



#### Oilex Ltd

16<sup>th</sup> November 2017

After several false dawns, credibility is now beginning to return to this Indian energy play focused on multi-TCF gas resources

Dual listed Oilex joined AIM in 2006, focused on developing a strong position in the highly prospective producing basins in India. Expansion elsewhere since then has failed and nine wells drilled in India over the last 10 years have disappointed. Plus, JV partner problems and a looming licence expiry have made investors cautious. However, in 2016 new management took control and are dealing with the issues.

## Established player providing access to a booming Indian energy market India is one of the fastest growing economies on the planet. The country relies on imports for 80% of its oil needs and LNG (Liquified Natural Gas) imports are expected to double by 2020, despite the country having some highly prospective world-class hydrocarbon basins. Oilex is one of a very small number of foreign companies operating in India today.

# Drilling to begin in 2018 using state-of-the-art fracking technology Schlumberger/Baker Hughes has identified the problems in the old wells and have a blueprint for success. One re-entry and two vertical wells are planned for H2 2018, probably funded by a new JV partner farming in, with Oilex retaining a 30% to 45% stake in the vast well-regarded Cambay block. Given success, a horizontal well could be drilled in December 2018 and crossing over in 2019.

Premium gas price project as production will substitute imported LNG India relies on imported LNG to fill the energy gap. Oilex is just 15km away from a major high-pressure pipeline taking re-gassed LNG from the port to Delhi and Mumbai, so is well placed to be able to gain a premium price.

#### Discounted cash flow analysis suggests upside of 680%

Due to legacy problems the stock now has a shell company valuation. By any yardstick, the shares look well- oversold in our view. **We initiate** coverage of Oilex with a target price of 1.60p and Conviction Buy stance.

Table: Financial ove	erview			
Year to end Dec	2016A	2017A	2018E	<b>2019E</b>
Revenue (A\$m)	0.45	0.09	0.40	1.50
PTP (A\$m)	(36.15)	(3.67)	(5.05)	(6.15)
EPS (cents)	(3.2)	(0.3)	(0.3)	(0.2)

Source: Company accounts & Align Research

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 Target1.60p



#### **Key data**

EPIC	OEX
Share price	0.205p
52 wk high/low	2.28p/0.14p
Listing	AIM/ASX
Shares in issue	1,698.1m
Market Cap	£3.48m
Sector	Oil & Gas

#### 12 month share price chart



### Analyst details Dr Michael Green michael.green@alignresearch.co.uk

IMPORTANT: Oilex is a research client of Align Research. Align Research holds an interest in the shares of OEX. For full disclaimer information please refer to the last page of this document.

#### **Business overview**

#### **Oilex Operations**

• Oil and gas projects — Oilex has interests in a number of oil and gas assets in India, Sumatra and Australia. There is some production from India at present but the other assets are currently non-producing. Oilex has operated in India for over 10 years and in that time has drilled nine wells and today is one of the few foreign companies operating in the oil and gas sector in the country.

Asset	Location	Entity	Equity	Operator
		Oilex Ltd	30%	Oilex Ltd
Cambay Field PSC	Gujarat, India	Oilex N.L. Holdings	15%	
		(India) Limited		
Bhandut Field PSC	Gujarat, India	Oilex N.L.Holdings	40%	Oilex N.L.Holdings
		(India) Limited		(India) Limited
West Kampar PSC	Sumatra, Indonesia	Oilex (West Kampar)	67.5%'	PT Sumatera Persada
		Limited		Energi
	Joint Petroleum			
JPDA 06-103 PSC <sup>2</sup>	Development Area	Oilex (JPDA 06-103)	10%	Oilex (JPDA 06-103)
	Timor Lease and	Ltd		Ltd
	Australia			
STP-EPA-0131	Western Australia	Admiral Oil Pty Ltd <sup>3</sup>	100%	Admiral Oil Pty Ltd⁴
Application				
STP-EPA-0106	Western Australia	Admiral Oil and Gas	100%	Admiral Oil and Gas
Application		(106) Pty Ltd <sup>3</sup>		(106) Pty Ltd <sup>4</sup>
STP-EPA-0107	Western Australia	Admiral Oil and Gas	100%	Admiral Oil and Gas
Application		(107) Pty Ltd <sup>3</sup>		(107) Pty Ltd <sup>4</sup>

<sup>&#</sup>x27;Oilex (West Kampar) Limited is entitled to have assigned an additional 22.5% to its holding through the exercise of its rights under a Power of Attorney granted by PT Sumatera Persada Energi (SPE) following the failure of SPE to repay funds due. The assignment request has been provided to BPMigas (now SKKMigas) but has not yet been approved or rejected. If Oilex is paid the funds due it will not be entitled to also pursue this assignment.

Table: Permit schedule as at 30<sup>th</sup> September 2017. Source: Company





Oilex's operations in India. Source: Company

<sup>&</sup>lt;sup>2</sup> PSC terminated 15 July 2015

<sup>&</sup>lt;sup>3</sup> Ultimate parent entity is Oilex Ltd

<sup>&</sup>lt;sup>4</sup> Current status is that of Preferred Applicant



#### India

India is at the same stage of economic development as China was a decade ago. It is clear to see that the country is enjoying China-style robust GDP growth, which acted like a powerful magnet for foreign investors there. With growth slowing down in China, and sluggish growth being experienced both in the US and Europe, India is attracting more attention.

Country	2016E	2017P	2018P	2019P
Percentage change				Projection
India	6.8	7.2	7.5	7.7
China	6.7	6.5	6.3	6.3
US	1.6	2.1	2.2	1.9
Euro Area	1.8	1.7	1.5	1.5
World	2.4	2.7	2.9	2.9

Table: Real GDP growth. Source: Global Economic Prospects June 2017 - World Bank

The country is ranked the third largest economy in the world, based on purchasing power parity. GDP growth over the last decade has been sufficient for Goldman Sachs to reclassify the Indian economy as a 'Growth Market' rather than an 'Emerging Market'. Already, the country is a leading provider of shared services and rapidly becoming a manufacturing base for foreign companies. By 2020, India is expected to rank among the world's three leading manufacturing destinations.

