

## PANCONTINENTAL OIL AND GAS NL (PCL)

### The Transformation begins - Dempsey well spudded

Pancontinental Oil and Gas NL ("PCL" or the "Company") has a 10% interest in the Dempsey well that spudded in recent days. The drill timetable is 30-40 days to TD, although we expect news flow from the shallower targets over the coming weeks. The well is relatively high risk (mainly targeting a deeper unproven section in the Basin) but the full success case (close to 1Tcf gross from all seven target zones) potential is worth circa A\$54m. The shallower targets could still likely be economic in the tens of bcf (with a rough NPV10 value of US\$0.53 per mmbtu a useful guide). Dempsey will likely be followed by the multi Tcf Tulainyo-2 well in the second half of 2017.

### Namibia alone worth more than the current share price

PCL is fully funded for one well offshore Namibia in PEL 0037. Prior to the oil price collapse Namibia was fast becoming an exploration hotspot and given its large targets and relatively low cost (shallow water) we expect activity to pick up over the next few years. Tullow Oil is paying down debt and the recent introduction of ONGC Videsh to the license increases the likelihood a well could get drilled in late 2018. Just on the basis of past expenditure and their free carry, PCL looks undervalued. An actual successful well could be worth in excess of A\$140m net to PCL (see table below).

### We rate PCL a Speculative Buy – California a free option

PCL's acquisition of Bombora has revitalised the management team and provided more certain near-term drilling activity. The Dempsey, Alvares and Tulainyo wells are all targeting upside in excess of 1Tcf of gas (gross).

Our base valuation for PCL is just our estimated value for Namibia, based on a farm out value and the implied value for the US assets compared to the other listed ASX peers participating in the wells. In the near term, success at Dempsey could add in excess of A\$50m to our valuation in a full success case. We note that other ASX listed stocks (SGC and XST) have equal or greater economic exposure to Dempsey. However, we view PCL as offering meaningful exposure, while also being supported by the Namibian asset. So, exposure to the suite of Californian opportunities can be viewed as a free option at the current share price. The current share price does not reflect the opportunity set and we rate PCL a Speculative Buy.

### Key Table: Projects and Prospects\*

			Net Prospective		Unrisked	
Region	Project or Prospect	Type	Interest	Resource	NPV10 (A\$m)	Method of estimation
USA	ASX Peer Group Implied Value				8	Hartleys / IRESS
California	Dempsey	Gas field exploration	10%	77 Bcf	54	Deterministic (Best Estimate)
California	Tulainyo	Gas discovery appraisal	13%	233 Bcf	165	Probabilistic (P50)
California	Alvares	Gas discovery appraisal	15%	90 Bcf	64	Hartleys
Namibia	Farm in Value	Transaction Comparable			18	Hartleys
(PEL 37)	Albatross	Oil exploration	30%	99.5 mmbbl	481	Deterministic Best Estimate
	Seagull & Gannet Sth	Oil exploration	30%	96.3 mmbbl	466	Deterministic Best Estimate
	Seagull & Gannet Nth	Oil exploration	30%	29.6 mmbbl	143	Deterministic Best Estimate
	Cormorant	Oil exploration	30%	35.3 mmbbl	171	Deterministic Best Estimate

Source: PCL and Hartleys. \* Net Prospective Resources are PCL Estimates. NPV10 (unrisked) are Hartleys estimates for Net Prospective Resource case based on field modelling and comparable comps.

9 Aug 2017

Share Price:	\$0.0025
12mth Price Target:	\$0.0050

#### Hartleys Brief Investment Conclusion

In Namibia, Tullow recently announced farm out deal with ONGC Videsh in PEL37. This could mean PCL participates in an exploration well in 2018. Acquisition of private company Bombora Natural Energy Pty Ltd. provides exposure to very large near term gas targets in Northern California.

#### Key Personnel

David Kennedy	Non-Executive Chairman
John Begg	Executive Director & CEO
Ernest Myers	Non-Executive Director
Barry Rushworth	Non-Executive Director
Marie Malaxos	Non-Executive Director

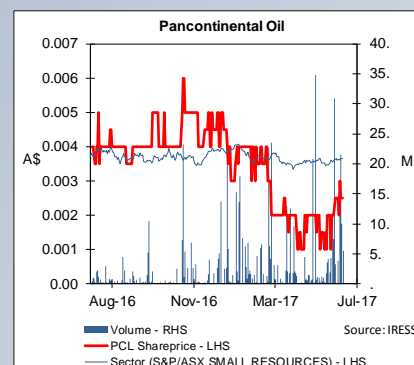
#### Top Shareholders

Sundowner International	6.7%
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#### Company Address:

Level One, 10 Ord Street  
West Perth, WA, 6005

Target Price:	\$0.0050
Issued Capital:	5014.4m
- fully diluted	5490.5m
Market Cap:	\$12.5m
- fully diluted	\$13.7m
Current Cash	\$1.2m



Source: Hartleys Research

#### Authors:

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Hartleys has provided corporate advice within the past 12 months and continues to provide corporate advice to Pancontinental Oil & Gas NL, for which it has earned fees and continues to earn fees.

