RESEARCH

OIL AND GAS

16 April 2014

RECOMMENDATION

Speculative Buy

12 month price target	**$0.40/sh**
12 month volume	7.7m
12 month share low	10c
12 month share high	22c
Market Risk	High
Liquidity Risk	Medium
Infrastructure Risk	Medium
Country Risk	High

IRESS & DJC Research

ISSUED CAPITAL

ASX	LIO
Share price	20c
Mkt cap[1]	$19m
Ordinary shares on issue	95m
Options[2]	4m

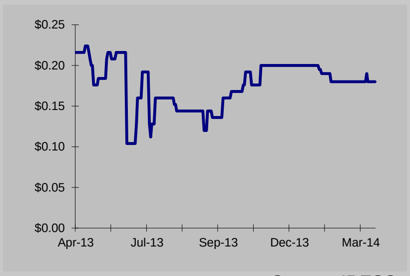
1 Undiluted *Source: IRESS*
2 Various dates and strike prices

DIRECTORS

Russell Brimage	Exec Chairman
Kim Morrison	Managing Director
Tom Soulsby	Non Exec Director
Chris Newton	Non Exec Director

Source: LIO

12 MONTH PERFORMANCE



Source: IRESS

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Lion Energy Ltd (LIO)

Initiation Note: Ready to Roar

Lion Energy Ltd (LIO) is an ASX listed emerging oil and gas company focused on Indonesia, where it has been operating for over fifteen years. It has a producing conventional oil field (Seram), a material interest in a highly attractive exploration block (South Block A) and is an early mover in the high potential unconventional industry via four Joint Study Applications (JSA's). We believe LIO has a solid foundation business and its high impact near term drilling activity could deliver material upside. We therefore initiate with a Speculative Buy recommendation and price target of $0.40/sh.

Key Points:

- **Restructured with high calibre management and shareholders.** LIO has recently been restructured and recapitalised with an experienced Board and Management team who have extensive experience in developing and investing in Indonesian oil and gas assets. Two Indonesian strategic investors, Risco Energy (Risco) and Tower Energy (Tower) are substantial shareholders of the company. Both shareholders have a long term investment horizon and are committed to building a material oil and gas company.

- **Growing energy demand and rising gas price underpins value.** The macro environment for conventional/unconventional oil and gas in Indonesia is very attractive highlighted by rapidly growing energy demand, competitive fiscal terms which underpin attractive project economics, declining conventional production and existing infrastructure which can reduce future development costs and timeframe to first production. We believe LIO is well positioned to leverage off these key macro drivers and has the potential to build a material production business.

- **Unconventional potential provides blue-sky upside.** We believe LIO's four unconventional JSA's provide significant upside given the US Energy Information Administration has ranked Indonesia in the global top 10 of countries with shale oil resources supported by an estimated 8bnbbls oil (technically recoverable). Furthermore, experienced unconventional producer AWE has also targeted Indonesia as a growth area in its unconventional portfolio having developed and appraised unconventional assets in the Eagle Ford, Texas and the Perth Basin.

- **Material exploration and new ventures upside.** LIO plans to drill three wells by year end with its South Block A prospect (assuming a volume estimate of 10mmbbls oil) providing material upside of over 10c/share in a success case. In addition, potential new ventures focused on assets with near term production potential could substantially increase LIO's cashflow generation.

- **Key near term catalysts.** The key near term catalysts for LIO include: 1) Oseil-21 development well on production (May 2014), 2) Lofin-2 appraisal well spud (July 2014), 3) Award of unconventional JSA's (3Q CY14), 4) South Block A resource upgrade (3Q CY14), 5) South Block A prospect spud (4Q CY14) and 6) New asset acquisitions (ongoing).

Company Overview

Lion Energy Ltd (LIO) is an emerging ASX listed oil & gas company focused on Indonesia, where it has been operating for over fifteen years. It has a producing conventional oil field (Seram), a material interest in a highly attractive exploration block (South Block A) and has an early mover position in the high potential unconventional industry via four Joint Study Applications (JSA's).

LIO has recently been restructured and recapitalized with an experienced Board and Management team who have extensive experience in developing and investing in Indonesian oil and gas assets. Two Indonesian strategic investors, Risco Energy Investments (Risco) and Tower Energy (Tower) are substantial shareholders of the company. Both shareholders have a long term investment horizon and are committed to building a material oil and gas company highlighted by Risco having two representatives on the Board and Tower providing consulting support.

The unconventional Indonesia focus is driven by rapidly growing energy demand, competitive fiscal terms which underpin attractive project economics, declining conventional production and existing infrastructure which can reduce future development costs and timeframe to first production.

Although the unconventional potential provides attractive blue-sky upside, LIO also has had recent success from its conventional assets with the recently drilled Oseil-26 development well (Seram PSC) producing above expectations at 580bopd (~14.5bopd LIO net share) vs 300 bopd pre drill estimates. In addition, oil production from Oseil and surrounding oilfields have averaged 2,720bopd (68 bopd net to LIO), representing a ~20% increase prior to Oseil-26 coming onstream.

Capital Structure and Funding Position

LIO's current capital structure is the following:

		Market Cap $mn
Share Price Assumption ($/sh)	$0.20	
Shares on Issue (mn)	95	19.0
Options (mn)	4.07	
Estimated Cash ($mn)		7.6
Debt ($mn)		0.0
Est. EV ($mn)		11.4

Figure 1: LIO Capital Structure *Source: Company reports and IRESS*

Based on the current 2014 work program scope, LIO is fully funded until year end. However, more capital may be required if new venture assets are acquired which we expect could be value accretive. The key spend for 2014 include:

- South Block A exploration costs: $3.2m
- Seram PSC production, development and appraisal: $1.9m
- Corporate costs: $1.3m
- Unconventional Joint Study applications: $1m

The key shareholders for LIO are Risco Energy Unconventional (Risco) and Tower Energy Indonesia Ltd (Tower) who are expected to be long term investors. Risco holds two Board positions (Tom

Soulsby and Chris Newton) while Tower provides key management and support in Sammy Hamzah (Principal Advisor) and Stuart Smith (CFO Designate).

Lion Energy Limited
Top 20 Shareholders and Distribution Schedule

TWENTY LARGEST HOLDERS OF ORDINARY SHARES

	Number of Shares	Percentage of Total
Risco Energy Unconventional Pte Limited	44,693,142	47.03%
Tower Energy Indonesia Limited	13,650,012	14.36%
Pouvoir Pty Ltd <Brimage Super Fund A/C>	4,421,529	4.65%
Jungar Holdings Pty Ltd <The Whyte Super Fund A/C>	3,937,515	4.14%
W & N Morrison Investments Pty Ltd <The Morrison Family A/C>	3,937,515	4.14%
KKSH Holdings Ltd	3,854,835	4.06%
Emmanuel Capital Pty Ltd	2,000,000	2.10%
Mr Robert Francis Davies <R And Y Davies S/F A/C>	1,068,916	1.12%
Mr Kenneth John Bull	937,504	0.99%
Mr Robert Francis Davies <The R And Y Davies Superfund	937,504	0.99%
Mr John Jansen & Mrs Dale Lorraine Jansen <JJ Retirement Fund A/C>	736,785	0.78%
Mr Richard Charles Grigg	600,695	0.63%
Jacobs Oil & Gas Ltd	540,664	0.57%
Claverdon (Vic) Pty Ltd <Fairway Unit A/C>	500,000	0.53%
Mr Gerry Masters <G & S Masters S/Fund A/C>	500,000	0.53%
Mr Kenneth Bull	423,003	0.45%
Mr Justin James Hilton Walta	423,003	0.45%
Zapac Pty Ltd	396,441	0.42%
Otway Oil & Gas Pty Ltd	375,000	0.39%
Dolenter Ira Nominees Pty Ltd	371,770	0.39%
	84,305,833	88.72%

Figure 2: Top 20 shareholders *Source: Company announcements*

Investment Thesis

- Management team and Directors have extensive experience in developing and investing in Indonesian oil and gas assets which reduces the geopolitical and execution risk of LIO.
- Pure focus on Indonesia with oil and gas demand growing at >5% pa with rising domestic gas prices (LNG pricing link) which should provide support for project economics.
- Leverage to material unconventional resource potential in basins located close to infrastructure.
- Growing conventional production and reserves upside.
- Two highly supportive cornerstone shareholders who will provide technical, strategic, commercial and financial support.