There has been steady improvement in India's relative position in the global economy, reflected in the country's growing influence in international institutions, such as the G-8 and G-20, and its negotiation with free trade areas, notably ASEAN and the EU. However, despite healthy GDP growth India still accounts for only 2% of the world's GDP, even though the country has 18% of the world's population. This seems to set the scene for decades more well above average economic growth as the country goes through a prolonged period of catching up on the wealthier countries of the world, fuelled by favourable demographics and government reforms.

Key drivers for growth in the country are: the population, cheap labour, its progressive sectors of industry, good links with the West and democracy. Current population growth means that India is set to have a younger populace compared to most developed nations and is likely to stay that way for the next fifty years. The country has very progressive IT, health, education, science sectors amongst others and has adopted international best practices in the production of a wide range of goods and services. India also has strong trading relationships with countries in the western world, notably the US and the UK.

Economic reforms initiated in the 1990s have grown in scope and scale and produced increasingly beneficial returns. There is tremendous scope for growth in India from rapidly increasing urbanisation, gross domestic production and business expansion. Business activity is being strongly boosted by the true pro-business government of Prime Minster Modi which in early 2015 announced plans to reduce the corporate tax from 30% to 25% over the next four years. (Source: India-briefing.com 25 November 2015). All this economic growth requires energy and it looks as though the oil and gas sector is likely to be a key beneficiary.

#### **Encouraging Foreign Direct Investment**

The Indian government has made a number of policy changes over the last few decades which have served to dramatically reduce discrimination against foreign investors. Under Prime Minister Modi, there has been a further relaxing of the regulations which serve to reduce some of the many regulations that have restricted Foreign Direct Investment (FDI). Also, there has been a complete change of the government's stance from being an authoritarian figure to becoming a trading partner with foreign direct investors.



A MAJOR NATIONAL INITIATIVE. DESIGNED TO FACILITATE INVESTMENT. FOSTER INNOVATION. ENHANCE SKILL DEVELOPMENT. PROTECT INTELLECTUAL PROPERTY. AND BUILD BEST-INCLASS MANUFACTURING INFRASTRUCTURE. THERE HAS NEVER BEEN A BETTER TIME TO MAKE IN INDIA.

Oil and gas is a key contributor to the Indian government's MAKE IN INDIA initiative. Source: Company

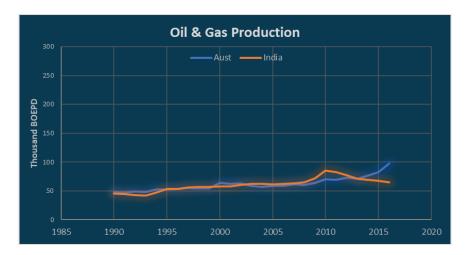
The MAKE IN INDIA initiative has been launched to facilitate investment in the country. This, along with other recent policy measures to encourage FDI, includes relaxing the maximum holding that foreign investors can have in Indian companies. Measures such as these will allow FDI up to 100% in telecoms, news TV channels, retail banking and e-commerce. It is a bit of a surprise that even the defence sector is being opened up to 100% foreign ownerships, although any holding in advance of 49% requires government approval. Over the coming years, it does look likely that the oil and gas sector could attract increasing amounts of capital from the West on the back of this latest initiative and the increasing relaxation of regulations concerning FDI.



#### Oil and gas in India

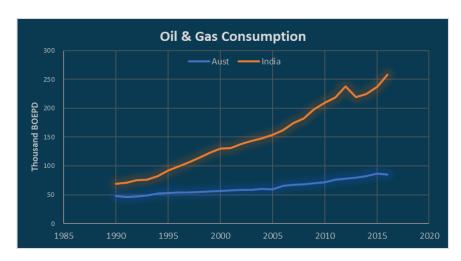
India is the world's third largest petroleum consumer. The government recognises that energy supply is critical to the economy and is actively promoting oil and gas opportunities to overseas companies. Domestic oil and gas production is in decline, with the country now importing 80% of its oil, whilst LNG Imports are set to double by 2020. (*Source: Ultra News 06-05-2015*).

Energy fundamentals in India are very strong. Not only does the country have one of the fastest growing economies in the world but India is also forecast by BP Energy to become the largest global energy market.



Outlook for oil and gas production for India until 2035. Source: BP Energy

There is plenty of oil and gas potential in the country to help meet the increasing level of energy demand. This potential lies in India having some highly prolific oil and gas basins which remain under-explored, where FDI coupled with foreign expertise is required to unlock these compelling opportunities. It has been estimated that India has proven reserves of 5 billion barrels of oil and proven gas of 54 TCF (Source: Company).



Outlook for oil and gas consumption for India until 2035. Source: BP Energy

#### LNG market

Liquified Natural Gas (LNG) plays a crucial role in bridging the gas supply gap in India, which is now the 4<sup>th</sup> largest importer of LNG behind Japan, South Korea and China. India has a growing dependence on LNG, with imports increasing by 11.1% CAGR between 2010 -15 to 15 million tonnes. The overall LNG share of the gas market has risen from 20% to 38% over the same period. (*Sources: EY Gas market in India*). The level of imports keeps on rising as in 2016 India is thought to have increased imports by more than 4Mt to 20Mt in 2016. (*Source: The Hindu 07.06.16*). Moody's investor service believes that India's LNG imports are set to double by 2020. (*Source: Ultra News 06-05-2015*). In November 2016, Citi Research forecast that demand for LNG in India was set to touch 30Mt by 2020. (*Source. Livemint.com 12.10.16*).



LNG prices in Asia. Source: Bluegold Research

Large offshore gas developments in Australia have been put into production to provide LNG for Asia, which have led to a glut that was estimated to run until 2023/24. (Source: Credit Suisse). The latest of these developments is the Greater Gorgon gas field off the coast of Western Australia, which has become that country's fourth such LNG export development. This large project is a joint development between Chevron, Exxon Mobil and Shell where subsea gas-gathering infrastructure feeds an LNG plant on an island with LNG loaded onto ships for export. Supplies to India began in January 2017.