# SUMMARY MODEL

Pancontinental Oil & Gas PCL		Share Price \$0.0025		9 Aug 17 Speculative Buy	
Key Market Information				Directors	
Share Price		\$0.0025		David Kennedy Non-Executive Chairman	
Market Capitalisation		\$13m		John Begg Executive Director & CEO	
Net Debt (cash)		\$1.2m		Ernest Myers Non-Executive Director	
Issued Capital		5014.4m		Barry Rushworth Non-Executive Director	
ITM options		0.0m		Marie Malaxos Non-Executive Director	
Options		476.1m			
Issued Capital (fully diluted ITM options)		5014.4m			
Issued Capital (fully diluted all options)		5490.5m			
EV		\$11.3m			
Valuation*		\$0.0046			
12Mth Price Target		\$0.0050			
* Valuation is based on farm out value for Namibia only and current implied value for US opportunities based on ASX listed peers					
Valuation Summary					
Asset		Valuation			
		A\$m	cps		
PEL 0037 (30%)		18	0.32		
California		8	0.14		
Total		25	0.46		
Key Permits / Prospects					
Sacramento Basin		Net Interest	Unrisked NPV10**		
Dempsey		10%	A\$54m		
Tulainyo		13%	A\$165m		
Alvares		15%	A\$64m		
Namibia					
PEL 37		30%	A\$1261m		
** Full success case based on Company prospective resource estimates¹					
Investment Summary					
In Namibia, Tullow recently announced farm out deal with ONGC Videsh in PEL37. This could mean PCL participates in an exploration well in 2018. Acquisition of private company Bombora Natural Energy Pty Ltd. provides exposure to very large near term gas targets in Northern California.					
Expected News flow					
2H CY17		Bombora Acquisition		Completed	
Spudded		Dempsey-1 Well		California	
2H CY17		Tulainyo-2 Well		California	
2H17-2H18		Alvares Appraisal		California	
2H CY18		Namibia Drilling		Namibia	
CY18		Walpyring Seismic & Drilling		Perth Basin	
Analyst: Aiden Bradley Phone: 08 9268 2876					
Last Updated: 09/08/2017					
Sources: IRESS, Company Information, Hartleys Research					

# RECOMMENDATION & RISKS

## INVESTMENT THESIS & RECOMMENDATION

### Bombora acquisition transforms the near-term story

The main asset that PCL acquired from Bombora was their exposure to the Sacramento Basin in California. The Dempsey, Alvares and Tulainyo wells are all chasing the same gas play in the Northern Part of the basin.

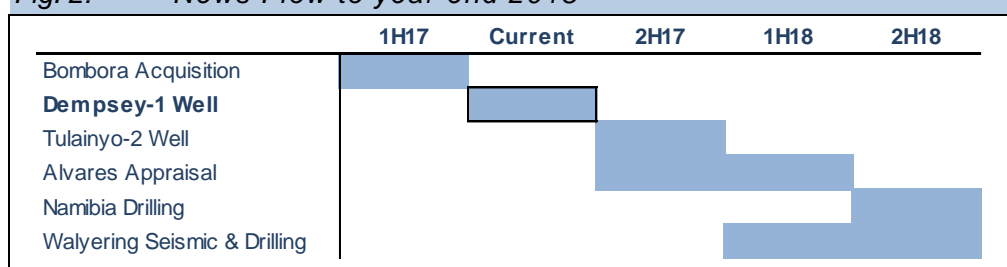
Fig. 1: Projects and Prospects\*

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			Interest	Resource	NPV10 (A\$m)	
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Source: PCL and Hartleys.. \* Net Prospective Resources are PCL Estimates. NPV10 (unrisked) are Hartleys estimates for the Net Prospective Resource case based on field modelling and comparable comps.

The Dempsey well (PCL 10%) has spudded and while it is relatively high risk (mainly targeting a deeper unproven section in the Basin) the full success case (all seven zones) potential is worth circa A\$54m. The shallower targets could still likely be economic in the tens of bcf (with a rough NPV10 value of US\$0.53 per mmbtu a useful guide) and have a considerably high likelihood of success given they are drilling the proven Forbes Formation. Dempsey will likely be followed by the 1Tcf+ Tulainyo-2 well in the second half of 2017.

Fig. 2: News Flow to year end 2018



Source: PCL and Hartleys..

### Drilling in Sacramento Basin a free option at the current share price

The Californian wells are relatively low cost (and fully funded) and the targets are extremely large. PCL through Bombora has also gained exposure to all three potential high impact wells for relatively little capital outlay. So, while the market may view the wells pre-drill as high risk, the upside potential for PCL is potentially enormous. While calculating a catch all NPV10 per mmbtu is difficult (given the breath of potential outcomes) we have modelled a base case NPV10 for a 100bcf discovery at Dempsey of US\$0.53/mmbtu (assuming a realised gas price of US\$3.20/mmbtu).

**So as an extremely rough rule of thumb, every 1bcf net to PCL discovered would likely be worth around US\$500,000.**

### Namibia a Hidden Gem

The oil price collapse which began in 2014 has impacted many companies in the oil sector, from explorers to producers through to the companies that provide services to the industry. PCL among the junior explorers listed on the ASX was perhaps one of the most unfortunate in regards to timing.

In September 2013, PCL announced an excellent farm out deal with Tullow Oil, one of the highest profile and successful African focused oil explorers.

In exchange for 65% of license PEL 0037 and taking over as Operator, Tullow obligated to fund 100% of the costs of a 3D seismic survey of not less than 3,000 km<sup>2</sup> commencing before 31 December 2014. Fund 100% of the costs of a 2D seismic survey of not less than 1,000 km and subject to identifying a drillable prospect (which we view their subsequent releases as satisfying this condition), fully fund 100% of the costs of one exploration well with no expenditure 'cap' to not less than 3,500 metres below the sea surface.

Offshore Namibia generally looked like becoming one the next 'hot spots' for offshore exploration just before the oil price collapse and PEL 0037 one of the more prospective licenses. We therefore continue to see high potential in PCL's remaining 30% stake PEL 0037, and do expect at least one well to be drilled on the license in the next few years as explorer's balance sheets are repaired and expectations surrounding the outlook for oil pricing stabilises.

