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Petsec Energy Limited (PSA)

HOLD

Whilst Yemen uncertainty remains, a re-rating may remain somewhat distant **$0.11**

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Summary (AUD)

Market Capitalisation	**$36M**
Share Price	**$0.11**
52 week low (03-08-17)	$0.095
52 week high (23-08-16)	$0.215
Ave Monthly Vol (year rolling)	1.673M

Key Financials

Year End (US$m)	FY15 Actual	FY16 Actual	FY17 Est.
Production (Bcfe)	**0.5**	**0.3**	**1.1**
Revenue (post royalties)	2	1	20
EBITDAX	**-3**	**-9**	**2**
EBIT	-10	-12	-8
NPAT	**-11**	**-13**	**-7**
NPAT (A$mn)	**-15**	**-18**	**-8**
EPS (Ac)	**-6.3**	**-5.5**	**-2.1**
Growth (%)		*na*	*na*
PER (x)		**na**	**na**
EV/EBITDAX (x)		**na**	**nm**
EBITDAX Margin	na	na	10%
Operating cash/share (Ac)	**-4.4**	**-3.4**	**-3.4**
PCF (x)		na	na
ROE (%)	**-46%**	**-72%**	**-40%**

Share Price Graph (AUD)

Source: yahoo finance

Our View

Despite the ongoing Yemeni conflict, oil in the ground doesn't disappear, however, the value of that resource remains subjective and certainly low until sustainable production can be demonstrated and that may mean 6months plus of data. This is the value conundrum PSA is wrapped in…discovered oil in a ready to start up infrastructure network, but with persistent high sovereign risk. This is one for investors with strong risk appetite. The stock price can be underpinned by the US development and production portfolio, which prices Yemen with <10% chance of success. Somehow, we can't see the market embracing the stock until investment sentiment towards Yemen changes significantly to the positive.

Key Points

- **PSA are targeting production upside by the end-2017** – Although start-up dates keep slipping, the company is confident it will be able to commence production from both its Hummer discovery (US) and Yemeni oil assets (An Nagyah) from 4Q'17.
- **Sentiment remains negative on Yemen** – We note management's positive outlook towards resumption of Yemen oil production. From an industry perspective, the signs are encouraging…oil is flowing and PSA is significantly progressed on finalising its An Nagyah trucking option. On the minus side, we (and the market) remain concerned at the conflicting news reports emanating from Yemen with respect to the on-going conflict. We suggest it's likely the market will take a cautious 'wait and see' approach to realising the value of this portfolio…first oil will be an important step.
- **We downgrade NAV post the last equity placement and on a higher risk weighting for Yemen** – We have lowered our weighting on the Yemen assets to 25% for all the remaining uncertainty on start-up timing and field performance that is yet to be addressed. We apply a 75% weighting to the US assets stemming from the 'misses' evidenced in production actuals against independent expert's assumptions, which provide the basis for our forecasts.

  As a result, we value the company's asset portfolio (ungeared) at 22cps. This still represents a premium to the reference share price of 7-Aug (11cps) and does support the 'value' proposition, albeit speculative embedded in Yemen oil reserves.
- **The current share price can be largely justified by the un-risked value of the US assets and cash –** On that basis, we still see the price as representing Yemen as a free option but some **significant progress is going to need to be demonstrated to deliver sustainable share price upside. We downgrade our recommendation to HOLD from Speculative Buy.**

Are we there yet? Hummer around the corner and Yemen production by end-2017 but is that sufficient to change the market sentiment?

We have reviewed outlook for PSA bearing in mind a number of changes to assumptions made over the last 6-9months:

- New commodity price estimates;
- Changes to financing via the late 2016 equity capital raising and issue of convertible notes;
- Inclusion of Hummer (USA) as a separate development; and
- Revisiting our valuation from a risk perspective, especially applied to the Yemen assets.

The critical change to our view is determined by a <u>significant adjustment in the risk weighting we apply to the Yemen assets.</u> Whilst the inclusion of Hummer is a net positive, this is more than offset by the dilution arising from the share issue, commodity price impacts and less optimistic weighting applied to the Yemen opportunities.

Although the oil resource in Yemen hasn't disappeared, the original mid-2016 timeline for the resumption of production at An Nagyah has well come and gone and in that respect, the initial guidance (and our confidence) was overly optimistic. Recommissioning and de-risking remain somewhat intangible; and despite the significant operational progress and confidence held by the company, we note the changes to underlying financial assumptions forced by the continuing conflict in the country.

