy of the Aje field. Source: Company*

**Oil production**

There have been five exploration and appraisal wells drilled (Aje 1 to Aje-5), with a total of four reservoir intervals encountered at Turonian, Cenomanian and Albian levels. The project came on-stream in May 2016 and production is through the Front Puffin floating production storage and offloading (FPSO) unit, which has the capacity to produce 40,000 barrels per day of liquids (oil + water) and store up to 750,000 barrels of oil.

At present, two wells are producing, which are Aje-4 and Aje-5ST2. The Aje-4 well was recompleted as a development well on the Cenomanian. Aje-5 was initially completed on the Cenomanian but underperformed and so was sidetracked in 2017 to test two alternative Cenomanian locations and was finally completed on the Turonian oil rim at a higher level.

*The Front Puffin FPSO. Source: Company*

*Subsea trees. Source: Company*

**Currently, the Aje field produces around 2900 bopd from two wells (c.248 bopd net to ADM following the completion of the recent acquisition of an increase stake).** Production between the two wells (Aje-4 & 5) is roughly 50:50. The Aje-4 well in the Cenomanian produces oil with a 63% water cut and extrapolating the production performance of this well suggests that there is a lot more oil in the Cenomanian. This gives plenty of encouragement for the drilling of a further well to the east. The Aje-5ST2 well produces from the oil rim and has been performing better than anticipated, which clearly underlines the potential of the oil rim.

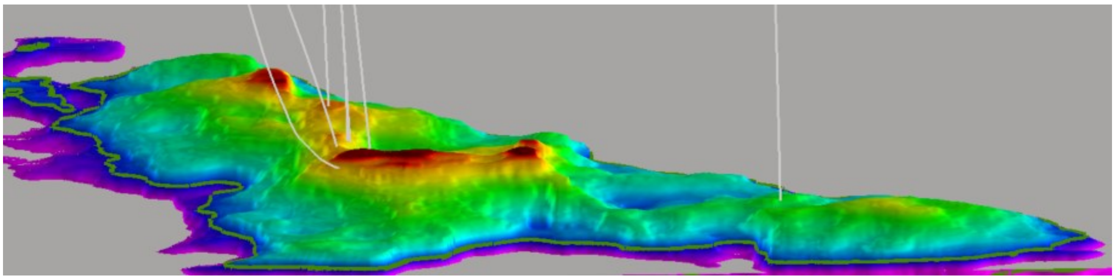
**Revenue and operating costs**

The oil produced is of high quality, with an API of 41°, which is classed as an Amenam crude and sold to international oil companies and trading houses at a 70-80 US cents premium to Brent Crude.

When we initiated coverage in the summer 2018, the lifting cost stood at US$40/bbl based on 3,300 bopd which factors in operating costs and general & administrative expenses (G&A). **Last year the operating costs fell to the mid-US$30/bbl costs. Following a recent cost reduction programme, they are expected to be around the US$25/bbl mark and expected to decrease further as the rate of oil production rises.** At the moment, oil production is coming from the Cenomanian and Turonian reservoirs, although a significant gas and oil resource remains to be developed in the Turonian reservoir.

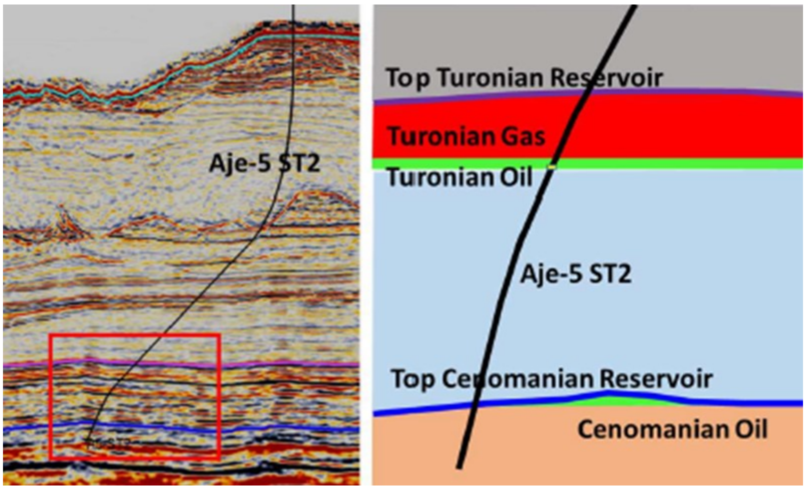
**Turonian Oil Rim**

The production performance of Aje-5 since May 2017 suggests that the Turonian oil rim has significantly greater potential than previously thought. RPS has outlined about 70mmstb in place of which 20mmstb is deemed recoverable.