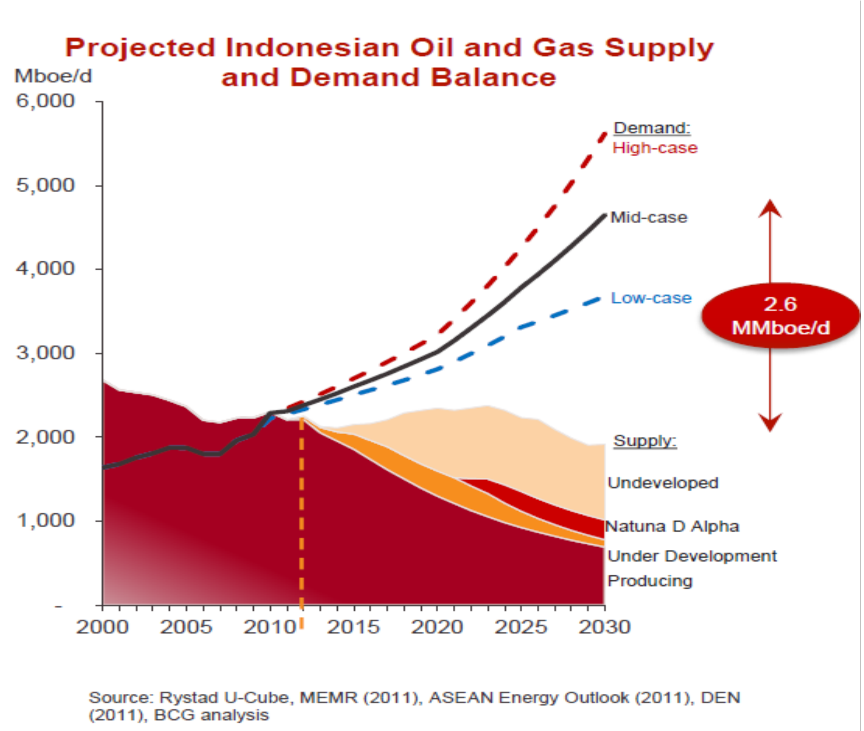

Figure 3: Forecast Indonesian Oil and Gas Supply/Demand *Source: LIO*

Company Strategy

LIO has a simple and focussed strategy aimed at value creation:

- Focus on onshore Sumatra (Indonesia) which has rapidly growing energy demand, rising domestic gas prices and competitive fiscal terms which underpin attractive project economics.
- Assemble an experienced management team which has had success in acquiring, developing and producing oil and gas assets in Indonesia.
- Benefit from first mover advantage in acquiring a diversified and material unconventional acreage position in basins strategically located close to existing infrastructure to increase leverage and optionality for future monetisation (e.g. farm-outs).
- Seek synergies between unconventional and conventional exploration e.g. geological data, knowledge, drilling, and infrastructure. This could reduce costs, increase speed and reduce exploration risk.
- Mature assets through diligent technical work (leverage US experience) to maximise farm-out terms.
- Balance asset portfolio with growing conventional production and early stage but high upside exploration plays.
- Attract strategic aligned shareholders with a long term investment horizon who will support the development of a material oil and gas producing business.

Catalysts

LIO is well funded following the completion of a $9.5mil capital raising in January 2014 and has the following near term catalysts:

- Oseil-21 development well on production (May 2014).
- Lofin-2 appraisal well spud with P50 resource potential of 5.13mmbbls/ 0.128 mmbbls LIO share oil (July 2014).
- Award of unconventional JSA’s (3Q CY14).
- South Block A resource upgrade (3Q CY14).
- South Block A prospect spud (4Q CY14).
- New asset acquisitions (Ongoing).

Attractive Macro Environment for Oil and Gas

The macro environment for oil and gas in Indonesia is very attractive highlighted by rapidly growing energy demand, competitive fiscal terms which underpin attractive project economics, declining conventional production and existing infrastructure which can reduce future development costs and timeframe to first production.

Indonesia is the largest energy consumer in Southeast Asia, accounting for 36% of the regions primary consumption in 2011. Energy access is currently a challenge with ~30% of the population lacking access to electricity. Oil production has been in decline since the mid-1990's with proven reserves of 2.7bnbbls at end 2012. The majority of the ~900kbbls/d oil was produced from the Sumatra, Java and East Kalimantan basins. Oil production has fallen by almost 50% since its peak in 1991 with new developments limited in the short to medium term. The Cepu block in East and Central Java (600mmbbls oil) is the key development in the near term and is operated by Pertamina (Indonesia's National Oil Company) and ExxonMobil. The declining oil production presents exceptional opportunities for emerging oil and gas companies such as LIO to build a material reserves base which can be developed to market and reduce Indonesia's reliance on oil imports.

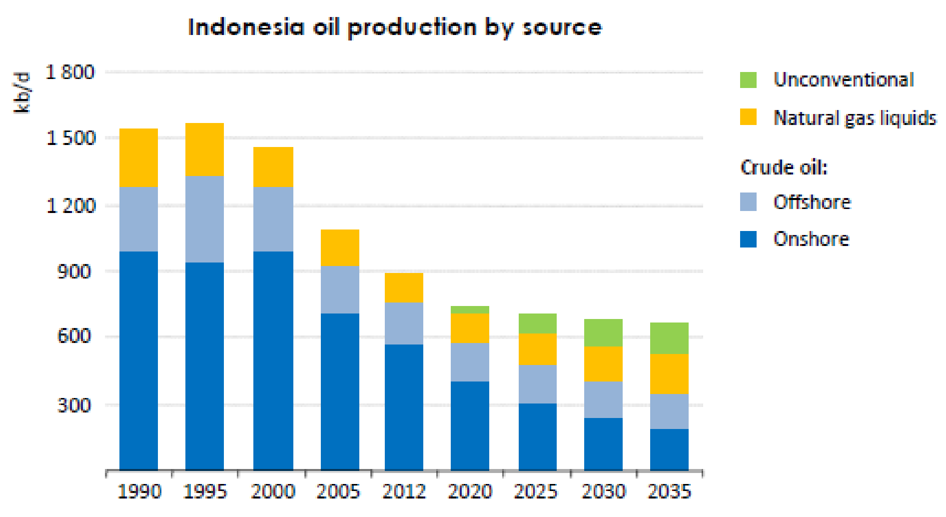

Figure 4: Actual/Forecast Oil production by Source *Source: International Energy Agency*

Indonesia has been a material LNG exporter to Japan, Korea and China. As opposed to oil, gas production has been increasing in recent years (and peaked in 2010 when Tangguh came on line as the graph below shows) with the largest producing areas being in Sumatra and East Kalimantan. The Oil and Gas Journal estimates Indonesia has ~104tcf gas and is the 13th largest holder of proven gas reserves globally.