Whilst there is a persisting disconnect between what industry is reportedly seeing on the ground in a practical sense (opening up of production and sales) and that which is being highlighted in the newswires, sentiment to the assets from an investment perspective will continue to be driven by the negative humanitarian headlines in our view and a positive re-rating may be somewhat elusive.

The market may only begin to ascribe any significant value to the Yemen production assets when cashflow is demonstrated on a sustained basis.

…our valuation is downgraded on dilution and higher risk

We have downgraded our NAV and now value the company at $0.22/share on an ex cash/corporate costs basis ($0.28 combined), still a significant premium to the reference share price (11cps 7-*Aug*) and continuing to highlight that the upside in the stock resides in the Yemen assets…<u>a value which remain subjective given the political situation in the country</u>.

The recent successful testing of the Hummer discovery is a positive but we'd also highlight that start-up guidance has been pushed out a little to "late in the third quarter 2017" (*May 2017, AGM Chairman's address).* The company notes that the project can deliver in the order of US$2.5-3mn of net revenue per annum on gross production of 20mmcfd...nice, but not a game-changer.

Figure 1: Adjusted NAV…we are significantly lifting the risk on Yemen

		Pr	Risked A$mn	A$/share
Yemen				
An Nagyah	100%	25%	$39	$0.12
S1 Undeveloped oil	100%	5%	$6	$0.02
Al Meashar	100%	5%	$7	$0.02
US				
Hummer	12.5%	75%	$10	$0.03
Other US onshore	various	75%	$10	$0.03
			$72	**$0.22**
Exploration			$15	$0.05
Net Cash/(debt)			$13	$0.04
Corporate costs			($10)	($0.03)
TOTAL			**$90**	**$0.28**
Shares on issue (mn)	320	as at 4.4.17		

Holding our NAV on the US assets static, the current share price represents a probability weighting on An Nagyah (with look through) of 10% at best and whilst that appears intrinsically low it does represent the investment uncertainty the market is applying to the Yemeni assets; and the negative sentiment that the company needs to overcome..

Source: Taylor Collison estimates and weightings

We downgrade our recommendation to HOLD, but a sustained re-rating of the share price will only come from a re-start of Yemen production and evidence of cash flows through to the company balance sheet. Assuming production can recommence from late-2017, the market may still need to see at least 6 months of data.

Pending more detailed guidance from the company on Hummer capex and reserves our ascribed value may be considered conservative on this asset, but at best the share price is supported by the assets of the company ex-Yemen with some (but limited) embedded growth…the upside remains Yemen.

Reviewing the Yemen outlook

The status of the Yemen assets is difficult to define, certainly in a quantifiable sense, whilst the country remains in a state of conflict as evidenced by the continuing negative newswire reports of bomb strikes, armoured offensives, suicide bombings and cholera epidemics (refer Appendix 1).

Figure 2: Pipeline schematic - Yemen

Source: www.yourmiddleeast.com

The Houthi's control of the Red Sea coast and ports has forced PSA to alter its plans to re-start production from the An Nagyah Oil Field and export via the Marib pipeline to the Ras Isa Terminal.

Due to the uncertainties with access to this port the company is pursuing an alternate transport mechanism – trucking - from Marib to the top of the Masilah pipeline and through to the Ash Shihr terminal.

The closer Shabwah pipeline to the Bir Ali terminal is privately owned and not accessible on a third-party basis as we understand.

There are obvious disadvantages to trucking, particularly as this will constrain production in a number of ways:

- *slower ramp-up to full production* – with the country still somewhat 'unsecured', the trucking option must be grown incrementally before the security of the route is established – convoys are vulnerable;
- *the logistics and sourcing of sufficient vehicles and escorts* - although PSA suggest the limitation will be in production rates rather than availability of tankers;
- *the cost* - at this stage we model on guidance the additional cost in the order of $16/b and whilst deductible under the cost recovery terms, this impost reduces the present and future value of the projects; and;
- *duration* – assuming sufficient trucks can be sourced (likely), the route is secured and organisational logistics can be handled efficiently, the value erosion on the project is directly related to the duration of the process.

Figure 3: An Nagyah sensitivity to trucking duration

	NAV				
	A$mn	per share	per barrel	% change	
2017 (current)	47	$0.17	$14.74		
2018	46	$0.17	$14.30	3%	extending through 2018 impacts at the margin
2019	44	$0.15	$13.63	8%	Negative impact accelerates as more aggregate costs are incurred in the project life

Source: Taylor Collison estimates

At this stage, we assume trucking operations through to end calendar 2018 from a 4Q'17 start-up.