*Aje Turonian structure viewed from the west. Source: Company*

The enhanced oil production seen at Aje-5ST2 has been put down to better than anticipated characteristics of the oil rim. It is now estimated that the oil rim could be up to 40 feet thick. At the same time, assay samples point to a better oil quality. These factors serve to increase the in-place volumes and the valuation on an NPV basis.




*The Turonian Oil Rim. Source: Company*

In June 2018, ADME announced an assessment of the Turonian development potential. Work carried out on the production data from both the Aje-4 and the Aje-5 wells has been used as the basis on which to estimate the potential for an integrated oil and gas development of the Aje Field. At that time, it was reported that the licence partners were working on a simulation study to assess the potential for new oil wells in both the Turonian and Cenomanian.

The Aje-4 well completed on the Cenomanian then was producing 1,500 - 1,700 bopd. On this performance it is thought that the connected oil volume to that well is significantly larger than the current mapping suggests. This means that there is the potential to drill a further well to the east of Aje-4, probably in the location that was planned for the Aje-6 well. Also, at that time, the Aje-5 sidetrack well was producing 1,600 - 1,700 bopd from just a six foot completion interval on the Turonian oil rim. So, this well was also producing at a rate that was better than expected which serves to illustrate the reservoir's potential.

Drilling of long horizontal wells and producing in a controlled manner will be necessary to keep the water and gas in place in order for the optimal development of the oil rim. The directors estimate that these wells could produce up to 5,000 bopd per well which three months of simulation studies was expected to confirm. We believe that the Aje Field has the scope to become a very significant producing asset.

## CPR

AGR TRACS updated its original July 2014 CPR in April 2018 and April 2019, with both clearly showing the potential of the Aje Field and the level of resources and reserves that are potentially available. The 2018 CPR focused on the April 2017 Fast Track Gas Field Development Plan (FDP) which was prepared by the operator YFP for the Turonian gas-condensate field development**. There have been significant developments in the Aje project over the past two years that have had a material impact on the reserves and resources position of the project.**

The main purpose of the updated 2018 CPR was to provide an independent review of the subsurface evaluation incorporating the results from three new penetrations in the Cenomanian (Aje-5, Aje-5STI and Aje-5ST2). These included production from new wells coming on-stream from the Cenomanian reservoir in May 2016 and from the Turonian oil rim in May 2017, all of which has occurred since the 2014 CPR. In addition, a field development plan for the Turonian Aje gas project (FDP) had been submitted to the Nigerian Government for their consideration in 2017. The FDP comprised of four or five production wells in the Turonian to be tied back to the existing and new infrastructure. AGR TRACS reviewed the Turonian FDP along with the supporting volumetric estimates, production forecasts, facilities costs and economic evaluations.

**The updated 2018 CPR showed that the level of reserves has increased substantially since the 2014 CPR**. At that time AGR TRACS also certified gross 1C Unrisked Contingent Resources of 4 MMboe, 2C Unrisked Contingent Resources of 9 MMboe and 3C Unrisked Contingent Resources of 17.5 MMboe. ADM's net entitlement is respectively 1C Unrisked Contingent Resources of 0.20 MMboe, 2C Unrisked Contingent Resources of 0.45 MMboe and 3C Unrisked Contingent Resources of 0.88 MMboe. These Contingent Resource volumes mentioned are all expressed as unrisked technically recoverable volumes. No economic cut-off has been applied as the development plans are still in progress.

Although the 2018 updated CPR has now been superseded by the 2019 version, it is worth noting a couple of important points. Firstly, that the recent performance of the Aje-5ST2 sidetrack well completed on the Turonian oil rim served to encourage the Aje partners to investigate a more extensive development of this oil rim to better understand how the oil rim can be optimally developed. Secondly, the board of ADM reckoned that these results not only confirm the commerciality of the Aje gas development, but also outline the necessity for a revision of the development plan following the completion of oil rim studies. Adopting such an approach would mean that the final investment decision on the future development of the Turonian reserves could be taken with an improved and more comprehensive analysis and understanding of the complete project.

| Reserves | 2019 | | 2018 | |
|---|---|---|---|---|
| | **Gross MMboe** | **Net entitlement to ADME MMboe** | **Gross MMboe** | **Net entitlement to ADME MMboe** |
| 1P Proven Reserves | 82.4 | **5.2** | 78.2 | 5.0 |
| 2P Proven and Probable Reserves | 138.2 | **8.9** | 127.1 | 8.2 |
| 3p Proven, Probable and Possible Reserves | 220.8 | **12.8** | 215.0 | 12.7 |

*Aje OML 113 reserves. Source: AGR TRACS CPR April 2019*

The most recent updated CPR was published in April 2019 and showed that 2P increased from 127.1 MMboe gross to 138.2 MMboe gross**. It is worth noting that recoverable oil reserves, which is one of the component elements of the estimated reserves figure, rose from 2.96 MMbbls gross in 2018 to 4.73 MMbbls gross in 2019, which is a significant increase given that the field produced more than 1 million gross barrels in 2018**.