There is forecast to be a big squeeze during the winter in the northern hemisphere, which has led to the Asia spot price increasing to over US\$9 per mmbtu (Source: Bluegold Research). In September 2017 there was news that India had renegotiated the pricing of LNG imported from Australia, with Exxon Mobile agreeing to charge 13.9% (down from 14.5%) of the prevailing Brent oil price at the port of delivery. (Source: Bloomberg 10.09.17 India Renegotiates Australia LNG Price). These changes mean that, according to our calculations, at the current Brent Crude price of US\$64 per barrel, Gorgon LNG would cost \$8.90 per mmbtu.

In October 2017, Petrowatch, which provides market intelligence on the Indian oil and gas industry, reported that spot LNG prices for delivery in Q4 2017 had begun climbing once again. Long term demand fundamentals have improved, reflecting higher demand from China, which has served to effectively allow Gorgon production to be absorbed much faster than had been previously envisaged. The LNG glut is now forecast to end in the early 2020s, improving the outlook for LNG prices. (Source: Credit Suisse). All this means that prices are expected to recover to above the US\$9 per mmbtu level and we expect them to stay above this level, much quicker than previously forecast.



#### **Background**

Oilex joined AIM in 2006, to add to its existing ASX listing. At that time, the company was developing a strong position in the highly prospective hydrocarbon producing basins of India. Over the intervening years a previous management team pursued a goal of global expansion during an environment of rising oil prices, making acquisitions in India, Oman, Australia and Indonesia. At the height of the excitement the shares nearly traded as high as A\$1.60. However, none of these projects ever delivered and the only asset that has been pursued is the Cambay Field PSC in India, where problems have arisen due to the JV partner not meeting its share of costs.

In the first six months of 2016 a new management team, in the shape of Joe Salomon as MD and FD Mark Bolton, took over control of Oilex. They had a number of burning issues that needed to be resolved before the company could begin to make any real headway. Oilex's high cash burn rate has now been halved, debt is nil and so the financial position has become far more manageable. The new team also successfully dealt with litigation with an investor (Zeta Resources) which could have easily sunk the company.

Due to its past, Oilex lost a lot of credibility with investors and also within India. Relations in the country have now been rebuilt, Joe Salomon was recently invited to present to an industry gathering at a recent Indian government roadshow for the oil and gas industry. The team has also made a lot of headway into two remaining legacy issues - gaining licence extensions on its projects and resolving a trying situation with JV partner Gujarat State Petroleum Corporation Limited (GSPC) which owes the company US\$5.5 million for past project expenditures.

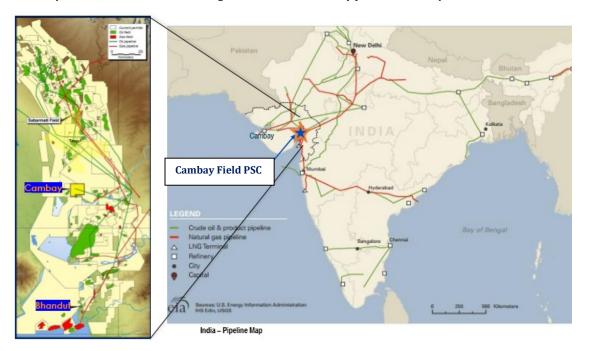
#### **Operations**

Oilex has oil and gas assets in India, Sumatra and Australia. Our report concentrates on the Indian assets where there looks to be the biggest opportunity to add value in our view.

Oilex's head office may be in Perth but the company has a project office in Gandhinagar in the state of Gujarat. The company has operated in India for over 10 years, drilling nine wells. Oilex is one of the few foreign companies operating in the oil and gas sector in India. The board continues to evaluate new opportunities with a goal of widening the company's asset base.

#### Cambay Field, Onshore Gujarat, India

Oilex's major asset is the Cambay Field project, located onshore in the state of Gujarat, which historically has been one of India's most prolific hydrocarbon provinces as well as being a leading centre of industrialisation. The company has a 45% stake in this project and is the operator, with the remaining 55% interest held by joint venture partner GSPC.



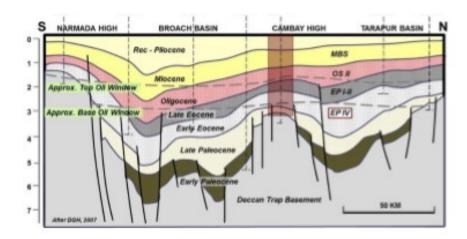
Cambay Basin map and the pipeline map of India, Source: Company

The Cambay production sharing contract (PSC) covers an area of 40,000 acres, right at the heart of the prolific Cambay Basin and close to national pipeline infrastructure.

The Cambay Project is located close to a major industrial corridor and just 15 kilometres away from a high-pressure gas pipeline which forms part of the country's national gas pipeline network. This ideal location will help the team to commercialise production supply gas to the fast-evolving and fast-growing domestic energy market.

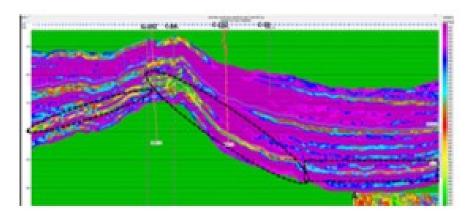
There is a long history of oil and gas production from a series of vertically stacked reservoir sections in this area. The focus of Oilex's attention is a tight siltstone reservoir from the Eocene period which has the potential for multi-TCF gas resources within the PSC. In addition, in the Oligocene section there is a secondary conventional reservoir.





Cross section showing EP-IV and OS-II reservoir zones. Source: Company

The Cambay Basin contains proven hydrocarbons in multiple horizons. Oilex is focusing on low permeability multi-TCF Eocene wet gas reservoir (EP-IV). There has been production from the EP-IV reservoir on the block from five wells since 1997, but the flow rates have been disappointingly low. Even following Oilex's first application of horizontal drilling and stimulation technology in India, there does not seem to have been much improvement as gas has not flowed at the predicted rates. **New studies undertaken by consultants have provided explanations for the poor results of the past and have identified remedies for future programs.** Although the company's principle focus is on the EP-IV, there also remains some lower value potential in the unswept shallow OS-II sands.