Whilst the impact of a $16/b transport impost is notionally enormous, we need to note it replaces pipeline tariffing (albeit a significantly lower rate) and the added expense is somewhat absorbed under the cost recovery provisions of the PSC. These fiscal regimes are only weakly sensitive to changes in input costs and oil prices.

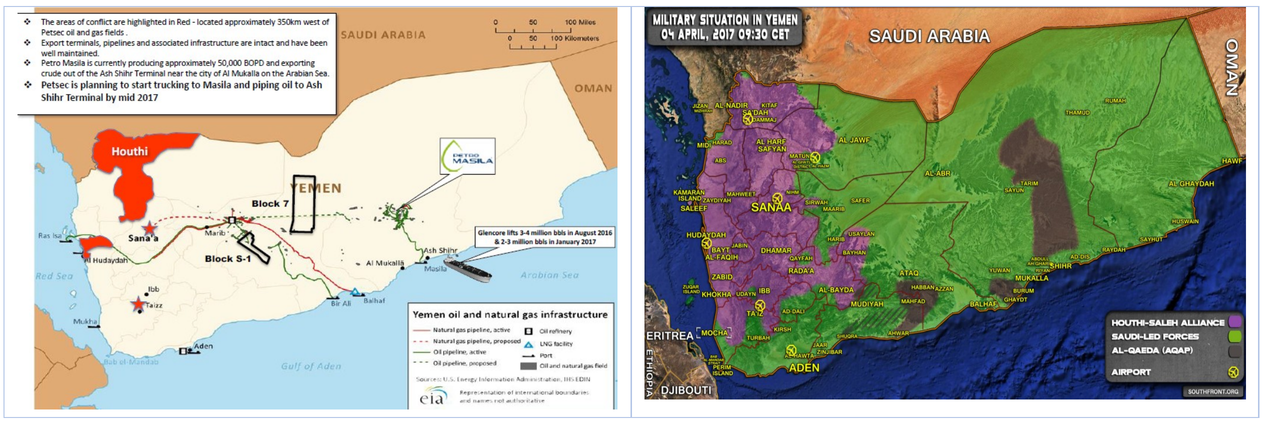
The implied per barrel values (Fig 3) are nominally high for a PSC, but the company does have the advantage of a large, pre-existing sunk cost pool, which provides 'excess returns, at least in the case of the An Nagyah field.

Petsec has recently released a schematic (Fig 4) outlining the 'rebel' held areas (in red), which would give the impression that the areas of continuing conflict are restricted a significant distance to the north of the oil production facilities and slightly to the south of the Ras Isa export terminal.

A quick web search, however, provides contradicting maps with the suggestion the 'rebels' are still active or control significantly more ground with the potential to impact the company's proposed operations significantly.

We do not suggest the PSA map is wrong and nor can we vouch for the reliability of the *southfront.org* data, but this rather highlights the mass of conflicting information and reports pertaining to the political situation in the country and underpins the difficulty of the investment decision for many market participants.

Figure 4: Situation maps...just what control, do the rebels have?



Source: Company data [presentation May-2017] (LHS); www.southfront.org (RHS)

Unlocking the value in Yemen is the difficult investment proposition

We have downgraded our value of the Yemen portfolio on the basis of the continuing sovereign risks associated with the projects.

From the most recent presentation (ASX release May-17), we note the company's confident outlook towards the assets.

❖ The areas of conflict are highlighted in Red - located approximately 350km west of Petsec oil and gas fields . ❖ Export terminals, pipelines and associated infrastructure are intact and have been well maintained. ❖ Petro Masila is currently producing approximately 50,000 BOPD and exporting crude out of the Ash Shihr Terminal near the city of Al Mukalla on the Arabian Sea. PSA report the 'coalition is moving to the Red Sea port city of Hudayah to free it of rebel occupation and to restart production from the Marib-Shabwah Basin through the Marib Oil Pipeline to its terminus at Ras Isa, near Al Hudayah'	PSA puts the areas of conflict well to the west of its areas of operations… …with the potential to see the Ras Isa port opened up.
❖ The An Nagyah Oilfield holds 12.8MMbbl of oil gross to Petsec Energy (5.6MMbbl net to Petsec with a NPV_{10} in the order of US$155MM at $30/bbl, 1.1.2016). ❖ Additional 4 undeveloped oil and gas fields – Osaylan, An Naeem, Wadi Bayhan, and Harmel which hold in excess of 34MMbbl of recoverable oil and 550 Bcf of gas. * An Nagyah NPV estimated at US$155mn as of 15/03/16	We understand the NPV_{10} estimate cited here was **based on a mid-2016 production start-up and no trucking**…the economic assumptions have changed. It is worth noting our 'unrisked value' of A$153mn equates to US$122mn at the spot exchange rate (4-Aug). We remain comfortable with our estimate, but nominally the value is 'zero' if production doesn't restart.