**Future development programme**

Aje has always been a gas project and there is now becoming a clear path towards the development of this larger target with a dramatic improvement in the professionalism of the management of the block. BP in its forward look at the energy mix has pointed out that demand for natural gas will grow faster than the demand for oil and coal as the transition to a lower-carbon energy system continues. Natural Gas is expected to account for 26% of the total energy consumption by 2040.

The partners are discussing a low risked phased further development of Aje. This field is rich in condensate and management have confidence in increasing production based on several drill stem tests (DSTs). Phase I concerns the initial development of oil and condensate production of 6,000 – 8,000 bopd with the drilling a total of three wells in 2021. **This development is likely to be funded by a third party and consortium of banks alongside an offtake agreement.**

This is planned to be a Turonian gas producer well and injector well to cycle gas for condensate along with a Cenomanian oil well. Increased technical expertise sees the partners planning to use pilot holes to find the best locations in the Cenomanian and Turonian reservoirs. In addition to the drilling of three wells, the cost includes replacing the FPSO with a more appropriate leased vessel which will improve operational efficiencies as well as provide sufficient gas processing capacity.

Phase I generates generous cash flows which could potentially be used to fund further gas development which is a standalone investment decision to be made subject to the closing of a gas offtake agreement which the partners have targeted for 2021. The gas development could see Aje supply gas to the Lagos/Lekki market, with dry gas sold to the West Africa Gas Pipeline. **Gas prices are quite high in this region at US$3.50 to 7/mscf as the fuel is priced as a replacement for diesel, which most people in West Africa must rely on for power.** This development will require 3 gas wells being established for the 110 mmscfd that is currently envisaged by management and could potentially be financed by the cash flow generated in Phase I.

## Strategy for growth

New management at the helm of ADM Energy look to have the necessary skill set and connections to build shareholder value, which over recent years has remained elusive. Their timing is good as there are currently lots of oil and gas assets about, as it is a buyers' market.

There are three types of deals: appraisal, development and production. Probably the best deals are in appraisal as there is currently the chance to buy 2C resources for something like USD 50 cents a barrel – although in reality these are really 2P but where a development plan is probably necessary to gain a 500% uplift in value to a minimum of US$2.5 – 3 a barrel that 2P reserves typically command. As attractive as appraisal deals are, they need to be equity funded, not debt, and so these represent the sort of deals that ADM may do once the company becomes larger**. ADM's immediate focus will be on production deals as these are the easier to finance.**

Osamede Okhomina, ADM's new CEO, has years' experience of doing such deals, where he has originated, structured and managed counterparty risk. His experience of doing such deals allows him to foresee problems. Through his historic deal making, Osamede has developed strong relationships with multinational banks in Africa. In addition, there is also the opportunity of traders such as Trafigura entering into a convertible facility to help in funding. So, the plan is to use production deals to make money before embarking on appraisal deals.

Although the new CEO has only been at the helm of ADM for less than a year, already the company has been partially qualified to buy assets from international oil companies (IOCs) like ExxonMobil, Chevron and Shell. In addition, there is the Nigerian government's Marginal Oil field development programme which will see 50 marginal fields farmed out to indigenous oil companies by the multinational oil companies. **These IOCs have divestment programmes which could see the sale of up to 500,000bopd sold to independent operators.** Typically, development projects in Nigeria would require 2-3 wells to be drilled, with the funding being arranged with institutional partners to buyout the IOC and see companies like ADM taking an equity stake on these assets. **These deals take six months to complete and it is good news that the team has been working on a total of three such deals**.

However, the low hanging fruit is seen to be Aje. Osamede knows this project inside out, he put it together and brought all the partners in. He was instrumental in bringing the original deal to the then named MX Oil. Formerly, Osamede was CEO of EER, which holds a 16% stake in Aje and also equity in ADM which is now in the midst of increasing its holding in the project, thereby doubling revenue and doubling cash flow for US$3 million. The Aje project in OML 113 has big potential but has however been troubled by a history of underperformance and disputes between the various partners. ADM has made clear its intentions to further increase its stake in OML 113.