**Fig. 3: EL 0037 Leads and Prospects**

Prospect Lead		AREA (Sq K m)	Prospective Resource 100% (MmBbls)*
Albatross	Prospect	293	349
Seagull & Gannet S	Prospect	273	338
Seagull & Gannet N	Prospect	90	104
Cormorant	Prospect	120	124
Upper Fan 2	Lead	85	
Lower Fan 3	Lead	352	
Lower Fan 4	Lead	170	
TOTAL (Prospects Only)			915*

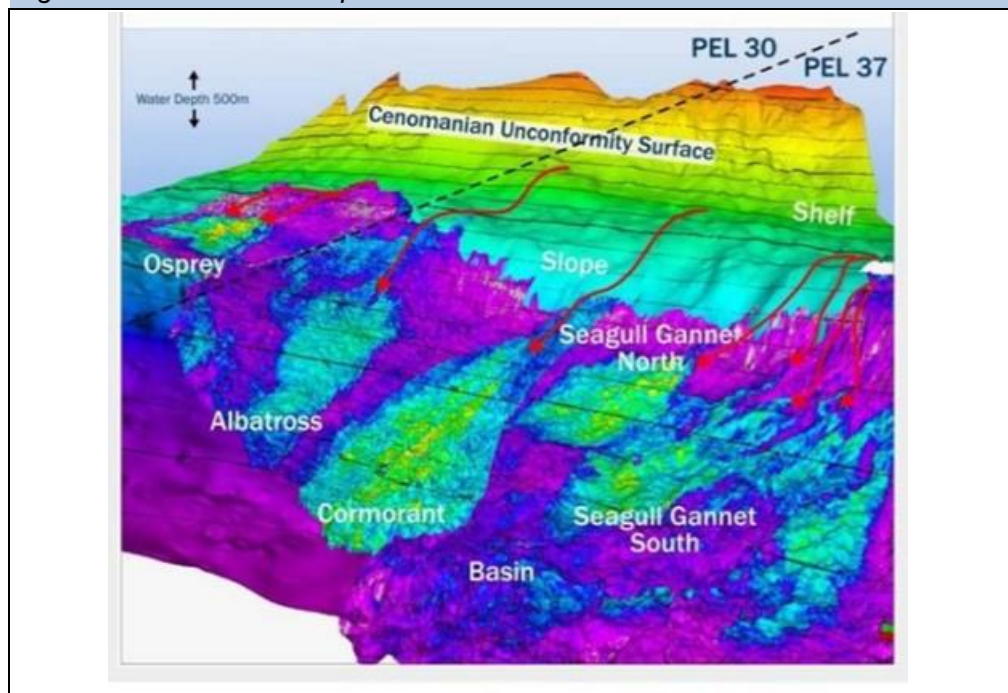
Source: PCL

### Namibian Drill Schedule Uncertain

However, the timing of the well has been uncertain and remains subject to a number of factors including the prevailing oil price (and hence the appetite for offshore exploration) and Tullow Oil's financial position. This has placed financial pressure on PCL and has negatively impacted the share price.

In response, the Company has acquired Bombora Energy Pty Ltd. This transaction not only revitalises the corporate team but also provides PCL with a number of relatively low cost but high impact drill ready targets over the next 12 months. We view this transaction as a win-win for both sets of shareholders. Bombora shareholders get access to a potential fully funded offshore well in Namibia, one of the most prospective undrilled wells held by any ASX listed Oil & Gas Company. PCL shareholders now have a much stable corporate platform to retain their significant exposure to the Namibian well, while also for a relatively low cost gained exposure to a suite of high impact onshore gas wells in California.

Fig. 4: Tullow Prospects PEL 30 and PEL 37



Source: Tullow

### Namibian Value alone a premium to current share price

Putting a definitive valuation on PCL's Namibia position does however remain difficult. The recent announcement of a farm out by Tullow Oil of part of their stake in the PEL 0037 to ONGC Videsh, in our opinion, highlights the attractiveness of this particular license (this was ONGC's first exposure to Namibia). So, while the exact timing of a well remains difficult to pin point, we do believe a well will eventually be drilled on this license (our best guesstimate at this stage is late 2018). Therefore, PCL's free carry has real value. Tullow has already spent US\$34m on the license (mainly high quality seismic) and a well is likely to cost in the region of US\$35-50m (relatively cheap as moderate water depth). So, the 'value' of PCL's carried stake in the well could range from A\$14-20m, or A\$28-34m including back costs. To be conservative we assume a discount (at 60% of book value) for a likely deflation in costs since Tullow spent their US\$34m plus apply a risk factor (50%) regarding the likelihood a well gets drilled by Tullow. Even so the value to PCL shareholders from Namibia very conservatively equates to circa 0.35c per share. We see this as the base value for PCL ex the US.

Our valuation for PCL's US exposure is simply the implied value calculated based on the respective market values of the ASX listed peers participating in these wells (see Figure 3 below). The success or otherwise of Dempsey in the next month will obviously have a major impact on these valuations (including PCL).

### We rate PCL a Speculative Buy

While acknowledging there are exploration and timing risk regarding both Namibia and the Sacramento Basin, the share price upside potential is large from a relatively low base. Namibia alone we value at 0.35c per share and view the exposure to three high impact Californian wells as free options at a price at or below that level. We therefore at current levels rate PCL a Speculative Buy with a base case value of 0.5c per share. Very material upside exists from this target, as outlined in Figure 1, upon exploration success in any one of the four (three in the US and one in Namibia) wells they will likely participate in over the coming 18 months.