Seismic impedance sections showing EP-IV response. Source: Company

Production of gas and condensate from the Cambay Field PSC continued throughout most of the year ending 30<sup>th</sup> June 2017. During this period, a small volume of gas was produced into the local low-pressure pipeline from the Eocene reservoir. The C-77H well produced 8.6 mmscf, and C-73 produced 2.7 mmscf. In the current year, the team will be cycling production alternately from C-77H and C-73. Gas is sold into a low-pressure network at a price of around US\$4 per mmbtu. A workover program of two older wells C-70 and C-23z to test potential production flow rates from the OS-II reservoir was completed in June 2017. Unfortunately, following this work, these two wells did not produce commercial volumes of oil or gas.

#### Resources

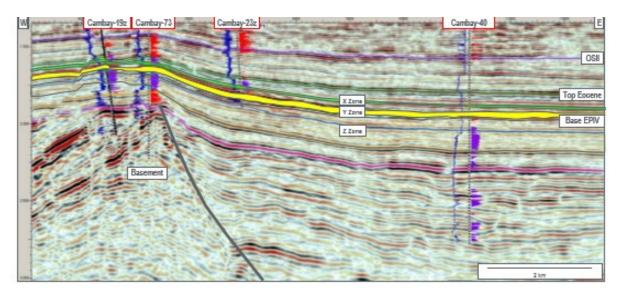
In June 2015, Oilex had reserves and contingent resources at the Cambay Field PSC associated with EP-111/IV (X and Y Zones) from a review undertaken by RISC. At that time, the company had 93 Bcf net gas and 3.6 million barrels net condensate P2 Reserves in Y Zone and 324 Bcf net gas and 27.4 million barrels net condensate 2C in X and Y Zones.

However, in June 2016, RISC recommended that the reserve volumes be re-classified to Contingent Resources, although the volumes have not changed. RISC re-classified the reserves for three reasons. Firstly, a change in economic assumptions given the downturn in world oil and gas prices, secondly, Oilex's joint venture partner's failure to approve ongoing work and thirdly, the resultant deferral in project timing which served to push the recovery of reserves beyond the current term of the PSC.

Contingent Resource volumes net to Oilex for the Eocene being changed in June 2016 are shown below.

	Net Gas Volume Bcf			Net Condens	sate Volume m	illion barrels
	1C 2C 3C			1C	2C	3C
X & Y Zones	215	417	728	12	27.4	54.6

Table: Unrisked Cambay Field Resources Estimates at June 2017. Source: Company's Financial Report for year ended 30 June 2017.



Zones within the Eocene at the Cambay Field PSC. Source: Company

Gross in place contingent and prospective resources are shown below.

Total resource (gross)	Gas in Place (Bcf)				
Region	P90	P50	P10	Mean	
X Total	1716	2519	3503	2573	
Y Total	919	1733	2944	1851	
X and Y Total	3141	4318	5806	4409	

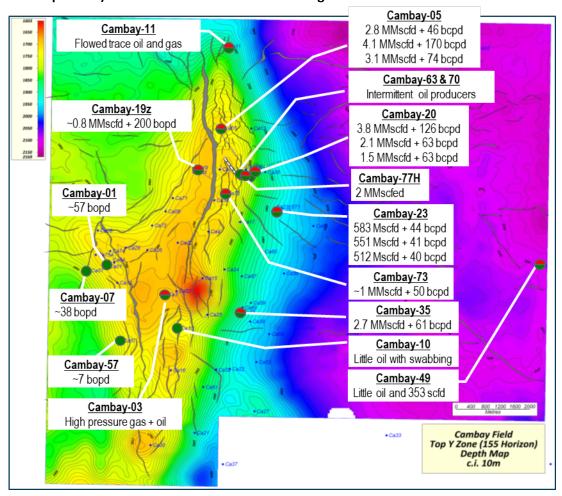
Table: Total Gross Contingent and Prospective in Place Resource probabilistically combined.

Source: Company



#### Technical review on the EP-IV project

Production performance of the wells on the EP-IV project has been disappointing. More than 40 wells have been drilled that have intersected the EP-IV within the PSC. The test flow rates in exploration wells have shown that many wells have flowed gas and/or oil (as shown on the map below). The tests rates were without being stimulated.



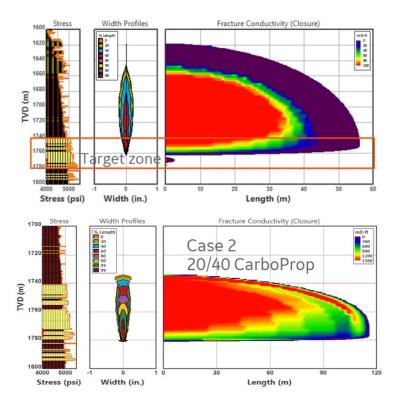
Historical production from the Cambay Field PSC. Source: Company

Five wells have produced in the EP-IV. As mentioned earlier, two wells are currently on cyclic low rate production (C-77H and C-73). There are two stimulated horizontal wells (C-76H and the C-77H). The C-76H failed operationally after very positive indications and was never able to be flow tested, whilst the C-77H is one of the two wells producing gas at low rates.

A revised geo-mechanics study has been undertaken using a core sample from a recent exploration well and also investigated results from the latter wells that have been drilled on the PSC. This study has produced very positive results confirming the fundamentals, which gives the board the confidence to restart the field program. Obviously, no major expenditure is going to be entered into until the PSC extension is granted. **Drilling costs have been found recently to be lower than expected at US\$2.5- 3.0 million for a vertical well and US\$6 – 7 million for a horizontal well (these costs include fracture stimulation).** 

#### Technical evaluation of EP-IV from core sample

There have been good results from all the studies on the core sample. Work by consultants Schlumberger and Baker Hughes has highlighted specific reasons for the underperformance of historic wells plus suggested an optimal well and stimulation design for the future development. This can all be achieved using technology that is readily available off the shelf.