Despite the growing production, domestic gas prices are rising to US$8+/mmbtu in the near term (or higher for some LNG linked contracts) due to the vast amount of gas contracted for exports (LNG) versus domestic consumption, most reserves being located away from the main industrial hubs and the doubling of gas demand over the last decade. The concerns surrounding domestic gas supply have been demonstrated recently with the Government imposing a 30% domestic gas reservation on the Donggi-Senoro LNG project which is higher than the Domestic Market Obligation (DMO) of 25%. Due to the declining gas available for domestic consumption and the increasing energy demand we believe the development of unconventional resources will play a critical role in the future energy mix and early movers such as LIO could hold a significant advantage in this space as competition for high quality unconventional acreage increases with near term demand from the domestic market and potentially longer term monetisation through LNG export.

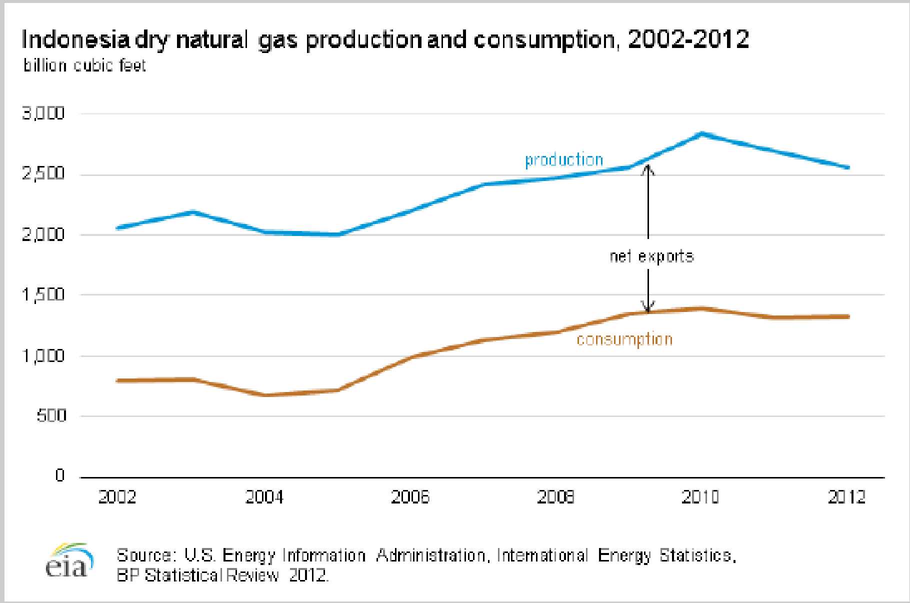

Figure 5: Actual/Forecast Oil production by Source *Source: International Energy Agency*

The growing gas demand, which is fast outstripping gas supply for the domestic market throughout South East Asia, has been supported by the development of regas terminals throughout the region (which is expected to double over the next decade). The key outcome being that countries within South East Asia will be material exporters and importers of LNG underpinning the potential value of new gas resources such as shale gas.

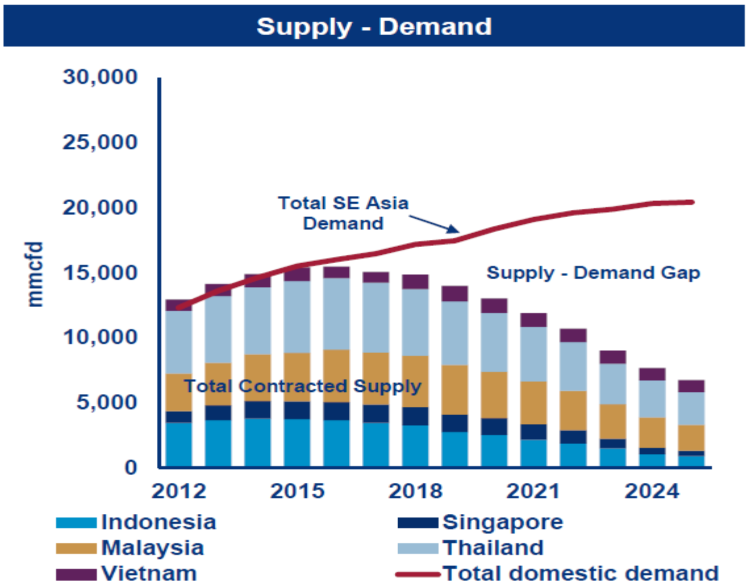

Figure 6: SE Asia Forecast Supply/Demand *Source: Wood Mackenzie*

ASX Listed Companies Delivering Material Production in Indonesia

Despite the negative sentiment towards Indonesia there are a number of high profile ASX listed oil and gas companies who are delivering material production or are maturing development projects in the country. We believe this supports the notion that companies with the right skill-set and focus can build a material oil and gas business in Indonesia.

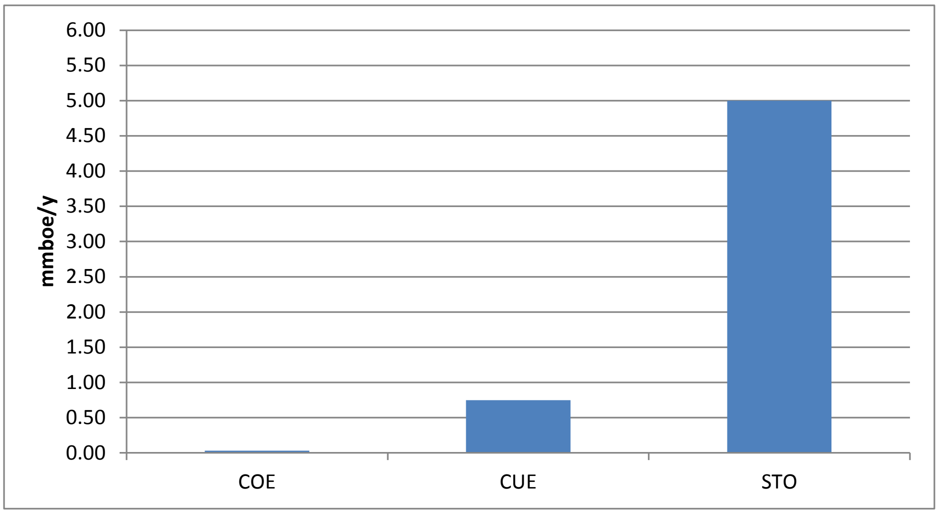

Figure 7: Production of Selected ASX listed companies in Indonesia Source: Company Reports, DJC

As highlighted in the chart above, Santos Ltd (STO) is the largest Australian producer of oil and gas in Indonesia having produced ~5mmboe in the past year which represents ~10% of STO's production. Small cap oil and gas companies Cue Energy Ltd (CUE) and Cooper Energy Ltd (COE) have also had a good track record of production in Indonesia, as did Novus and Discovery Petroleum in the past.

Mid cap ASX listed oil and gas producer AWE Ltd (AWE) has built a material portfolio in Indonesia and, with Santos now as operator, is maturing the Ande Ande Lumut oil project to first oil (estimated 2017). In November 2013, AWE completed the sale of a 50% interest in the Northwest Natuna PSC, which includes the Ande Ande Lumut oil project, to a subsidiary of STO for a total consideration of US$188 million. The consideration comprised US$100 million in cash payable and an US$88 million capital expenditure carry. As a condition of the sale, AWE also transferred operatorship of the Northwest Natuna PSC to STO. This transaction generated a material profit after tax of US$75.5m. Current gross 2P reserves are estimated to be 101mmbbls oil with upside contingent resources of 35mmbbls oil. Project sanction is expected in 2014/2015 with first oil expected in 2017.