Aje's problems seemed to have stemmed from a lack of good operations and technical leadership – but that has all changed with the arrival of PetroNor which has recently acquired a 12.2% revenue interest in OML 113. Vendor Panoro will receive US$10 million in new PetroNor shares with a contingent future payment of up to US$25 million based on future gas production volumes. PetroNor looks set to stir matters up by seeking to re-establish the common interest between Aje shareholders and make further progress which looks likely to begin with the Field Development Plan being updated.

PetroNor sees its acquisition of Panoro's Nigerian entities as a low-cost entry ticket to access significant proven resources potential. PetroNor will be in the driving seat as it is forming a new SPV with YFP, the operator of Aje, to provide technical assistance, align partners and progress development of the liquid and gas resources. **The presence of PetroNor should not be underestimated as this company has a track record of success having rapidly matured its exploration portfolio by acquiring more than 13,400km² of 3D seismic data and drilling multiple exploration wells.**

ADM's increased stake in Aje is currently being approved by the Nigerian government, along with the other five developments deals that are in the pipeline where the chance of closing each one has been put at 50:50. These represent acquisition deals from IOCs which must have a local partner - ADM is able to structure itself to act as a quasi-indigenous partner. These deals are available to the new management team chiefly for cultural reasons. Westerners going in to do oil and gas deals with Nigerians would probably end up paying some fancy prices and with deal structures that might be difficult to get financed. ADM is now being led by a highly experienced oil and gas man in CEO Osamede Okhomina who is a British born Nigerian that graduated from Cambridge University and can successfully bridge the gap between the local businesses and the public market.

**ADM is currently at an exciting period in its growth story as there are a series of highly positive developments on the horizon which could add substantial value for shareholders.** To create the greatest value from the project requires the critical sequencing and optimisation of production from multiple gas and oil horizons. The Aje field is a unique play which has a good quality reservoir containing good quality oil. The field is in relatively shallow water offshore Nigeria sitting on the edge of the shelf and well away from the Niger Delta. Nigeria represents a benign environment and has good partners in PetroNor and YFP, which is a strong local entity. Plus, oil production is sold around the world at a premium to Brent crude and premium prices are paid for gas in Nigeria as supply cannot meet demand.

ADM looks well positioned to withstand the current market volatility and pursue the board's stated core investment strategy in our view. In fact, the company is seeking to take full advantage of current market conditions to continue its drive to buy reserves cheaply –the team are very adept at doing that and are seeking to aggressively build up reserves and production. The board is taking the long-term view in positioning the company for substantial growth over the coming years with the aim of becoming a significant mid-sized player. Osamede and his team know the vendors well, which opens the door to cash and stock deals, which should allow for more rapid growth. **The initial target is to build ADM to in excess of US$100 million market cap company and once of such a size with the right sort of financial support the new board sees the potential of being able to do two deals a year.**

## Financials & current trading

Oil production at Aje began in 2016 and since then production climbed steadily and over the last couple of years but has plateaued at around the 3,000bopd level. Losses that have been recorded over the last five years are mainly due to operating costs of the oil operation and administration expenses.

| Y/E 31 December £'000s | 2014A | 2015A | 2016A | 2017A | 2018A |
|---|---|---|---|---|---|
| Revenue | - | - | 1,571 | 1,727 | 3,127 |
| Pre-tax profit/loss | -1,149 | -2,899 | -1,336 | -3,435 | -849 |
| Net profit/loss | -1,177 | -2,889 | -1,366 | -4,181 | -445 |

*ADM Energy five-year trading history. Source: Company accounts*

**2018 results**

Financial results for the twelve months ended 31st December 2018 covered a period when the OML 113 licence was renewed for another 20 years (subsequent to the end of the period the Aje partnership paid the US$9.8 million renewal fee) and the Field Development Plan for the Turonian Aje gas prospect was approved by the Nigerian government. Oil was produced at a stable rate from the two wells in the Aje Field (Aje-4 and Aje-5) with a total produced volume of 1.2 million barrels of oil for the year, which equated to 3,100 bopd and 155 bopd net to ADM Energy. Revenue for the 12 months rose by 82% to £3.127 million and after operating costs of £2.356 million and administration expenses of £1.620 million, the company made an operating loss of £0.849 million. With no finance costs or taxation, the pre-tax loss and the loss for the year were £0.849 million. After £0.404 million of gains on exchange translation, the company's total comprehensive loss for the year came out at £0.445 million. The basic and diluted loss was 0.04p per share.