Fracture modelling of the historical vertical well (top) showing fracture escaped vertically outside the reservoir target zone and the optimized model (bottom) where there is longer fracture within the reservoir target. Source: Company

A lot has been learnt from Baker Hughes' work on the geomechanical modelling and hydraulic fracture optimisation of the Eocene reservoirs at Cambay. Recommendations on how Oilex should develop the low permeability Eocene formation (EP-IV) Y-Zone in the Cambay Field, highlighted the key issues to be:

- Select an optimum depth interval within which a horizontal well should be placed and perforated to create zone-confined fractures.
- Use a hybrid fluid system slick water (non-viscous) fluid to initiate and establish a fracture followed by cross-linked gels to place the proppant – to avoid out of zone fracture growth.
- Approximately 150 metres fracture half-length with conductivity of around 250mDft should be the target for the treatment.
- Over-flushing the treatment must be avoided in the Y-Z Zone. This has been a major issue of past drilling.

Other recommendations included drilling the pilot hole at least 50 metres below the target reservoir and gathering log data before side tracking the horizontal lateral at the optimum depth within the reservoir. In addition, at least gamma, density and acoustic logs (both compressional and shear) should be acquired to adequately characterise the lithologies, rock properties and stress.



#### **Joint Venture Management**

There has been a history of unpaid cash calls by Oilex's joint venture partner GSPC. Last year, the company received US\$1.708 million from GSPC, but this still leaves around US\$5.5 million unpaid. Oilex continues to bear the ongoing costs of the joint venture. The board has ensured that a good dialogue has been maintained with its partner and it is now anticipated that GSPC will commence regular contributions to ongoing operating cash calls going forward. In December 2016, Oilex made an offer to acquire the additional 55%, but the outcome as yet remains unknown.

#### Bhandut Field, Onshore Gujarat,

The Bhandut Field is also located in the Cambay Basin in Gujarat and was initially discovered and developed by Indian multinational Oil and Natural Gas Corporation (ONGC) in 1976. Oilex has a 40% stake in this PSC and is the operator, with the remining interest held by joint venture partner GSPC. Previous drilling in the Bhandut Field intersected a number of hydrocarbon zones, some of which have produced and are no shut-in.



Bhandut production facilities. Source: Company

In the last financial year, there was a total of 28.5mmscf produced which came from the Bhandut-3 well. Production continued from this well until June 2017, when it was shut-in due to increasing water production.

While this field has ongoing production and exploration potential, the prize is modest and in recent months, the company has reportedly been in discussions concerning the sale of its interest in the PSC. In September 2017, Oilex submitted a development plan in support of the application for an extension of the PSC which is due to expire in September 2019.

#### Strategy for growth

Management plans to have completed dealing with all the legacy issues in H1 2018, which will allow real progress to be made. The two remaining issues are the licence extension for the two Indian projects as well as the situation involving JV partner GSPC These items both really rest with the government as the Director General of Hydrocarbons (DGH) is in control of oil and gas licencing and GSPC was set up by the Gujarat State government.

Both matters are expected to be quietly resolved in a timely fashion over the coming months. A ten-year licence extension would take both projects through to September 2029. The resolution of the GSPC situation is more than likely to be achieved by bringing in a large financially-stable new joint venture partner probably assuming most of GSPC's stake, with GSPC ending up with a small interest. To this end, Oilex has opened a data room and has been soliciting interest from larger international E&P companies in an attempt to ensure that the deal is secured for a preferred partner.

#### Improving credibility

Once these problems have been confined to history, Oilex can begin to make the most of the multi-TFC opportunity that clearly exists in the Cambay Field PSC. Unfortunately, previous management teams have been talking about doing this for the past seven years, but so far, the results have been disappointing, which has tried the patience of investors.

With their low-cost risk-managed approach, current management has a vital job in restoring investor confidence in Oilex which might come with bringing in a cornerstone investor at either a company or project level. Such a move would mean that when such announcements are made they should have a dramatic positive effect on the share price.

#### **Gaining commercial proof of concept**

There are three main reservoirs at Cambay, with the OS-II and the EP-IV having the greatest potential. The OS-11 is shallow and conventional, which has been a largely underperforming reservoir that has been the target for wells historically. Oilex's main interest lies in the EP-IV which is deeper, has reservoir flows and forms the basis of the resources and the multiple TCF opportunity.

In our view, management needs to provide investors with commercial proof of concept. In the past there has been a catalogue of failure across three attempts to drill and frack the EP-IV. There has been one vertical well and two horizontal wells drilled and fracked which have all proved to be uncommercial. We believe the lack of success boils down to the necessary analysis not being carried out on core samples to properly design the frack.

Previously, it was assumed that a North American model would be appropriate and off the shelf technology was used, which had been successful in shale gas plays in the US. However, even in the US, different reservoirs in different basins require unique solutions

Although these wells drilled on the PSC involved multiple fracks, it is clear that fracture length was not established to the necessary degree, and that fractures were poorly directed with most of the fracture lost outside the reservoir zone. The recent work indicates that wrong fluids were used and that proppant was not strong enough and hence crushed. Most importantly, the proppant was over flushed and in a softer rock and with crushed material it simply served to seal the frack.



#### 2018 Programme

It is anticipated that the PSC extension will be received in early 2018, which will serve to restart field development and capital expenditure. The Field Development Programme (FDP) has set out a plan for both the EP-IV and the OS-II reservoir sections. Oilex has a number of wells which represent good workover candidates. In the shallower OS-II reservoir, seven workovers are planned with an estimated cost of \$150,000 per workover, which could also be farmed out. This could be good for news flow and would demonstrate that progress has resumed on the ground.

In the EP-IV reservoir, the team has identified 2 workover candidates including the existing C35 well which is a workover candidate with planned fracture stimulation which would be the first trial of the campaign. Currently, Oilex is undertaking due diligence to weigh up the pros and cons of using an existing well, where the results might be compromised. But, such an exercise is relatively cheap in industry terms at US\$700,000 and it would provide the team of experts with a dummy run before the costlier programme begins. Such a move might prove invaluable ahead of a drilling 2 stimulated vertical wells with a likely combined budget of US\$5.5 million.