Fig. 5: Valuation based on ASC listed peers

	Mtk Cap	Stake			Implied value per 10%		
		Dempsey	Alvares	Tulianyoy	Dempsey	Alvares	Tulianyoy
Sagasco (SGC)	A\$19.8m	50%	44%		A\$1.6m	A\$2.7m	
Xstate (XST)	A\$5.0m	10%	21%		A\$1.3m	A\$1.8m	
Magnum (MPE)	A\$13.4m		10%	20%			A\$3.9m
Pancon (PCL)	A\$10.0m	10%	15%	13%			
<b>PCL Implied US Value</b>	<b>A\$7.5m</b>				<b>A\$1.4m</b>	<b>A\$2.3m</b>	<b>A\$3.9m</b>
<i>Implied Namibia</i>	<i>A\$2.5m</i>						

Source: PCL, Hartleys and IRESS.

## RISKS

The key risks for PCL (like most oil & gas exploration and development companies) is making an economic discovery and obtaining the funding for ongoing exploration. Other risks include delays, key person risk, country/sovereign risk, weather, JV partner obligations, cost inflation. Investing in explorers is very risky given the exploration value of the company in essence assumes that the market will recognise a portion of potential value before the results of an exploration program are known, conscious that the ultimate chance of success is low (typically 1%-20%) and that failure is much more likely, in most cases. Other risks are earnings and cash flow disappointments given the industry is volatile and cash flow expectations can disappoint due to cost overruns, project delays, cost inflation, environmental regulations, resource estimate errors and management performance and contract negotiation skills. High financial leverage (if it exists at that time) would add to the problem.

## SIMPLE S.W.O.T. TABLE

Strengths	Experienced management team. Fully funded offshore well in Namibia. Significant near-term Sacramento Basin drilling activity including two fully funded wells.
Weaknesses	Frontier Exploration risks. Non-Operated interests. Limited Balance Sheet Capacity. Relying on partners to secure their own funding requirements on an ongoing basis.
Opportunities	Further farm in opportunities in US and Australia. M&A potential.
Threats	Oil and US and WA Gas prices. License expiry / not fulfilling license commitments. Potential further share dilution. The AUD/USD Exchange rate.

Source: Hartleys Research

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## APPENDIX – THE CALIFORNIAN ASSETS

Given the timing uncertainty in Namibia, PCL rather than sitting and waiting for a Tullow decision on a well, announced the acquisition of Bombora Natural Energy Pty Ltd, a private explorer focused on the onshore Sacramento Gas Basin in California and the Perth Basin.

PCL acquired Bombora on the terms of 26 PCL shares for each Bombora share and subsequently raised \$2m to fund field activities and drilling under the Dempsey, Tulainyo, Alvares and Walyering farms previously agreed by Bombora.

Bombora's strategy is to identify projects that are existing gas discoveries that require further appraisal. A strategy that is not about finding the gas, but rather getting it to flow.

- The Dempsey Gas Project and Alvares Gas Discovery are operated by Sacgasco (SGC.ASX)

<http://www.sacgasco.com/sacramento/>

- The Tulainyo Gas Discovery is operated by California Resources Production Corporation (CRC.NYSE) and Cirque Resources LP. CRC is a publicly traded oil and natural gas exploration and production company and the largest oil and natural gas producer in California on a gross-operated basis.

<http://www.cirqueresources.com/tulainyo-project/4583782836>

- The Walyering Gas Field is operated by UIL (UIL.ASX), however operatorship can be earned by PCL.

<http://www.uilenergy.com.au/wp-content/uploads/2016/09/160921-Bombora-Farmin-to-Walyering-Project-Area.pdf>

John Begg and Marie Malaxos, directors of Bombora, joined the Board as executive and non-executive directors respectively with John Begg replacing Barry Rushworth as CEO.

While Walyering in the Perth Basin is not without its merits we view Bombora's drill ready targets in California as the most likely source of near term upside for PCL shareholders. For further detailed analysis on the Western Gas Market and the Perth Basin, please refer to the following Hartleys research notes.

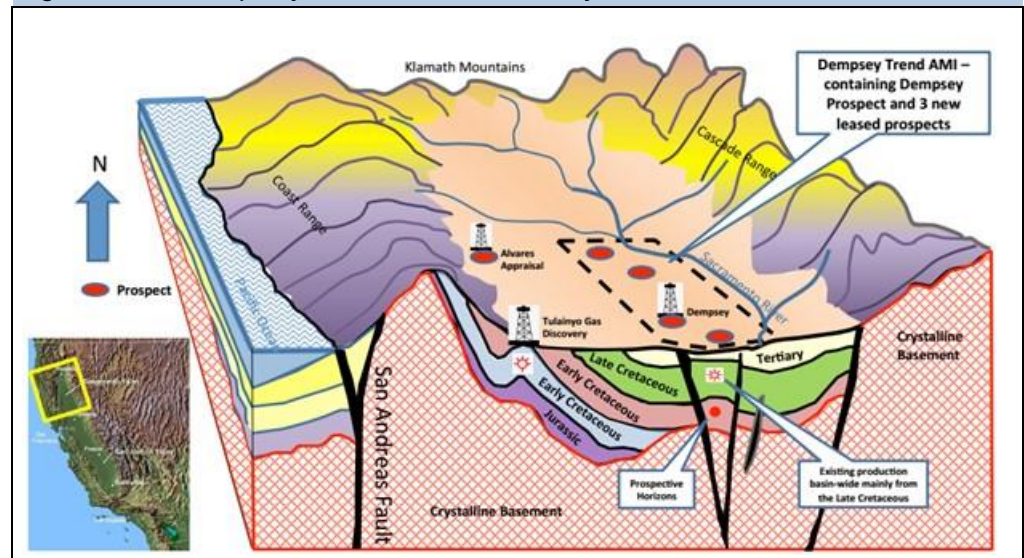
Carnarvon Petroleum Ltd – Mining for Gas in the Bedout Sub-basin (12 April 2017)

Empire Oil & Gas Ltd – In search of the Kingia/High Cliff Sandstone (19 May 2017)

Bombora through a series of farm in deals had gained exposure to three potential gas targets in the Northern Part of the Sacramento Gas Basin. With the current deflation in drill costs the potential risk reward from these wells is extremely attractive.