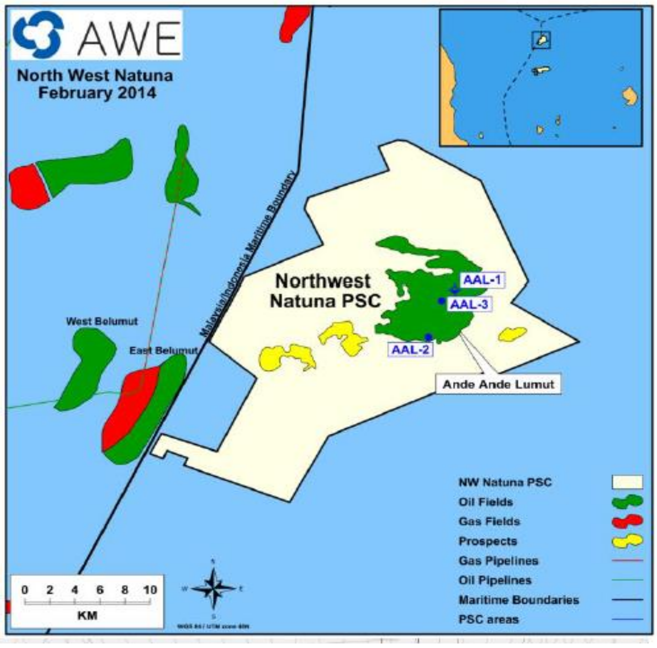

Figure 8: Ande Ande Lumut oil project *Source: AWE*

AWE has also targeted Indonesia as a growth area in its unconventional portfolio having explored and developed unconventional assets in the Eagle Ford, Texas and the Perth Basin. We believe given AWE's experience and success in maturing and developing unconventional assets into production, its focus on Indonesia highlights the resource potential and supports LIO's early entry into this space.

	Asset	%	Location	Status	2P mmboe	2C mmboe
Oil	Tui	57.5**	Taranaki Basin	Production	30.1	10.2
	Oi	31.25**	Taranaki Basin	Exploration		
	Cliff Head	57.5	Perth Basin	Production		
	AAL	50	Natuna Sea	Development		
East Coast / Oil Linked Gas	Casino/Henry/ Netherby	25	Otway Basin	Production	38.8	39.8
	Blackwatch, La Bella	25 60	Otway Basin	Appraisal		
	Yolla	46.25^	Bass Basin	Production		
	Trefoil, White Ibis, Rockhopper	44.75^	Bass Basin	Appraisal		
Indonesia Gas	Bulu, Terembu, East Muriah, North Madura, Titan, Anambas	42.5 – 100*	Natuna Sea, East Java	Appraisal	0	29.1
Unconventional	Sugarloaf	10#	Eagle Ford, Texas	Production, Development	14.4	10.1
	Perth Basin	33-100*	Perth Basin	Appraisal		
	Indonesia	TBD	Sumatra	Exploration		

Figure 9: AWE Asset Portfolio Overview *Source: AWE*

Corporate Restructure Reduces Joint Venture Risk

In our view, the corporate restructure of LIO whereby each of the four companies have invested at the equity rather than project level de-risks potential Joint Venture issues. Based on this structure, all parties are incentivised to ensure LIO is a success at the corporate level with Tower Energy and Risco Energy holding a combined ~61%.

Figure 10: LIO Investment Structure *Source: LIO*

Risco to Provide Funding and Management/Operational Support

We believe the support of Risco is a significant value driver for LIO given Risco's strong track record of maturing oil and gas assets through the full lifecycle of exploration, development, production and divestment. We believe Risco's funding and management/operational support will provide LIO with valuable resources during its evolution from small cap oil and gas company to a material producer.

The key transactions from Risco's previous portfolio include:

- Executed five investments across three geographies in less than two years.
- Grew production from zero to 7,500boepd and reserves to 20.5mmboe in just two years.
- Grew EBITDA from zero in 2H10 to US$60m FY12A and an expected US$90m FY13E.
- Drove portfolio value to deliver high double digit percentage annual returns.

Selected team achievements over the last 10 years include:

- The acquisition of assets from Conoco Phillips, BP, Santos, Inpex, Ephindo, Salamander Energy, BlakEnergy and Vitol.
- Partnering CNOOC, Pertamina, Medco, Shell, Otto Energy (via GPC), Total, BlakEnergy & Dart Energy in production and development.
- Divestment programmes to Mitsubishi, Japex and Shell.
- Led initial public offerings on the Indonesian Stock Exchange.
- Development of a production portfolio 2003-2009, adding over 500 mmboe's.
- Operated and managed an oil and gas producer with output exceeding 30,000 boe's per day.

Fiscal Terms

The fiscal regime in Indonesia is a Production Sharing Contract (PSC) environment comprised of a First Tranche Petroleum (FTP) whereby 10-20% of gross production (varies by contract) is shared in accordance with the profit sharing splits (between Government and Contractor) and cost recovery. Production revenue remaining after FTP and cost recovery is shared between the Government and Contractor on a fixed rate basis. The income tax rate is comprised of a corporate tax rate (~25%) and a dividend tax or branch profits tax (BPT) for branch operations (~15%) resulting in an effective income tax rate (corporate and branch) of ~40%. There is also a Domestic Market Obligation (DMO) in which each contractor must set aside a percentage of its production for domestic consumption.

Fiscal terms for unconventional production are currently under review but are expected to be attractive to encourage exploration and development due to the expected high costs in the early stage of unconventional development. We expect the Profit share for contractors could be ~45% gas based on the current CBM terms while the profit share for oil could be ~40%. LIO's unconventional applications are located close to existing infrastructure which we believe should allow future discoveries to be developed at a relatively low unit development cost.

	Seram	SBA
Lion Energy Interest	2.5%	35.0%
FTP percentage	15%	20%
FTP shareable with Contractor?	Yes	Yes
Cost recovery limit (3)	100%	100%
DMO - Oil		
DMO portion - Oil (% of Profit Oil)	25%	25%
DMO price - Oil	25% of market	25% of market
DMO - Gas		
DMO portion - Gas (% of Profit Gas)	No	25%
DMO price - Gas	No	at market
Profit Split		
Contractor split - Oil (pre-tax)	63%	27%
Contractor split - Gas (pre-tax)	71%	54%
Tax rate	44%	44%
Contractor split - Oil (post-tax)	35%	15%
Contractor split - Gas (post-tax)	40%	30%

Figure 11: Overview of LIO Fiscal terms *Source: LIO*

Asset Overview

LIO's key asset base is comprised of the producing Seram PSC (2.5% LIO) located onshore the island of Seram, in Eastern Indonesia, South Block A exploration PSC (35%) located in the North Sumatra basin and four unconventional applications (two located in the North Sumatra basin and two located in the Central Sumatra basin). We believe LIO's asset base provides an attractive balance of a growing production base, conventional exploration upside and blue-sky unconventional potential.