As far as timing is concerned, the C-35 re-entry well is expected to undertaken in Q2 2018 followed by two new vertical wells drilled in H2 2018, to confirm the optimal recipe for the frack. With all these wells there will be an initial production test followed by the fracture stimulation and further flow tests to gain understanding on the uplift provided by the stimulation.

Regarding the funding of the drilling program, such is the scale of the opportunity here that we believe that an effective financing strategy would be to farm down its interest. Accordingly, we have assumed the Company's interest will reduce from the current 45% stake to say 30% in order to attract the right joint venture partner to farm-in in return for funding proposed drilling programme.

#### Phased development of the EP-IV

To access multi-TFC gas, Oilex has planned a phased development of the EP-IV program. Depending on the success of the two vertical wells, a horizontal production well may be drilled at an expected cost of US\$6.5 million. Baker Hughes' model suggests that there is an incremental benefit from a fracked horizontal well. The success of the vertical wells will allow the experts to determine whether a horizontal well could deliver a better financial outcome.

Once the company moves into horizontal production drilling with aggregated higher rates of gas production, it is planned to deliver this production into the high-pressure national grid which is 15 kilometers away. The economics of phased development looks to be positive at all stages, with the early single well developments leveraging the existing infrastructure.

The company plans a staged development from 1 mmscfd at present increasing to 12.8 mmscfd by expanding the current facility at a cost of up to US\$10 million. Phase 2 will see an increase to 50mmscfd for a cost of approximately US\$40 million. Beyond this further expansions are largely linear. Phased expansion of the gas processing facility as production grows would make funding easier. Although the EP-IV is the main focus, there is also an additional phased plan for smaller volume OS-II conventional reservoir.

#### **New projects**

Oilex is looking further afield for new opportunities. The focus of attention is not on exploration but development plays whether the opportunity comes from a technology angle or an attractive valuation. The team has identified three key areas: India, Australia and the North Sea.

Joe Salomon has been working in India for two decades and knows what is needed to successfully operate in the country - India is a very sophisticated economy and commercial risks cannot be managed from a distance. So, an Indian operating team is essential and makes all the difference. Oilex has an impressive Indian operational team and does not employ any expats. The company has brought in Indian consultants to undertake a strategic review of the key basins in the country to provide a structured approach to finding oil and gas opportunities and following them up.

In Australia, the area of interest is the mighty Cooper Basin, which is the country's oldest oil and gas producing region. Oilex has a specific strategy and is trying to secure an opportunity which would represent a commercial oil play using a technological advantage that the company has and following recent new geological understandings in the basin. The management team is also looking at a steady stream of North Sea projects seeking to do a deal on an asset.



#### Financials & current trading

Losses that have been recorded over the years are largely due to the impairment of exploration, evaluation assets and development assets incurred in the Cambay Field PSC. Despite substantial investment, the level of production, and therefore revenues, has continued to be low.

Y/E 30 <sup>th</sup> June A\$'000	2013A	2014A	2015A	2016A	2017A
Revenue	196	251	290	446	92
Pre-tax profit/loss	-9,110	-3,753	-17,389	-36,154	-3,665
Net profit/loss	-6,978	-5,307	-12.128	-36,154	-3,665

Oilex's five-year trading history. Source: Company accounts

#### 2017 results

Oilex made good progress in the year ending 30<sup>th</sup> June 2017, which saw many legacy issues being resolved including: reducing the cost base and resolving the litigation with Zeta Petroleum. In March 2017, the company raised £1.1 million, mainly in London at 0.0225p per share, to fund the Cambay work programme. Activity in the period confirmed Oilex's focus on realising value in the Indian projects. At the same time, the management team continued to actively seek out new opportunities to broaden the portfolio. As at 30<sup>th</sup> June the company had cash resources of A\$3.22 million and no debt.

#### **Recent developments**

On 26<sup>th</sup> October 2017, the company announced its quarterly report which brought good news from the projects in India. At the Cambay Field, core analysis has confirmed that the EP-IV tight siltstones can be effectively stimulated and commercial flow rates are potentially achievable. The study also seemed to answer the question as to why the EP-IV wells had underperformed in the past.

The ten-year extension of the PSC at Cambay was lodged and once this has been granted and funding has been received an active work programme of workover and vertical wells is planned for 2018. It was also reported that there was intermittent gas production from the C-77H well which averaged 166 mscfd with 7bpd of associated liquids, which equated to 35 boepd with 16 boepd net to Oilex.

An extension of the PSC at the Bhandut Field was lodged in September 2017 and it was also reported that potential opportunities for the sale of the PSC are continuing to be advanced. During the quarter, the Bhandut-3 well remained shut-in due to increased water production.

For a long time, as the operator, Oilex has been bearing the ongoing costs of the Cambay Field PSC as its partner GSPC had failed to meet cash calls. As at 30<sup>th</sup> September 2017, the gross unpaid calls remaining outstanding totalled US\$5.5 million. The company has made sure to maintain a constructive dialogue with the JV partner to resolve the issue and at the time of the latest quarterly report the board was able to announce that it is anticipated that GSPC will begin to make regular contributions to ongoing operating cash calls moving ahead.

#### Risks

#### **Geological risks**

There are a series of technical risk factors concerning the amount of understanding of the geology of the project areas, the reservoir being targeted and the distribution and magnitude of the indicators that have been identified in exploration work. However, success in the 2018 program will redress this risk and increase the project value substantially.

#### **Political risk**

Any political risks are largely ameliorated by the government's strong support for the industry and recognition that energy security is critical for the country to continue its impressive growth.

#### 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 \$140 to \$28. Currently, Brent crude trades around the \$64 level.

#### **Exchange rate risks**

Movements in the value of currencies will have an effect on the company's accounts on translation from Indian rupees into Australian dollars. Fluctuations in the value of the Indian rupee against the Australian dollar, and in the value of the Australian dollar against the pound and US dollar may have an effect on the valuation Oilex is awarded by the UK stock market.