**2019 Interim Results**

Results for the six months ending 30th June 2019 saw oil continue to be produced at a stable rate from two wells (Aje-4 and Aje-5) averaging 3,009 bopd. During the period there were two liftings and sales of produced oil. The 10th cargo was in March 2019 and saw the company's share of the lifting equating to 17,323 barrels, sold by the joint operators at an oil price of US$66.97 per barrel. In June 2019. Aje completed its 11th lifting, equating to 297,581 barrels to the joint operators (ADME's share was 14,879 barrels) sold at US$64.844 per barrel. The profit from the liftings were used to significantly reduce project level debt allocated to all the partners in Aje. Revenue for the period was £2.171 million and after £2.094 million of operating costs and £0.511 of administration fees, the company made an operating loss of £0.434 million. The loss on ordinary activities came out at £0.448 million and so did the loss for the period as no tax was payable. The total comprehensive loss for the period was £0.403 million after £0.45 million of exchange translation movements. The basic and diluted loss per share from continuing and total operations was 1.28p.

**Recent developments**

In January 2020, the board announced a strategy update for the current year and beyond which was focused on building a larger investment portfolio of projects across Nigeria and West Africa. Early February 2020 saw the announcement that an MOU had been signed to create a proposed strategic alliance with Trafigura to enable the development and financing of energy projects in Africa. Under the terms of this deal, Trafigura would provide ADM with conditional pre-financing of up to US$100 million for approved projects. At the time it was also anticipated that Trafigura may subscribe for up to US$20 million in convertible loan notes in ADM as definitive agreements and project funds for such projects are agreed.

In late-February 2020, ADM was able to report the acquisition of an additional stake in the Aje project. The company acquired a participating interest of 2.25% from EER (Colobus) Nigeria Limited for US$3 million which consisted of US$2 million in new shares at 7p plus US$1 million in cash at the time of completion. On completion ADM's participating interest will increase to roughly 4.9% which corresponds to a revenue and cost bearing interest increasing of 9.2% and 12.3% respectively. **Post completion, ADM's net 2P reserves will increase from 8.9 MMboe to 16.4 MMboe and net daily production will rise from 148 bopd to 273 bopd.**

The company updated investors in late-April 2020 with news that operations at OML 113 have remained largely uninterrupted, with a stable level of production. It was reported that COVID-19 protection measures have been implemented to reduce the cost base and that a two-month extension has been agreed with EER for the refundable deposit payment. The board also pointed out that together with operators and joint venture partners, they were working together to find ways to mitigate the impact of the oil price reduction.

## Risks

### Geological risks

There are a series of technical risk factors concerning the amount of understanding of the geology of the project areas, the reservoirs being targeted and the distribution and magnitude of the indicators that have been identified in exploration work.

### Political risk

There are political risks involved in companies operating in Nigeria. The oil industry is arguably the most susceptible sector of the market to political risks largely due to its importance to the host county's economy. However, IOCs have been operating for over 50 years and the industry is arguably the most mature in the region and continent, so political risk may not be such a high-risk factor.

### Oil price risks

Oil prices are highly cyclical and changes in the price could have a negative or positive impact on the valuation of the company's projects and revenue from the sales of hydrocarbons. Over the past decade, the price of oil has been highly volatile, trading in the range of US$140 to $9. Brent crude currently trades around the US$30 level and so far, this year has had an average closing price of US$45.26 per barrel compared with US$64.28 in 2019.

### Exchange rate risks

Movements in the value of currencies will have an effect on the company's accounts on translation from US dollars into British pounds. Fluctuations in the value of the US dollar against the pound may have an effect on the valuation ADM Energy is awarded by the UK stock market.

### Future funds

The market for raising funds for small cap companies looks to have had improved from the worse conditions a couple of years ago, however the global spread of the COVID-19 infection has meant that equity markets have become extremely difficult. This is especially so for oil companies where lockdown has resulted in a glut of oil which has had a severe impact on the price per barrel. Even ahead of the arrival of this pandemic and the fall in the oil price, some recent fund raisings amongst small cap oil companies have seen share prices being undermined by incoming investors demanding substantial discounts to provide the necessary capital.

## Board of Directors

**Peter Francis – Non-Executive Chairman**

Peter has over 35 years of experience working with major international oil companies. He spent 30 years with ExxonMobil in a number of executive, treasury and government related positions across the US, Europe, Russia and Africa. More recently, he worked for Royal Dutch Shell in Abuja and served as CEO of Oracle Energy, a Canadian TSX exploration and producing company focused on oil and gas activities in West Africa. Peter has extensive knowledge of working in developing and transition economies, building relationships with senior government officials and developing strategies to support new business entry. Peter is a board member of Washington based NGO Africare.

**Osamede Okhomina – Chief Executive Officer**

Osamede was appointed CEO of ADM Energy in July 2019. He has more than 20 years' experience in the global oil and gas industry, particularly in Africa, financing projects and growing businesses. Osamede started his career at Terra Energy Services, helping to introduce new deep-water technologies in Nigeria. He is a founding partner of Africa-focused Energy Equity Resources, a partner investor of ADM Energy, where he has secured more than $300 million of direct foreign investment into Nigerian oil and gas. He brings considerable government expertise and connections to the ADM Energy board.