The Dempsey, Alvares and Tulainyo wells are all chasing the same stacked gas play in the Northern Part of the basin, hence success or otherwise at Dempsey (the first to be drilled) will likely have a flow on effect on the perceived value in not just any follow up on trend with Dempsey but Alvares and Tulainyo as well. The equity market is likely to continue to apply a very large risk discount (or a low probability of success) to these wells given the unproven nature of the target (frontier in the sense that the little drilled deeper reservoir section has not yet had a commercial development) and the absence of a major US partner in Dempsey.

**Fig. 6: Dempsey and Alvares/Tulainyo Trends**



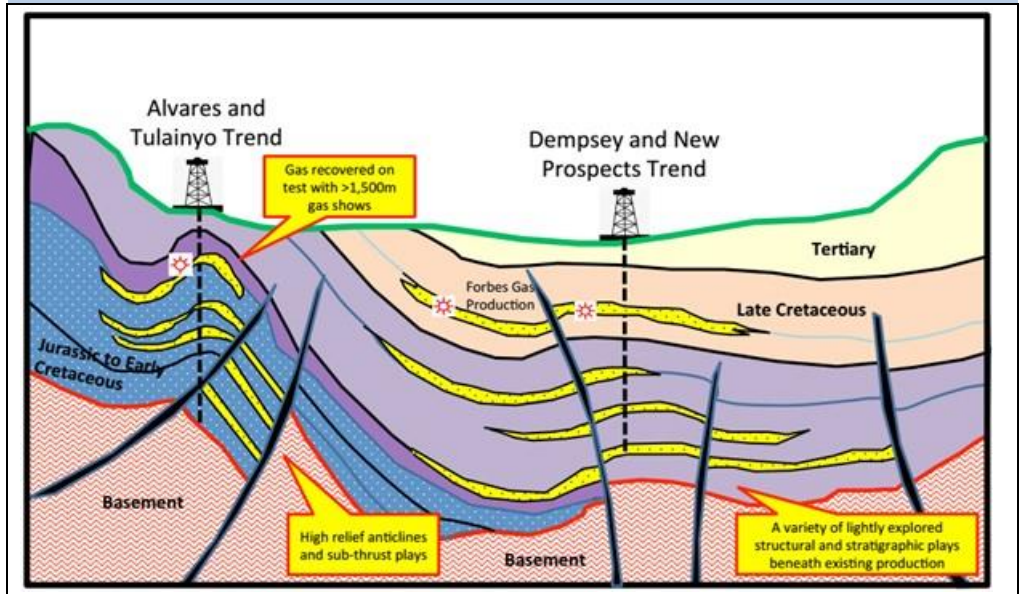
Source: Xstate Resources

However, the wells are relatively low cost and the targets are extremely large. So, while the market may view the wells pre-drill as high risk, the upside potential for PCL is potentially enormous. While calculating a catch all NPV10 per mmbtu is difficult (given the breadth of potential outcomes) we have modelled a base case NPV10 for a 100bcf discovery at Dempsey of US\$0.53/mmbtu (assuming a realised gas price of US\$3.20/mmbtu).

**So as an extremely rough rule of thumb, every 1bcf net to PCL discovered would likely be worth around US\$500,000.**



Fig. 7: Dempsey and Alvares/Tulainyo – Stacked Play



Source: Xstate Resources

## THE SACRAMENTO BASIN

The Sacramento Basin is a proven gas province in Northern California. NYSE listed California Resources Corporation dominates acreage in the Basin and currently produces 85% of the basins modest gas output. PCL is now partnered with CRC in the Tulainyo project. They are however strategically focused on liquids opportunities in basins to the South. However, they continue to flag the deeper gas potential in the basin and previously drilled the Tulainyo well targeting this play.

Fig. 8: Sacramento Basin – CRC currently focused on Oil

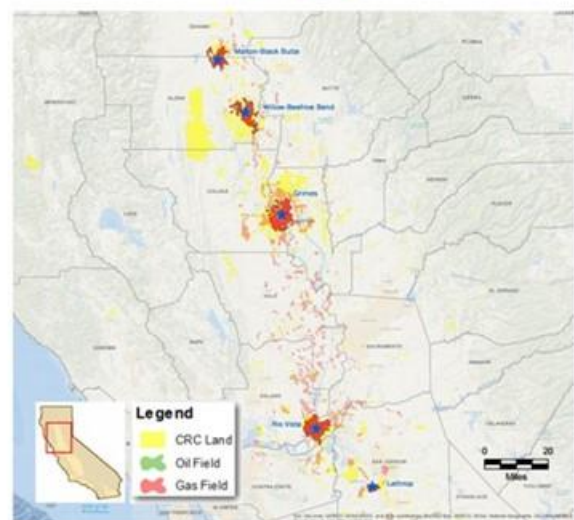
### Sacramento Basin – Significant Gas Optionality

#### Overview

- Exploration started in 1918 and focused on seeps and topographic highs. In the 1970s the use of multifold 2D seismic led to largest discoveries
- Cretaceous Starkey, Winters, Forbes, Kione, and the Eocene Domengine sands
- Most current production under 6,000 feet, deeper targets remain at less than 10,000 feet
- 3D seismic surveys in mid-1990s helped define trapping mechanisms and reservoir geometries
- 1Q 2017 average net production of 31 MMcf/d (100% dry gas)
- CRC produces 85% of basin gas with synergies from scale

**California imports >90% of its natural gas requirements**

#### Basin Map



Source: CRC

### 1: DEMPSEY-1 15 WELL (PCL 10%)

The first well PCL exposed well to be drilled in the Basin was spudded on the 1<sup>st</sup> of August. Operator Saccgasco (SGC.asx) has estimated total completion cost of just US\$4.4m for a well targeting over a Tcf of gas to TD of 3,200m.