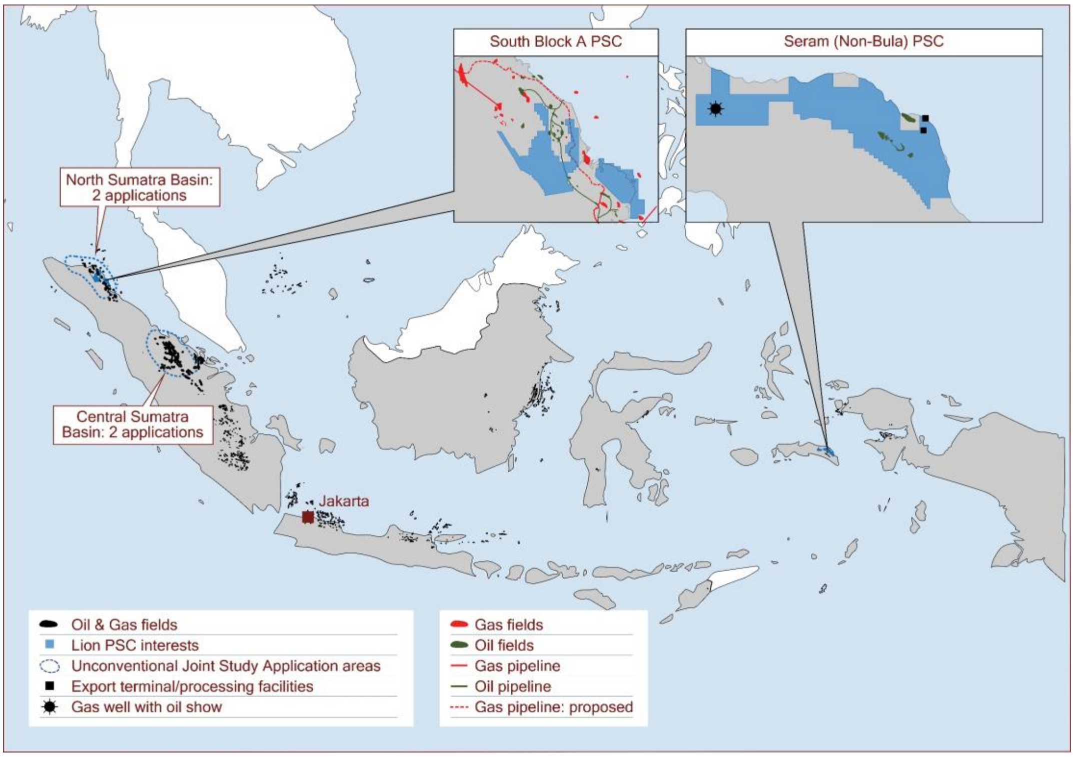

Figure 12: LIO Assets *Source: LIO*

Seram (Non Bula) PSC (2.5% LIO): Growing Production

LIO holds a 2.5% interest in the Seram (Non Bula) PSC joint venture (Seram Project) which is located onshore on the island of Seram, in Eastern Indonesia and has an area of 1,524 km^2. Other JV partners in the project include the operator CITIC (51%), KUFPEC (30%) and Gulf Petroleum (16.5%).

The Seram Project contains the Oseil oilfield which has delivered material production growth due to the recently drilled Oseil-26 development well which is producing above expectations at 580bopd (14.5bopd LIO net share) vs 300 bopd pre drill estimates. In addition, oil production from Oseil and surrounding oilfields have averaged 2,720bopd (68 bopd net to LIO), representing a ~20% increase prior to Oseil-26 coming onstream. Near term production growth could be delivered from the Oseil-21 development well which is being drilled and could be on-stream in May 2014. The Oseil oilfield generates annual net revenue of $2.2m and has a large sunk cost pool which underpins attractive netback cashflow to LIO. The PSC is due for renewal in May 2019.

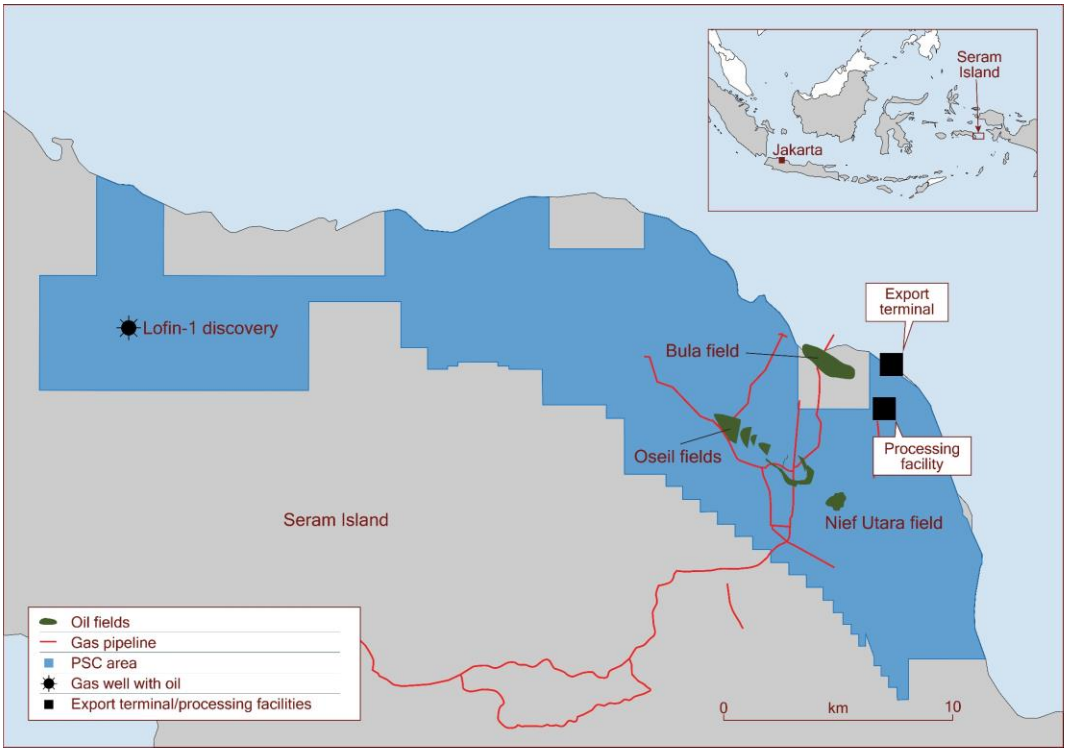

Figure 13: Seram PSC *Source: LIO*

The Oseil oilfield commenced production in January 2003 and has produced ~12mmbbls oil and 6.5bcf gas. The majority of the gas is used to generate electricity onsite for operations. Current gross and net reserves and contingent resources for the Seram PSC (although an update on Seram is due shortly) are highlighted in the figure below:

Fields/Discoveries/ Leads	Play	Expected Fluid	100%						Lion Equity Share					
			Gas/Associated Gas Recoverable (BCF)			Oil/Condensate Recoverable (MMbbl)			Gas/Associated Gas Recoverable (BCF)			Oil/Condensate Recoverable (MMbbl)		
Proven Reserves[1]		Category	1P	2P	3P	1P	2P	3P	1P	2P	3P	1P	2P	3P
Oseil Area Developed	Manusela	Oil				3.075	3.075	3.075				0.077	0.077	0.077
Oseil Area Undeveloped[2]	Manusela	Oil				3.450	7.745[3]	12.065[3]				0.086	0.193[3]	0.301[3]
Total Proven Reserves						6.525	10.820	15,14				0.163	0.270	0.378
Contingent Resources[4]		Category	Low P90	Best P50	High P10	Low P90	Best P50	High P10	Low P90	Best P50	High P10	Low P90	Best P50	High P10
Seram PSC Lofin Gas cap	Manusela	Gas cap	13.900	25.800	45.600	0.140	0.260	0.450	0.348	0.645	1.140	0.004	0.007	0.011
Total Contingent Resources			**13.900**	**25.800**	**45.600**	**0.140**	**0.260**	**0.450**	**0.348**	**0.645**	**1.140**	**0.004**	**0.007**	**0.011**
Prospective Resources[5]		Category	Low P90	Best P50	High P10	Low P90	Best P50	High P10	Low P90	Best P50	High P10	Low P90	Best P50	High P10
Seram PSC Lofin Oil Leg	Manusela	Oil leg	1.160	7.100	47.200	0.860	5.130	34.100	0.029	0.178	1.180	0.022	0.128	0.853