**Richard Carter – Chief Operating Officer**

Richard is a qualified accountant with extensive experience of raising funds for public and private companies. He has worked and advised across media, telecoms, engineering and energy sectors in various corporate finance and investor relations roles. As Chief Operating Officer, Richard supports the CEO and management team with delivering its strategic growth plan.

**Sergio Lopez - Non-Executive Director**

Sergio has been in the oil and gas industry for the last 13 years with experience ranging from finances to operations. Lewis Energy Group appointed Sergio as its Mexico Country Manager to coordinate a 15-year E&P contract with Pemex, which represented the first move by an American independent oil and gas company into Mexico since 1938. He negotiated a special budget to drill the first exploratory Eagle Ford Shale well in Mexico, named Emergente-1. This resulted in the first and only producer in the Eagle Ford Shale in Mexico called Habano.

**Manuel Lamboley - Non-Executive Director**

Manuel is a financier with over 30 years' experience in international broking and investment banking. He previously served as Head of the Geneva office of Williams de Broe and has held senior positions at Julius Baer Bank, Kidder Peabody, Paine Webber International and Prudential-Bache Securities. Manuel has long-standing relationships with major investors and financial advisers worldwide, with a particular focus on the natural resources sector. He has been a non-executive director of several listed companies in the mining and energy sectors, including International Mining & Infrastructure Corporation plc, and was also previously an independent director of UK-based African Aura Resources Limited.

## Forecasts

We update coverage of ADM Energy with forecasts for the financial years ending 31st December 2019 and 2020. For 2019, oil production from Aje totalled 890,203 barrels of oil and averaged 2,967 bopd, where 148 bopd was net attributable to ADM. The pre-tax loss is determined to be £1.314 million. The loss per share is calculated to be 2.97p.

For 2020, oil production is forecast to average 3,000 bopd with net attributable production to ADM assumed to average 150 bopd and then 273 bopd, post the completion of the acquisition of the increased stake in the Aje field. This is assumed to happen before the end of July 2020. As a result of the recent volatility in the oil price, the partners in the Aje project have adopted measures to cut costs and we are being guided that production costs have been reduced below US$30/bbl compared to middle US$30s previously. The project has 750,000 barrels of storage (enough for 250 days at assumed production levels on the FPSO). We assumed that the next sale will be planned to coincide with better future oil prices. **The forward oil price curve for Brent crude suggests a figure of mid-US$30s – 40 a barrel at the time when this storage facility is becoming full.** The pre-tax loss is calculated to be £0.3 million for the year, which we believe would equate to loss per share of 0.34p at the increased number of shares created by the acquisition of the increased stake in Aje.

| **Year End 31 December (000s '£)** | **FY2017a** | **FY 2018a** | **FY 2019e** | **FY 2020e** |
|---|---|---|---|---|
| **Continuing operations** | | | | |
| Revenue | 1,727 | 3,127 | 2,300 | 3,700 |
| Operating costs | (2,565) | (2,356) | (2,100) | (3,000) |
| Administration expenses | (1,495) | (1,620) | (1,500) | (1,000) |
| **Operating profit /(loss)** | (2,333) | (849) | (1,300) | (300) |
| Other gains and losses | (27) | - | - | - |
| Finance costs | (1,129) | - | (14) | - |
| **Profit/(loss) on ordinary activities before taxation** | (3,435) | (849) | (1,314) | (300) |
| Taxation | - | - | | |
| **Profit/(loss) for the year** | **(3,435)** | **(849)** | **(1,314)** | **(300)** |
| Basic and diluted profit/(loss) per share (p): | | | | |
| From continuing and total operations | (24.00) [1] | (4.00) [1] | (2.97) | (0.34) |
| Weighted average number of shares | 14,394,775[1] | 19,491,578[1] | 44,180,047 | 87,408,538 |
| Total shares plus warrants and options | 1,7,421,773[1] | 28,580,163[1] | 81,317,478 | 148,273,619 |

[1]Adjusted for 1-for-100 consolidation

*Source: Company/Align Research*

## Valuation

ADM is at an important stage in the development of the company. The Aje project has been in production for a couple of years now and there are well-advanced plans to significantly increase production over the coming years. The full development of the Aje project will involve an integrated oil and gas development project to maximize NPV. Our model was developed following discussions with management, and we have sought to be highly conservative. Below, we have outlined the assumptions on which our valuations are based.