PCL (formerly Bombora) under a farmin agreement with Saccgasco is to fund 20% of the well to earn a 10% interest.

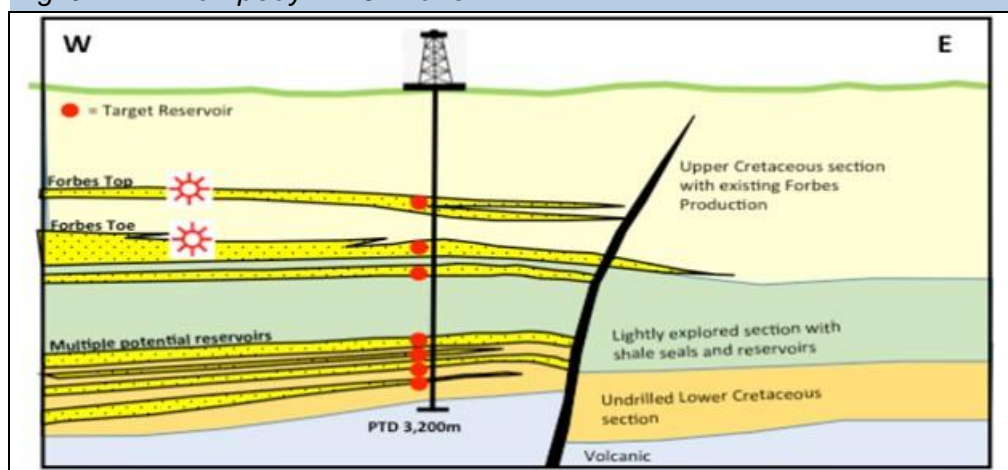
The Dempsey 1-15 well is expected to take 30-40 days to drill to TD (10,000ft). The well is targeting seven stacked conventional sandstone reservoir targets. This well is mainly targeting an older reservoir section beneath the proven producing zones, but is still likely 'saturated' with gas. So, we expect the JV to be reported significant gas shows across multiple zones in the coming weeks.

The key will obviously be encountering an economically viable reservoir. As a guide was estimate the NPV10 for a 100bcf at just over US\$0.50/mmbtu.

Saccgasco interprets 7 target gas reservoir levels beginning with a small (1-3 BCF Deterministic Recoverable Prospective Resource) seismic amplitude defined, extension of the shallow producing Forbes Sandstone reservoir system. The targets then extend down to total depth through a series of older Cretaceous sandstone reservoirs that also exhibit structurally consistent amplitude anomalies analogous to those that are observed on seismic elsewhere in the basin where conventional sandstone reservoirs have trapped natural gas in mapped structural closures, e.g Tulainyo / James wells and Alvares.

Individual, unrisks Deterministic Prospective Resources for these primary targets range from 116 bcf to 352 Bcf of recoverable gas. Should all the stacked reservoirs be full of gas, the cumulative unrisks recoverable Prospective Resources within the prospect could exceed 1 Tcf. We view the quality of reservoir as the key risk for the deeper primary targets.

Fig. 9: Dempsey-1 15 Wells



Source: Xstate Resources

In anticipation of a successful outcome with the Dempsey 1-15 well the JV have been identifying follow up leads. The Dempsey Trend AML is an Area of Mutual Interest extending to approximately 250,000 acres and containing the Dempsey prospect as well as at least three other, Dempsey-style prospects which have been identified on existing seismic.

Participants in the Dempsey 1-15 gas well are:

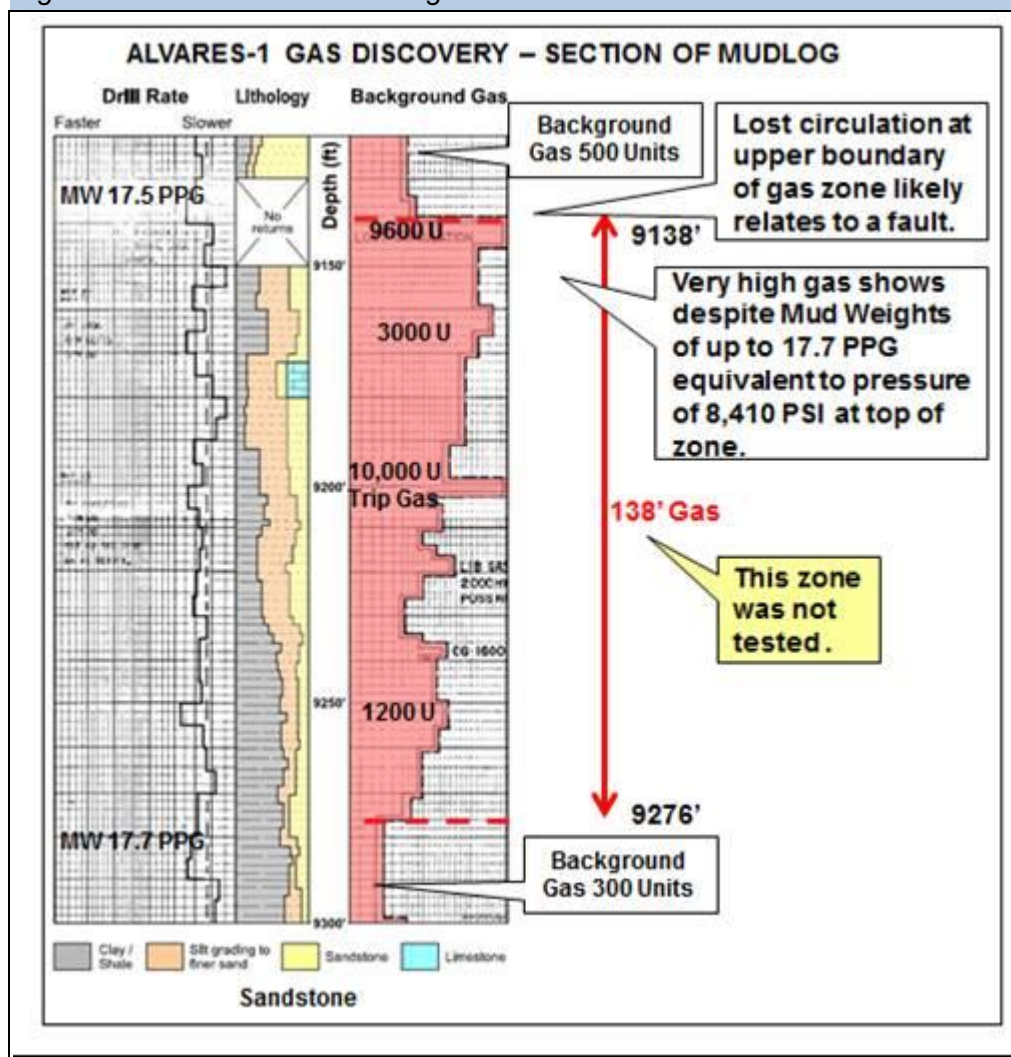
- Sacgasco Limited 50% (SGC.asx)
- Emphyrean Energy Plc 30% (EME.aim)
- PCL 10% (PCL.asx)
- Xstate Resources Limited 10% (XST.asx)