We have outlined previously ("INITIATING COVERAGE: Targeting oil at the bottom of the cycle"; 8-Sep-2016) that the Yemen investment case does not stop at An Nagyah, that the S1 Block also contains four other discoveries - oil at the Harmel and Osaylan fields; and gas-condensate at the An Naeem and Wadi Bayhan fields. These discoveries could provide relatively inexpensive production additions that could slot into the existing infrastructure base.

However, here is where we keep finding ourselves in the investment loop. The resources are there, the infrastructure is there, the capex to first oil (restart) is low and the company is confident of delivery by late-2017…so why does the share price disconnect persist?

It all comes down to sovereign risk issues in our opinion and some feedback we've received from the market points to the newswire headlines continuing to highlight turmoil and conflict with the added uncertainty of the role of the US under a new Government.

It's difficult to get away from the 'civil war' issues irrespective of whether industry is seeing things differently on the ground.

A re-rating can only come, we suggest when the market **sees evidence of sustained field performance and cash flowing**…perhaps building on the balance sheet through the quarterly reports. Given the ramp up through trucking may only occur slowly, **it could be well into 1H'18 before there's sufficient data to provide the market with confidence.**

As outlined in Fig. 1, we have downgraded our ascribed value through reducing the probability weighting on An Nagyah to 25% (from 75%), although we would highlight that our risk weighting is somewhat subjective as we prefer to ascribe risk to near-production projects in quartiles, but assigning risk is a qualitative exercise with no definitive answer.

Figure 5: An Nagyah sensitivity to risk weighting

Weighting	NAV (A$mn) An Nagyah	NAV (cps) An Nagyah	NAV (cps) Company	
25%	47	17	44	Current assumptions
10%	19	7	<30	On a similar downgrade to the remainder of the Yemen asset base, the portfolio would worth perhaps, 10-12cps
5%	10	<4	~17	Look through to other Yemen assets would effectively imply 'zero' ascribed value

Source: Taylor Collison estimates

Against the reference share price (11cps – *7-Aug*), we estimate the market is pricing the Yemen portfolio at less than a 10% weighting (and perhaps less again if more 'value' is ascribed to the US assets). Whilst this seems to us to be intrinsically low, it's difficult to argue against the market's position if driven by uncertainties related to the ongoing civil crisis.

Reviewing the US…just Humm(er) ing along

Hummer is good news and provides a boost for the US business. We note the company has indicated it expects upside in the present discovery from other pay intervals as indicated by well logs, although these potential intervals have not been tested and are targeted for drilling sometime from mid-2018. There should be a high probability of success given these zones have been successfully exploited along trend from Hummer.

Figure 6: US gas curves (as of 1-Jul-17)

Source: barchart.com

Given the heavy gas bias of the US production base, the continuing softness in gas prices has had a magnified, negative impact on business returns. Despite some recent upwards momentum in pricing and the emergence of what will be a large LNG export industry in-country, headline prices are expected to remain low for the foreseeable future as highlighted by the forward curves.

USA Net 2P reserves (1/01/17): 3.9Mboe/NPV$_{10}$ US$25.7mn *(Cawley, Gillespie & Associates)*/Mystic Bayou-1 well; Hummer-1 well	A good business with some embedded growth.
Active Projects: Mystic bayou & Hummer (Main Pass 270/273/274) discovered 2015 Mystic Bayou: 1 producer, 3 further locations Hummer: Discovery well tested in Nov-2016 at >20mmcfd+200bopd, production due late Sep-2017, 3-8 additional locations	Mystic Bayou is projected to generate net revenue of US$1.2-1.5mn pa Hummer is projected to generate US$2.5mn pa per well.

Production has been in decline since 2010 delivering only ~511mmcfe in 2015 and 313mmcfe in 2016. Whilst we expect Hummer to reverse this trend we still see growth well below the recent, historical peak.

Given the current and forecast low production base, one new discovery can deliver a significant positive impact to the reserves and production outlook. Reserves materially increased on the back of Hummer.

PSA has indicated reserves in the upper zone at Hummer could exceed the pre-drill target (183bcf, 3.7Mb) - that's a strong positive, netting the company (post royalties) in the order of 21bcfe as additional reserves.

The company cites its most recent independent resource analysis by Cawley, Gillespie & Assoc. Inc. (Cawley) from 1-Jan-2017 as valuing the US assets at~US$25mn. We value the assets at considerably less, justifiably we think, given the underlying assumptions to the Cawley estimate on production output have historically not been met (certainly through 2016 and 2017 to date) and will likely need to be reset. We also add a risk overlay, particularly for assets not yet in production.