**Revenue share**

ADM has a 5% revenue interest in the OML 113 licence offshore Lagos in Nigeria which contains the Aje development project, along with a number of exploration prospects. Following the recent acquisition, which is expected to be completed by the end of July 2020, the company's revenue and cost bearing interest will increase to 9.2% and 12.3% respectively. There is a farm-in element here and once YFP has recovered its costs, then the company's revenue interest will also increase to 12.3%. Further drilling is probably necessary for YFP to receive this revenue and on current plans this is likely to happen in 2021.

**Oil project**

The development plans agreed with the Nigerian government focus on the gas in the Turonian developed by five new wells. However, this agreement is likely to be revised. It would seem that the preferred development plan has now been reconceived as an undoubtedly low risk approach where Phase I involves the initial development of oil and condensate production at the 6,000 bopd level following the drilling of three wells in 2021. The wells planned to be drilled will be a Turonian gas producer well (US$40 million) and injector well to cycle gas for condensate (US$40 million) along with a Cenomanian oil well (US$50 million).

| Reservoir | Reserves and Resources | Comments |
|---|---|---|
| Turonian | STOIIP P50 estimate: 75 – 137 MMbbls<br>CIIP P50 estimates: 37 MMbbls<br>GIIP P50 estimates: 665 – 790 Bscf | Proven significant oil and reserves |
| Cenomanian | STOIIP P50 estimates: 35 – 56 MMbbls<br>High estimate includes unproven NE-area | Oil |
| Albanian | GIIP P50 estimates: 85 Bscf | Gas and condensate resource upside |

*Aje reserves and resources. Source: CPR*

The latest plans seem to suggest that the replacement FPSO, with a more appropriate vessel with gas processing capacity, could be leased, which would reduce the potential capex by c.US$100 million. This development is assumed to cost US$170 million and the partners have a party that would support this backed by consortium of banks alongside an offtake agreement. The borrowing base on Phase I and the required debt and equity funding necessary suggest that around US$50 million would be needed to be provided by the Aje partners, which is the difference between the capex and the borrowing base that may be determined by the lender. The current environment in the oil industry probably allows scope for the capex to be further reduced, whilst the lender's forward price curve might move up, which would close the gap and mean that less equity funding is required. An annual interest rate of 12% has been used for the debt in this analysis.

Oil is currently being sold internationally at a small premium to Brent Crude. In our analysis, we have assumed that the Brent crude price is received and have been conservative using a price rising from US$40 in 2020 to US$45 in 2021, US$50 in 2022, US$55 in 2023 and US$60 in 2024 and beyond. Operating costs are assumed to fall to below US$10/barrel during the 2022 – 24 period when oil production increases, but then begin to rise as the oil production rate slows. A royalty rate of 8% has been used for both oil and gas.

**Gas project**

Phase I is seen as unlocking generous cash flows which can be used to fund Phase II which is the gas development. Aje has really always been a gas project and the Final Investment Decision (FID) on Phase II is seen as being a standalone investment decision to be made once a gas offtake agreement is in place which apparently is being targeted for 2021. On that basis, we have assumed that gas production begins towards the end of 2024 and that this production is tied back to a new facility coming into place. The project schedule critical path is driven by the subsea pipelines and control systems and the export pipeline for gas sales. This development would require a total capex of circa US$350 million for the development of a gas plant which includes the drilling of an additional gas well (US$40 million), which can be fully funded by cash flow.

We have assumed a production rate of around 110 mmscf/d for twelve years (based on the in-place volumes in the 2P Reserves estimated in the latest CPR. Gas production is expected to be sold to the West Africa Gas Pipeline and industrial/commercial off takers in the Lagos/Lekki area, where gas prices are quite high at US$3.50 to 7 per mscf. On the gas we have continued to use a flat netback figure of US$4 per mcf over the life of the project, which was adopted in our previous analysis and still continues to be valid for this region.

**Sum of the parts valuation**

Based on our model, we have derived a NPV (12) of £20.17 million for ADM's increased stake in the oil project and a NPV(12) of £32.78 million for the company's increased stake in the gas project. In addition, a NPV (12) of £(10.88) million was determined for PLC costs**. Based on the current number of shares in issue (70,082,543) suggests a per share valuation of 60.03p and on a fully diluted basis (148,273,619) this valuation equates to 28.37p per share.**

| **Based on ADM's increased stake in Aje** | **Valuation £ million** |
|---|---|
| Oil project NPV (12) | 20.17 |
| Gas project NPV (12) | 32.78 |
| PLC costs NPV (12) | (10.88) |
| **Total** | **42.07** |
| Per share (70,082,543) | 60.03p |
| On a fully diluted basis (148,273,619) | 28.37p |
| **On number of shares for issue of £4.95m of CLN convertible into shares at 7p each. (218,987,905)** | **19.21p** |