Figure 14: Reserves and Resources Source: LIO

The key near term appraisal target which could deliver material reserves in the Seram PSC will be the Lofin-2 appraisal well located in the West of the PSC. Lofin-2 will appraise the Lofin-1 discovery which flowed gas (15.7mmscf/d) and condensate/oil (171bopd) on test. Lofin-1 was drilled to a total depth (TD) of 4,427 metres and encountered a gross hydrocarbon column of 160 metres. The well is interpreted to still be in hydrocarbons at TD and there is potential for the column to extend significantly beyond this depth. P50 prospective resources are 5.13mmbbls/ 0.128mmbbls LIO share oil and there is significant upside beyond this in the case of a high side hydrocarbon column outcome. The Lofin-2 appraisal well is due to spud in July 2014 and has an estimated drilling time of around 180 days. The key risks for the well include uncertainty surrounding the oil/water contact and reservoir deliverability. The gross well cost is estimated to be ~$30m or $0.75m LIO share.

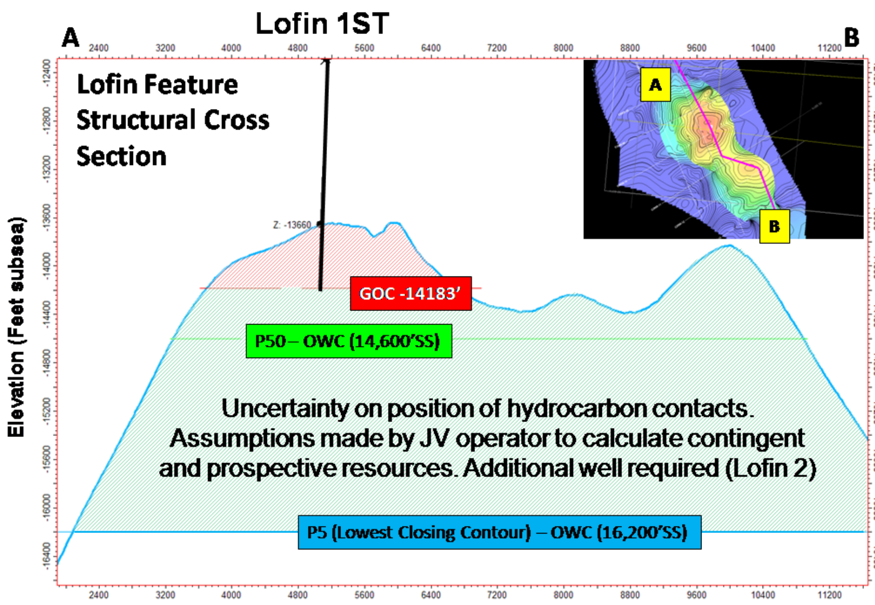

Figure 15: Lofin Discovery Source: LIO

South Block A PSC (35% LIO): Massive Exploration Upside

LIO has a 35% interest in the South Block A PSC through its wholly owned subsidiary KRX Energy (SBA) Pte Ltd. Other JV partners include RENCO Elang Pte Ltd (51%) and PT Prosys Oil and Gas International (14%). The PSC is centrally located in the North Sumatra Basin and contains large oil and gas potential. It is underexplored with nearby oil and gas infrastructure and undersupplied gas markets. South Block A is divided into two separate blocks, the western block is known as Area 1 and covers 1,256.5 km^2, while the smaller Area 2 block to the east, extends over the coastal boundary with an offshore portion, and covers an area of 637 km^2. No new seismic has been acquired since the early 1990's and no wells drilled since 1992.

The North Sumatra Basin is one of the most productive hydrocarbon provinces in Indonesia with over 80 known oil and gas fields. The larger fields include the Arun gas field (15tcf) and the Rantau oilfield (300mmbbls). Two distinct petroleum trends (Shallow oil and deeper gas trends) are prominent throughout South Block A.

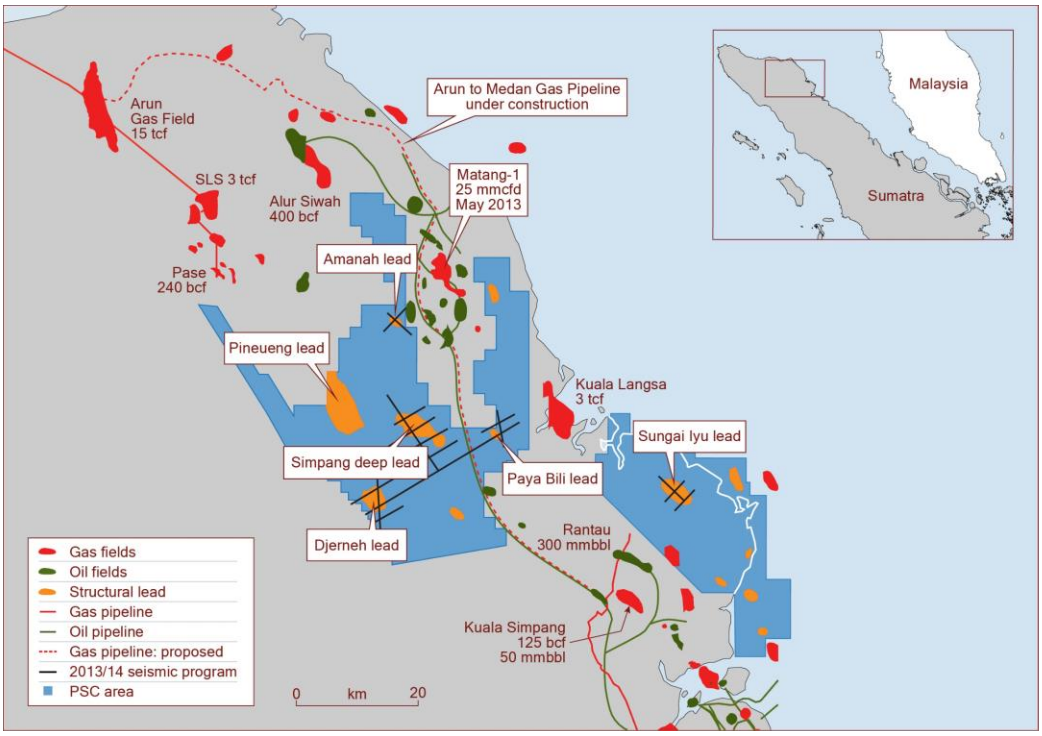

Figure 16: South Block A *Source: LIO*

LIO has identified a number of leads with prospective resources of 150bcf gas and 16mmbo liquids (LIO share, unrisked best estimate) and plan to drill an exploration well in 2014 following the current 2D seismic acquisition program and processing which is expected to mature one of these leads to a drill ready prospect. **The 2014 commitment well is likely to be a shallow oil/gas target (1,200 metres target depth) with estimated volumes of ~5mmboe to 10mmboe and an estimated well cost of ~$5m gross or ~$1.8m LIO share.**

Recent exploration success by Medco and Premier Oil has provided encouragement with their Matang-1 discovery in an adjacent PSC holding estimated volumes of 100 to 400bcf. The Matang-1 exploration well, which is onshore Block A Aceh, spudded in the fourth quarter of 2012. The well discovered gas and was subsequently tested which delivered good quality gas across flow rates of

25mmscf/d. We believe the monetisation and resource volume economic threshold of future gas discoveries should be undemanding due to the existing infrastructure and new Arun-Medan gas pipeline which runs through South Block A. Furthermore, the existing JV partners have priority unconventional rights which provide potential play and resource diversification of South Block A.