We attribute an unrisked NPV of A$26mn (US$21mn at spot rates – *4-Aug*) to the US portfolio and feel comfortable at this level, whilst acknowledging the potential for upside on a rebound in output.

Given the still high proportion of low margin gas in the product stream and historically high operating costs, we'd estimate the unit NPV to be around 15-20% of net revenue. Our NAV back solves to c.US$0.60/mcfe against the 1H'17 average received price (US$3.96/mcfe).

In a low margin environment that is a reasonable benchmark we'd suggest.

We highlight the sensitivity:-

Figure 7: A quick look on US NAV…at best we see the portfolio supporting the current share price.

Unit NPV		NAV		NAV	
US$/mcfe	% Ave sales price (US$3.96)	A$mn	US$mn	A$ps	
$0.59	15%	35	26	$0.12	Current assumptions
$0.80	20%	40	30	$0.14	Allowing for a higher long-term price and better operating performance…this supports the reference share price
$1.00	25%	50	37	$0.17	Interesting that optimistic NPV margins only deliver modest share price upside

Source: Taylor Collison estimates

Appendix 1: A quick search on Yemen headlines

A quick google search of news delivered the following selected headlines over the last month:

Terrorism of Saudi coalition kill people in Yemen *Aljazeera.com (25-Jul)*	The Executive Director of Human Rights Watch has questioned Saudi Arabia's accusation of Qatar funding terrorism while the Kingdom itself continues to promote "terrorism that is killing people in Yemen". The conflict in Yemen has escalated dramatically since March 2015, when the Saudi-led forces launched a military operation against the rebels. Since the conflict began, more than 10,000 people have been killed and millions have been driven from their homes.
Cholera is slaughtering Yemen and we're letting it happen *Fortune (20-Jul)*	Since April, more than 350,000 people have come down with cholera in Yemen, which has killed 1,790 of them. It is an appalling, inexcusable man-made disaster witnessed by a world that seems as impotent to stop the bacteria's spread in the Middle East in 2017 as it was in post-earthquake Haiti in 2010. But the Haitian debacle, in which United Nations Peacekeepers carried the Vibrio cholerae in their bodies from Nepal, passing the bacteria to spawn a massive epidemic, spread in a nation shattered by natural disaster. There is nothing "natural" about the carnage of Yemen: This is war, waged from 10,000 feet by Saudi bombers that have damaged or destroyed every hospital, clinic, water treatment plant, pumping station, and sewer system from Sanaa to Ibb.
UN envoy says the conflict in Yemen is intensifying daily *ABC News (12-Jul)*	The U.N. special envoy for Yemen warned Wednesday that conflict in the Arab world's poorest nation is intensifying daily, with terrorist groups expanding, 14 million people in desperate need of food and the worst cholera epidemic in the world. Yemen, which is on the southern edge of the Arabian Peninsula, has been engulfed in civil war since Sep-2014, when Houthi Shiite rebels swept into the capital of Sanaa and overthrew President Abed-Rabbo Mansour Hadi's internationally recognized government. In March 2015, a Saudi-led coalition, backed by the United States, began a campaign against Houthi forces allied with ousted President Ali Abdullah Saleh in support of Hadi's government. Since then, the Iranian-backed Houthis have been dislodged from most of the south, but remain in control of Sanaa and much of the north. In the southern part of the country, the United Arab Emirates, which is part of the Saudi-led coalition, has set up its own security forces, running virtually a state-within-a-state and fueling the south's independence movement.
The conflict in Yemen is causing excessive and avoidable harm *The Wire (30-Jun)*	Over the past few months, the Trump administration has settled on a strategy for the ongoing conflict in Yemen that it knows will lead to more suffering and violence in the country. Rather than trying to bring an immediate end to the war, which has claimed the lives of more than 10,000 civilians, administration officials have decided to help the Saudi-led coalition continue its efforts to pressure Houthi-led rebels into surrendering on Saudi terms, even if it means more violence.
Yemen's war: A story of internal power struggles and foreign intervention *alaraby.co.uk(30-Jun)*	Since the 2011 uprising, Yemen has become a battleground for internal and external warring factions, and escalating foreign intervention. Yemen is likely to see greater foreign involvement in its civil war, especially in light of a record breaking - though recently in doubt - arms deal with Saudi Arabia. As events continue to escalate, it is critical to understand the failed Yemeni Uprising of 2011, which helped lay the foundations for the current unrest.

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