*Sum-of-the-parts valuation. Source: Align Research*

Phase I financing requires an estimated US$50 million, where ADM would be responsible for US$6.15 million (£4.95 million). **We have gone on to assume that these funds are raised in convertible loan notes with a third party which convert into ADM equity at 7p per share.** This represents a large premium to the current share price, but it should be noted that it was the level at which EER, the vendor of the increased Aje stake, was prepared to accept ADM paper. It is also a price which we believe is completely justified by the quality of this world class oil and gas project, its robust economics, rapid expected growth in profitability with rising production and lower lifting costs. In order to be conservative, we have added in the 70,862,535 shares that would result on conversion of such a loan. **This would take the number of shares on a fully diluted basis to 218,987,905 and suggest a valuation per share of 19.21p, which we have chosen as our target price.**

**Peer group comparison**

In addition to determining the NPV, we have also investigated the sort of ratings that are awarded to oil and gas producing companies active in West Africa, and the manner in which ADM compares. **It does seem that based on an Enterprise Value per barrel of 2P reserves, that ADM stands out with an attractive valuation at a more than 90% discount to the median value shown in the analysis below.**

| Company | Share price | EV US$m | 2P MMboe | EV/2P US$/boe | Production boepd | EV/daily production US$/boepd |
|---|---|---|---|---|---|---|
| Lekoil (LON:LEK) | 2.68p | 20.8 | 22.7 | 0.92 | 2,400 | 8,667 |
| Oando (NSE:OANDO) | NGN2.80 | 1,042 | 470.7 | 2.21 | 40,188 | 25,928 |
| Panoro Energy (OSLO:PEN) | NOK9.16 | 65.4 | 9.62 | 6.80 | 2,500 | 26,160 |
| PetroNor E&P (OSL:PNOR) | NOK0.9 | 84.5 | 11.2 | 7.54 | 2,620 | 32,251 |
| San Leon Energy (LON:SLE) | 25.17p | 65.4 | 124 | 0.52 | 4,800 | 13,625 |
| Seplat Petroleum Development (LON:SEPL) | 56p | 1,240 | 509 | 2.44 | 46,498 | 26,668 |
| **Median** | | | | **2.33** | | **26,298** |
| **ADM ENERGY** | | | | | | |
| **Pre-transaction** | **2.50p** | **1.8** | **8.9** | **0.20** | **148** | **12,162** |
| **Post -transaction[1]** | **2.50p** | **3.8** | **16.4** | **0.23** | **273** | **13,919** |

[1] - following the completion of the increase stake in Aje

*Quoted West African oil and gas producing peer companies. Source: Align Research*

**ADM is acquiring the additional stake in Aje for a price which is equivalent to just US30 cents per barrel of offshore 2P reserves.** In addition, ADM has a number of deals planned where the acquisition costs would represent US31 – 100 cents a barrel, which could represent heavily value enhancing transactions if concluded. Comparing on an Enterprise Value per barrel of daily production basis, the discount to the median is not as great but still compelling at around 50%.

## Conclusion

ADM is an investor in a world class offshore oil and gas project and is seeking to aggressively build reserves and production with a target of becoming a significant mid-sized player with a large investment portfolio of projects across Nigeria and West Africa. **The recently agreed proposed strategic alliance with Trafigura would enable the development and financing of such energy projects in Africa, where it looks likely that Trafigura would provide ADM with conditional pre-financing of up to US$100 million for approved projects, as well as subscribe for up to US$20 million in convertible loan notes.** This represents very substantial capital which ADM can use to fuel its growth. So, it looks like investors can expect an impressive news flow moving ahead.

The team is adept at buying reserves cheaply as has been proven with the EER deal, where ADM paid only 30 cents per barrel for offshore 2P. When oil was trading merrily at US$60 per barrel, offshore 2P reserves were valued at US$15/bbl and even though the oil price may have collapsed we believe they have to be worth US$3-6/bbl (as our peer analysis highlights). Moving ahead, the board believes that significantly more 2P offshore reserves in West Africa can be acquired by ADM at highly attractive prices. The team takes a long-term view which might not appeal to every investor, but the truth is that such mid-size players are not built over night. The board's measured approach to expansion by acquisition should allow value to be added at each stage ahead of successive acquisitions in order to ensure that dilution is strictly limited.

We believe that ADM is grossly undervalued, as per our analysis above. As clarity becomes improved about the scale of the potential upside at the Aje project and normality begins to return to the oil market, we look forward to being given the opportunity to revisit our target price. **Our coverage of ADM Energy is updated with a target price of 19.21p and a Conviction Buy stance.**

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