#### **Future funds**

The market for raising funds for small cap companies may have improved from the worse conditions eighteen months ago, however the equity market does continue to be difficult especially for resources companies. Some recent fund raisings in the oil sector have seen share prices being undermined by incoming investors demanding substantial discounts to provide the necessary capital.



#### **Board of Directors**

#### **Bradley Lingo - Non-Executive Chairman**

Bradley was appointed as a Non-Executive Director in February 2016 and Non-Executive Chairman in February 2017. He has more than 31 years of experience in a diverse range of oil and gas leadership roles, including business development, new ventures, mergers and acquisitions and corporate finance. Bradley has worked with Tenneco Energy and El Paso Corporation in the US and Australia, the Commonwealth Bank of Australia and Drillsearch Energy Limited. He is currently the Managing Director and CEO of Elk Petroleum Limited.

#### Jonathan ("Joe") Salomon - Managing Director

Joe was appointed as a Non-Executive Director in November 2015 and Managing Director in March 2016. He has a Bachelor degree in Applied Science and is a member of the American Association of Petroleum Geologists, Petroleum Exploration Society of Australia, South East Asian Petroleum Exploration Society and has over 31 years of experience working for upstream energy companies. Joe has worked for a number of oil and gas companies in various senior positions including General Manager Exploration and New Ventures at Murphy Oil Corporation and Global Head of Geoscience at RISC PL, in addition to a number of executive director roles including Strategic Energy Resources, Norwest Energy and Nido Petroleum.

At several times in his career, he has acted as an independent consultant for various oil and gas companies, including New Standard Energy and Pacrim Energy. Joe first worked on Indian projects in 1994 while at Ampolex and since that time has maintained his connections with the Indian industry, at various times bidding in India's exploration and field development rounds and working with Indian companies as joint venture partners, both in India and internationally.

#### Paul Haywood – Non-Executive Director

Paul was appointed as a Non-Executive Director in May 2017. He has over 14 years of international experience in delivering value for his investment network through a blended skill-set of corporate and operational experience, including six years in the Middle East, building early stage and growth projects. More recently, Paul has held senior management positions with UK and Australian public companies in the natural resource and energy sectors including O&G exploration and development in UK, EU and Central Asia. His expertise stretches across the UK and Australian public markets, with a cross-functional skill set, diverse experience and capability encompassing research, strategy, implementation, capital and transactional management. Paul is currently Executive Director of Block Energy Plc and resource focused UK advisory firm, Plutus Strategies Ltd.

#### **Executive Management**

Jonathan Salomon – Managing Director

Details on the previous page

#### Mark Bolton - Chief Financial Officer and Company Secretary

Mark was appointed Chief Financial Officer and Company Secretary in June 2016. He has significant experience in the resource sector in Australia, having worked as Chief Financial Officer and Company Secretary for a number of resource companies since 2003. Prior to this, Mark worked with Ernst & Young as an Executive Director in Corporate Finance. He has experience in the areas of commercial management and the financing of resource projects internationally. He also has extensive experience in capital and equity markets in a number of jurisdictions including ASX and AIM.

#### Ashish Khare – Head of India Assets

Ashish was appointed Acting Head - India Assets in November 2016 and is based in Gandhinagar India and has over 16 years of experience in the petroleum industry. He has a Bachelor of Engineering in Chemical Engineering which includes petroleum management. Ashish's area of expertise includes upstream oil and gas, as well as midstream and downstream project implementation and operation management. He originally worked for Oilex as GM Operations & Business Development, and has experience working for various Indian companies including Cairn India Ltd and Reliance Petroleum.



#### **Forecasts**

We initiate coverage of Oilex with forecasts for the current financial year to 30<sup>th</sup> June 2018 and for 2019. In 2018, we believe that increased production will result from workovers with a pre-tax loss of A\$5.55 million. We see an increased number of shares in issue due to raising additional funds, and forecast a loss per share of 0.3 cents.

In 2019, we expect to begin to see revenue grow from the re-entered well and the drilling of the two vertical wells although in this period production may be restricted by the size of the gas processing plant on site. For 2019, we estimate that the company will make a pre-tax loss of A\$6.15 million, which would result in a loss per share of 0.2 cents.

(000' Australian Dollars)

Year End 30 June	FY2016A	FY 2017A	FY 2018E	FY 2019E
Revenue	446	92	400	1,500
Cost of sales	(1,081)	(620)	(1,000)	(1,350)
Gross Loss	(634)	(528)	(600)	150
Other income	1	312	-	-
Exploration expenditure	(3,973)	350	(1,400)	(2,000)
Impairment of exploration and evaluation assets	(11,573)	(374)	-	-
Impairment of development assets	(10,024)	-	-	-
Administration expense	(5,648)	(2,983)	(2,500)	(3,500)
Share-based payments expense	(150)	(8)	(150)	(300)
Other expenses	(3,813)	(383)	(400)	(500)
Results from operating activities	(35,814)	(3,614)	(5,050)	(6,150)
Finance income	62	56	-	-
Finance costs	-	-	-	-
Foreign exchange (loss)/gain	(402)	(107)	-	-
Net finance (loss)/income	(340)	(51)	-	-
Loss before income tax	(36,154)	(3,665)	(5,050)	(6,150)
Income tax expense	-	-	-	-
Loss	(36,154)	(3,665)	(5,050)	(6,150)
Other comprehensive income/(loss) Items that may be reclassified to profit or loss Foreign operations – foreign currency translation differences	1,144	15	-	-
Other comprehensive income, net of tax	(35,010)	(3,650)	(5.050)	(6,150)
Total comprehensive loss				
Earnings per share (Acents)	(2.2)	(0.2)	(0.2)	(0.3)
Basic loss per share	(3.2)	(0.3)	(0.3)	(0.2)
Diluted loss per share	(3.2)	(0.3)	(0.3)	(0.2)
Weighted average number of shares	1,124,360,627	1,296,347,907	1,901,094,599	2,572,084,768
Total shares plus options	1,200,676,999	1,971,277,172	2,275,553,831	2,649,251,434

Source: Company/Align Research

#### Valuation

We have determined a valuation for Oilex which is based largely on the company's interests in the Cambay Field PSC. We have formulated a model for the Cambay Field PSC based on examining the available published information and from discussions with management. Our analysis covers the period of the current licence and the expected licence extension until September 2029. The main assumptions are outlined below.