Figure 17: South Block A Seismic Program and Arun-Medan gas pipeline *Source: LIO*

Unconventional Applications (100% LIO): Blue-Sky Upside

Indonesia has been identified by LIO as having substantial unconventional resource potential which is supported by various energy agencies as having multibillion barrel oil potential and material gas potential. Furthermore the US Energy Information Administration has ranked Indonesia in the global top 10 of countries with shale oil resources.

Rank	Country	Shale oil (billion barrels)	
1	Russia	75	
2	U.S.[1]	58	(48)
3	China	32	
4	Argentina	27	
5	Libya	26	
6	Venezuela	13	
7	Mexico	13	
8	Pakistan	9	
9	Canada	9	
10	Indonesia	8	
	World Total	345	(335)

[1] EIA estimates used for ranking order. ARI estimates in parentheses.

Figure 18: Top 10 Countries with technically recoverable shale oil resources *Source: EIA*

Using learning's from the US, LIO has recognised that the successful unconventional plays were located in areas with a history of conventional production, had existing infrastructure for ease of monetisation with shale geological properties driven by high organic content, frackability, over pressure and had material thickness which increased the potential recoverable reserves. Taking all of these factors into account, LIO targeted Central and Northern Sumatra and now has submitted four

Joint Study Applications (JSA's). Two JSA's are over parts of the North Sumatra basin and two are in the Central Sumatra basin. **The total areas of the application made to date are over 17,000 km^2 and LIO believe these areas have the potential to contain mult-tcf gas potential and multi hundred million barrels oil.** The Central Sumatra basin is expected to be oil prone with the North Sumatra basin expected to be gas/condensate prone.

Direct offer tenders are preceded by a joint study process, in which the selected oil and gas company (or consortium of companies) and a local university work together to conduct a G&G study to determine the prospectivity of the designated area. Once the Joint Study is completed the Government tenders the area for the award of a PSC. The oil and gas company (or consortium) involved in the study then has the right to match any bids that might be made through the tender, discouraging other participants.

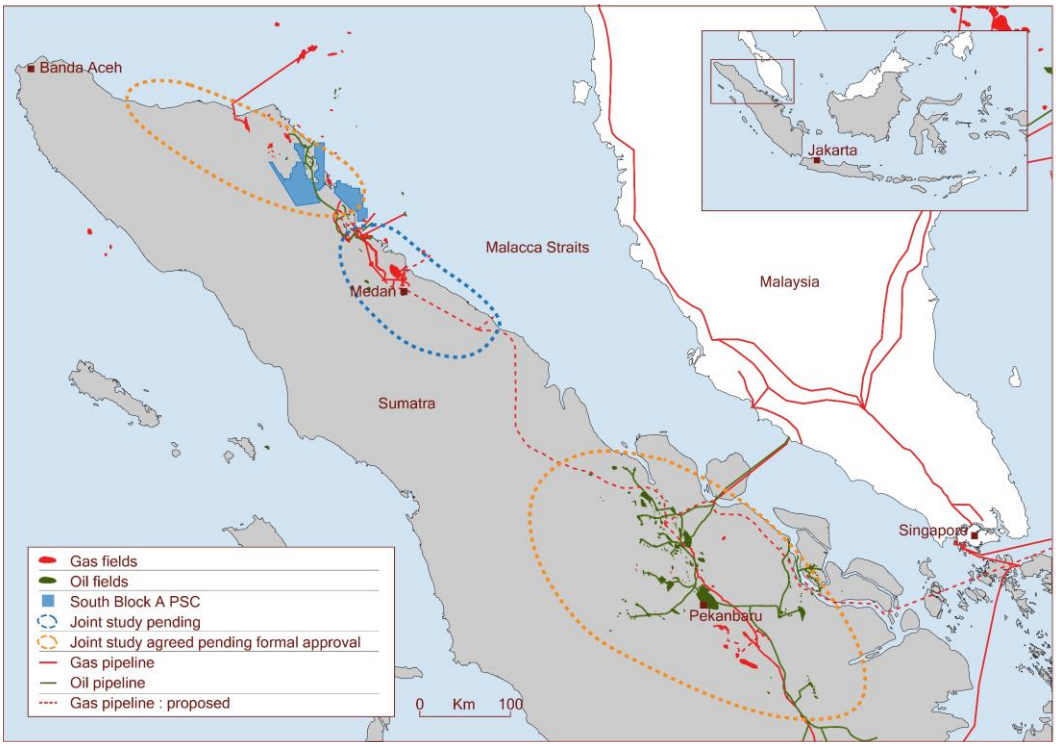

Figure 19: JSA locations *Source: LIO*

The first unconventional PSC was granted to Pertamina in 2013 covering an area in the southern part of the North Sumatra Basin, to the southeast of LIO's South Block A Project. The fiscal terms of the PSC remains uncertain, however industry anticipates the fiscal terms for unconventional PSC's will be significantly more attractive to contractors than existing conventional PSC fiscal terms to incentivise nonconventional exploration due to the initial cost learning curve. We expect the Profit share for contractors could be ~45% gas based on the current CBM terms while the profit share for oil could be ~40%.

Valuation

Lion Energy Ltd (LIO)		$0.20
Valuation	**A$m**	**A$/sh**
Seram 2P Reserves	4	0.04
Exploration and Appraisal	31	0.33
Corporate	(5)	(0.06)
Cash	8	0.08
Debt	0	0.00
Total @ 10% Discount Rate	**38**	**0.40**
Price Target		**0.40**

Figure 20: LIO valuation *Source: DJC Estimates*

Our initial valuation for LIO is $0.40/sh and our key assumptions are:

- As highlighted in our valuation above, the major value driver for LIO is in its exploration and appraisal assets which are in line with the majority of emerging small cap oil and gas companies across the ASX.

- We have applied an NPV/bbl and $/mcf valuation metric to LIO's 2P reserves (Seram), 2C resources and best estimate prospective resources (although an update on Seram is due shortly) in line with the figure below. We have assumed an NPV/bbl metric of $8/bbl and an $/mcf gas metric of $1.00/mcf.

- We have applied a Probability of Success (POS) to our valuation of 40% (i.e. a 60% chance of failure) for 2C resources and 10% (i.e. a 90% chance of failure) for prospective resources.