It should be noted that Emphyrean Energy are on a particular good run of form at the moment. It has a 10% interest in the recently successful Mako South-1 gas discovery in Indonesia with Conrad Petroleum and of course were a participant in the Sugarloaf asset in the Eagle Ford Shale.

## 2: ALVARES-1 WELL (PCL 15%)

PCL also has exposure to the Alvares-1 appraisal well, a re-test of a discovery drilled in 1982. Sagasco estimates that Total Completion Cost will likely range between US\$1-8m depending on whether it is tested by a side-track from the existing well bore or a new well.

Fig. 10: Alvares-1 Well Log



Source: Sagasco

Alvares-1 was drilled by American Hunter Exploration Limited in 1982 to a total depth of 4380m (14,060 feet) targeting oil in the Early Cretaceous age, Stoney Creek Formation. 'This formation is part of an early, marine basin fill and is comprised of

sandstones and conglomerates interspersed with clay rich rocks. Wireline log data from the well indicates extensive zones with conventional gas reservoir potential.'

'Alvares-1 encountered high pressures, along with strong gas shows (up to 10,000 units in one untested zone) recorded over more than 1500m (4,815 feet) below a thick, sealing shale at 2531m (8304 feet). No valid flow test was conducted due to equipment limitations and the deeper oil target failing. Despite these limitations minor gas flows to surface were recorded.

Alvares is a large structure mapped with 2D seismic and estimated by Sacgasco to hold prospective resources of over 2 Tcf of potential recoverable gas.

As disclosed by PCL on the 17<sup>th</sup> of July the Alvares license does not have a commitment to drill a well, so timing can be matched to take advantage of the other drilling results in the Basin.

Joint venture partners in the Alvares Gas Discovery include:

- Sacgasco Limited 39% (SGC.asx)
- Pancontinental Oil & Gas NL 15% (PCL.asx)
- Xstate Resources Limited 21% (XST.asx)
- Empyrean Energy PLC 25% (EME.asx)

Bombora has the right to earn a 10% working interest by funding 13.33% of the next well. Bombora's promoted cost for this well is capped at A\$1.75m. There is currently no commitment to drill at Alvares. Bombora has an option to earn a further 5% in Alvares, by funding Sacgasco's share of a re-entry of the discovery well to assess it for a sidetrack to the gas reservoirs. A sidetrack could significantly reduce the cost of testing the gas zones. The promoted component of Bombora's cost to earn its extra interest would be capped at circa US\$200,000.

On paper, it would seem that Alvares is an equal or better prospect than Dempsey given the gas zones already identified. PCL see the key risk as the execution of a drilling and completion programme that minimises damage to the reservoirs and will benefit from lessons learned first on other wells. So, there are obviously some questions posed by the high downhole pressures that still need to be answered.

### **3: TULAINYO (PCL 13.33%)**

The Alvares-1 well was one of only two early on-structure wells drilled to test the older reservoir section in the Northern Sacramento Basin. Both wells had extensive columns of high pressure gas shows and flowed pipeline quality gas to the surface.

The second well was the James-1 oil exploration well drilled in 1948. Tulainyo-1 drilled by California Resources Corporation in January 2015 was on trend with this well. It discovered multiple stacked high pressure, natural gas filled conventional reservoirs at depths of less than 1800 metres. This shallower series of stacked sandstone units could not be tested due to mechanical difficulties. Additional deeper conventional sand reservoirs that are prospective for gas remain untested. So once again there are likely to be challenges in drilling at high pressures.