The work programme for Oilex in calendar year 2018 is expected to consist of eight workovers followed by the re-entry and stimulation of well C-35 and the drilling of a vertical well C-80 in Q3 2018 and C-81 vertical well in Q4 2018. At the end of 2018 or early 2019, the first of the new horizontal wells C-78 is planned to be drilled. In all, a total of 55 horizontal wells are planned which covers the period from mid-late 2020 through to the end of 2026. The capital costs have assumed to be US\$2.75 million for a vertical well and US\$6.5 million for a horizontal well. Both these estimates include the cost of fracking.

Over this ten-year window, it is expected that the 55 horizontal wells will deliver a total of 145 Bcf and associated condensate. These horizontal wells will be drilled in quite quick succession with new gas production coming on stream just as that from the wells drilled earlier are declining. In this way the production profile appears to be fairly constant over much of the period.

The long-term gas price that Oilex will receive has been assumed to be linked to LNG Asia prices. Gas production from Cambay will be replacing imported LNG and so the price per mmbtu used in our analysis is based on what is for all intents and purposes a substitution value. Contracts for LNG imported into India are often benchmarked against Brent crude. We used our standard Brent crude price deck which has the price per barrel rising from US\$63 in 2018 to US\$80.70 in 2022 and US\$94.50 in 2029. We have used a ratio similar to the terms of a recently renegotiated LNG supply contract of Exxon Mobil. Plus, we added the charges and additional costs which imported LNG attracts, namely US\$0.72 for re-gassing and marketing per mmbtu and also allowed for import duty. The price received for condensate was estimated by using a discount with reference to our Brent crude price deck.

Production costs are assumed to be US\$1.30 per mscf which includes the costs at the well and the processing plant. Enlarging the gas processing facility is planned to be a staged development initially taking the capacity from the current 1 mmscfd increasing to 12.8 mmscfd by expanding the existing facility at a cost of US\$8 million. This capital expenditure figure covers the cost of the trunk line to the high-pressure pipeline and associated costs. That is planned to be followed by an increase of a further 40 mmscfd at an estimated cost of approximately US\$40 million.

The government has unveiled plans to reduce the current level of corporation tax rate from 30% to 25% over a four year period and we have used these rates over the life of the project. We have assumed that corporation tax can be offset against capital expenditure and on that basis, tax is not likely to be paid until 2025.

Undiscounted	NPV(10)	GCoS	Carried	Commercial	Carried	Oilex's 30%
cash flow		weighting	Value	weighting	Value	share
LIC¢	LICĆ		LICĆ		LICĆ	LICĆ
US\$m	US\$m		US\$m		US\$m	US\$m

Table: Valuation of Oilex's interest in the Cambay Field PSC. Source: Align Research and the Company



Our model shows that the bulk of the cash flow comes in the years 2023 to 2026. The undiscounted cash flow over the period came out at US\$1.690.91 billion. We have sought to appropriately risk this development. In order to be conservative, the geological chance of success was risked at 50%, before the re-entry well and the two vertical wells are drilled before the end of calendar year 2019. We then, to add to our conservative status further, choose to carry 50% of that value, before determining Oilex's share of this valuation. It should be noted that success in the 2018 program will redress the geological risk and substantially increase the valuation.

Over the coming months we expect the problems within the ownership of the Cambay Field PSC to be resolved and a new joint venture partner emerge which will likely provide the funding for the planned drilled program, a move which is likely to involve a farm-in deal. We have estimated that as a result, Oilex's interest in the PSC will be reduced from 45% to 30%. Factoring this into our analysis would value the company interests at US\$65.81 million. From this figure we subtracted NPV(10) for the company's corporate overheads. We have not adjusted this figure for cash which is being spent and debt. Cash is expected to be A\$1.9 million (£1.1 million) at the end of the current quarter and debt is nil.

As demonstrated in the table below, our valuation for Oilex is £36.54 million, which equates to 2.12p per share based on the number of shares currently in issue. There is obviously some financing to come and so we have chosen to determine our target price based on the number of shares on a fully diluted basis (2,275,553,831) that we estimate will be issue at the end of the company's current financial year. **On that basis, our target price is 1.60p.** 

	US\$m	£m
Cambay Field PSC (30%)	66.45	50.72
NPV(10) corporate overheads	18.58	14.18
Valuation	47.87	36.54

Target price	Number of shares	Valuation £million	Per share p
Currently in issue	1,698,112,165	36.54	2.15
Fully diluted basis	2,275,553,831	36.54	1.60

Table: Valuation and target price for Oilex. Source: Align Research

The target price might look high compared to the current market price, but that is largely, in our view, due to the shares being tremendously oversold. We believe that by any yardstick, the shares are inexpensive. We also point out that the true potential is a lot higher at the Cambay Field PSC - the 145 Bcf planned to be produced until 2029 represents just a fraction of the resources here. We in fact see our model and our valuation as actually representing a base case that does not account for further extension or an even larger expansion. An additional government approval would be required to extend the PSC beyond 2029.

The company is seeking to substantially improve its profile with UK investors and towards this goal, in May 2017, appointed Paul Haywood to be its UK Non-Executive Director. The improved IR effort in the UK should create a larger audience to follow the Oilex story, understand the scale of the opportunity and the reduce the massive discount that the stock has fallen to due to having disappointed the market in the past. This, similar to our other recent call Mayan Energy, of course represents opportunity for new investors.

Moving ahead, Oilex does seem to have the scope to generate significant levels of news flow over the next 18 months which would cover variously the results of workovers, the re-entry well, two vertical wells and the first new horizontal well. We expect that these developments will generate confidence and allows us to reduce risk weightings moving ahead and so increase our stock price target. We look forward to updating in the future as the fundamentals improve in line with the company's well-planned growth strategy.

Our coverage of Oilex is initiated with an end 2018 target price of 1.60p and a Conviction Buy stance.



#### **DISCLAIMER & RISK WARNING**

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