Reserves & Resources, 1 Jan 2014 (Recoverable, net to Lion)[1]	Gas/Associated Gas (BCF)			Oil/Condensate (MMbbl)			Method
Reserves	**1P**	**2P**	**3P**	**1P**	**2P**	**3P**	
Total Reserves (Seram)				0.163	0.270	0.378	Deterministic
Contingent Resources	**1C**	**2C**	**3C**	**1C**	**2C**	**3C**	
Total Contingent Resources (Seram)	0.348	0.645	1.140	0.004	0.007	0.011	Deterministic
Prospective Resources[2]	**Low**	**Best**	**High**	**Low**	**Best**	**High**	
Prospective Resources-Seram	0.0	0.2	1.2	0.0	0.1	0.9	Probabilistic
Prospective Resources-South Block A[3]	69.8	150.3	315.2	6.5	16.4	41.3	Probabilistic
Total Prospective Resources[3]	69.8	150.5	316.4	6.5	16.6	42.2	Probabilistic

Figure 21: LIO prospective resources *Source: LIO*

- We have assumed a 10mmbbl oil gross prospect for South Block A (3.5mmbbls LIO share) and have applied a POS of 10%. We have also assumed an NPV/bbl metric of $8/bbl.

- Given the frontier nature of unconventional oil and gas in Indonesia it is quite difficult to value LIO's four JSA's. Therefore we have assumed no value for LIO's four unconventional JSA's at this stage but highlight there could be material upside once these JSA's are granted and technical work delineates the resource potential.

- We have assumed corporate costs of $1.3m/year.

Key Risks

We have outlined the key risks below:

- **Geological risk.** Although LIO has a growing production portfolio, LIO also has material interests in early stage exploration assets which have both conventional and unconventional potential. Therefore, LIO is subject to the risk of finding and appraising a commercial resource.
- **Execution Risk.** Oil and gas project drilling and development can be a complex and high risk operation. This has been demonstrated recently by the Macondo incident and many projects are subject to schedule delays and cost increases. Unconventional drilling operations are at its early stage in Indonesia and we anticipate a steep learning curve in the coming years. However, LIO has mitigated some of the risk by assembling an experienced team with a track record of developing oil and gas assets in Asia.
- **Funding risks.** As with most junior oil and gas companies, funding to develop assets is a key risk and subject to the strength of equity markets. However, we believe some of the funding risks have been mitigated by having strategically aligned investors such as Risco and Tower.
- **Geopolitical risks.** Geopolitical risks such as changes in Government, fiscal regimes, safety and environmental approvals and other legislative changes could impact LIO's planned activities.
- **Commodity risk.** Significant variations in oil and gas prices can impact market sentiment towards the share price.

Directors

Russell Brimage, Executive Chairman

Russell has over 40 years' experience in the upstream oil and gas industry, ranging from public listed oil & gas companies to the service industry - both onshore and offshore.

Prior to Lion Energy, Russell was Managing Director of Oilserv Australia, an oil field service company which he founded in 1982. The company became a dominant service contractor in Australia providing contract field operations, testing and wire-line services, facility design and construction, drilling and work-over services.

In the public company arena, Russell has demonstrated capability in capacity as CEO to secure and develop producing assets in both Indonesia and the state and federal shallow waters of the US Gulf Coast, often via industry counter-cyclical transactions, to transform companies from zero revenue to positive cash flow and profitability, with successful outcomes. As chief executive officer of Entek Energy Limited, he was an early mover in identifying shale opportunities in the US with the farm-in to approximately 60,000 acres in the Niobrara shale play in the states of Colorado and Wyoming in August 2009.

Kim Morrison, Managing Director and CEO

Kim has a successful 28 year career working in senior technical and managerial positions with both majors and small cap companies in locations throughout the world. He graduated from The University of Sydney in 1984 with an Honours degree in Geology and Geophysics and also holds a Diploma in Applied Finance and Investment from The Securities Institute of Australia.

Kim commenced his career as a geologist with Hartogen Energy in Sydney and in 1989 joined Marathon Oil in Perth, subsequently moving with them to Jakarta and Houston. In 2000 he returned to Asia with Fletcher Challenge in Brunei as Head of Regional Geology. In 2001, Kim took on a senior portfolio management role with Shell in Malaysia and was posted to The Hague in 2005 to lead Shell's Asia Pacific New Ventures team. In 2006 he moved to Libya with Woodside as Onshore Exploration Manager and in 2008 returned to Perth as Business Development Manager for Oilex Ltd. Mr Morrison set up an exploration advisory business in 2010 and also co-founded KRX. With the acquisition of KRX by Lion, effective January 2014, he was appointed MD and CEO of Lion Energy.

Tom Soulsby, Non-Executive Director

Tom is the CEO of Risco Energy Investments and has 22 years' experience of the oil and gas and resources sector spanning investment banking, corporate business development and management/leadership roles.

A graduate of Swinburne and Monash Universities, he initially worked as an accountant, starting his career at KPMG and Western Mining. Tom then moved to Potter Warburg (now UBS) in Melbourne as an energy and resources equity research analyst. He subsequently joined ANZ in Melbourne, before being posted to Jakarta and ultimately Singapore as director of corporate finance and merchant banking. As a Director at Indonesian-listed Energi Mega Persada (EMP) from 2003 to 2008, he was responsible for the acquisition of assets which added 525 MMboe to EMP's 2P reserves – a key growth driver for the company.

Tom has been instrumental in securing backing for Risco prior to its incorporation in 2010, as well as growing the company and its capabilities in his role of Chief Executive Officer. Under Tom's leadership, Risco has participated in and funded over US$400m in successful transactions since 2010. He led the significant valuation creation, and subsequent monetisation, of Risco's first South East Asian oil and gas conventional and unconventional portfolio in 2013.

Chris Newton, Non-Executive Director

Chris is director of business development and operations for Risco Energy Investments. In a career spanning 35 years in oil and gas he has covered the spectrum of exploration, development and production, developing core strengths in petroleum economics, strategic planning, business development and ultimately, top management.

A 1978 Geology graduate from Durham University, England, Chris also holds a Grad Dip in Applied Finance and Investment from the Securities Institute of Australia (SIA). He has spent more than 25 years in South East Asia in various industry capacities including Managing Director of Fletcher Challenge in Brunei, a stint as Managing Director of Shell Deepwater Borneo, President of Santos – Indonesia and CEO of Jakarta-listed oil and gas company, EMP. Along with Mr Soulsby, he was a co-founder director of Risco Energy in July 2010.

Chris was an active Director of the Indonesian Petroleum Association (IPA) between 2003 to 2008, including serving as President from 2004 to 2007. He remains an advisor to the IPA Board and is also the oil and gas advisor to the Jakarta based Castle Asia Group.

Disclosure **RCAN1190**

This Research report, accurately expresses the personal view of the Author. All the information utilised in this report is accurate and current at the date stated on this report.

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The Author of this report made contact with **Lion Energy Ltd** for assistance with verification of facts, admittance to business sites, access to industry/company information. No inducements have been offered or accepted by the company.

The recommendation made in this report is valid for four weeks from the stated date of issue. If in the event another report has been constructed and released **Lion Energy Ltd**, the new recommendation supersedes this and therefore the recommendation in this report will become null and void.

Recommendation Definitions
SPECULATIVE BUY – 10% out-performance, but high risk
BUY – 10% out-performance
ACCUMULATE – 10% or more out-performance, buy on share price weakness
HOLD – 10% underperformance to 10% over performance
SELL – 10% or more underperformance
Period: During the forthcoming 12 months, at any time during that period and not necessarily just at the end of those 12 months.

Stocks included in this report have their expected performance measured relative to the ASX All Ordinaries index. DJ Carmichael Pty Limited's recommendation is made on the basis of absolute performance. Recommendations are adjusted accordingly as and when the index changes.

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