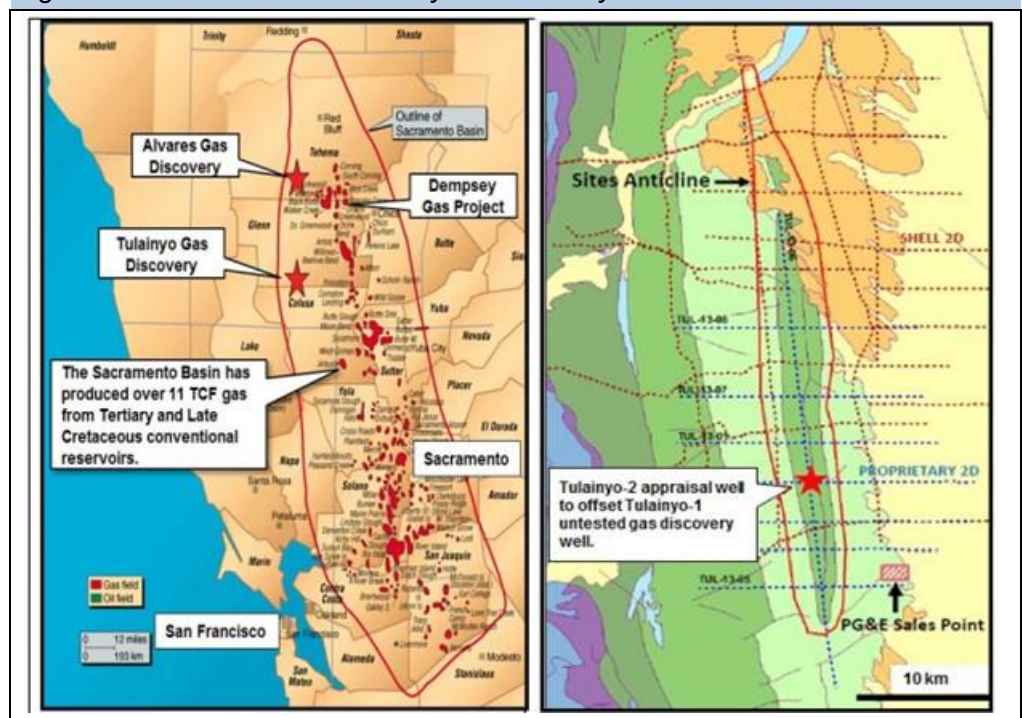
Bombora (now PCL) fancy having a go and have agreed a farm in with California Resources Production Corporation and Cirque Resources LP. PCL through their subsidiary Gas Fields LLC have agreed to fully fund up to three wells over 18 months. The farm agreement includes options for each drilling stage and mechanisms to limit the cost exposure per well.



In exchange Gas Fields has the ability to earn up to 33.33% of the project. The first well is estimated to cost approximately A\$4 million and must commence by 1 September 2017. Under the terms of the agreement, Gasfields will earn a 10% interest in the southern half of the 152 km<sup>2</sup> leased land position by funding Tulainyo-2. Gasfields' interest will increase to 33.33% if it decides to drill a second, deeper well in the area. Gasfields would also have the option to drill a third well in the northern half of the land position to earn up to 33.33% in the entire leased area.

To de-risk the drilling PCL have reached agreement with Magnum Gas and Power Limited for the latter to provide the main costs of the first well in exchange for 60% of Gas Fields (PCL retaining 40%). After the first well, Magnum would contribute funding to Gas Fields in line with its 60% shareholding in the Company. These funds have been advanced to the operator to pay for the well.

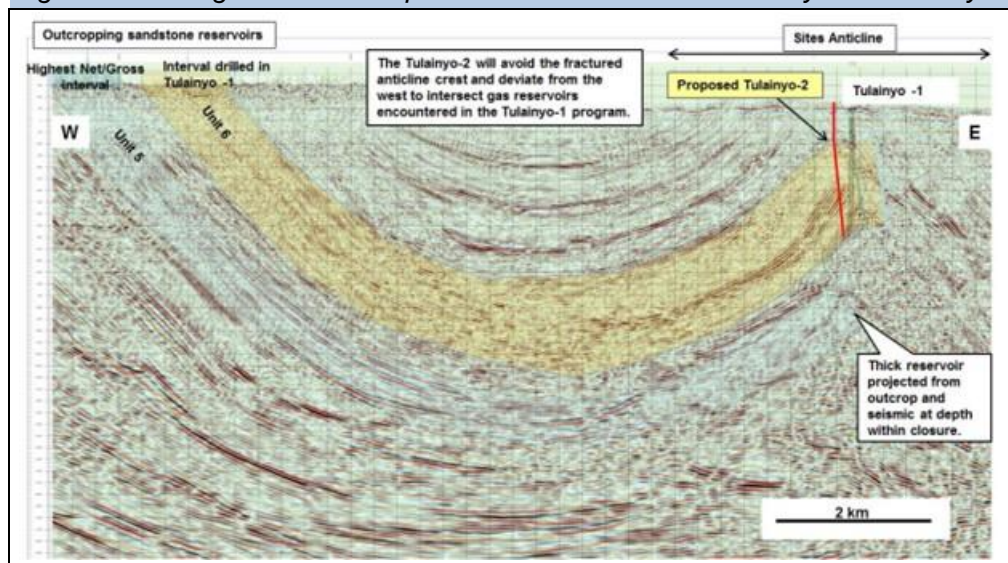
**Fig. 11: Location of Tulainyo Discovery Anticline**



Source: MPE

The proposed Tulainyo-2 will be a “proof of concept well” to evaluate and flow test the gas sands penetrated at depths less than 1,700m (c. 5,500 feet) by the Tulainyo-1 discovery.



**Fig. 12:** *Regional W-E dip seismic line across Tulainyo discovery*

Source: MPE

Post MPE's successful placement the direct cash exposure of PCL's shareholders to the Tulainyo-2 well is relatively minimal. While the risks and challenges again are disclosed, the upside is also hugely material and the drill costs modest.

**Fig. 13:** *Tulainyo unrisked Gross Prospective Resources*

<b>Net Prospective Resource Gasfields</b>	<b>P90</b> 169 Bcf	<b>P50</b> 582 Bcf	<b>Mean</b> 845 Bcf	<b>P10</b> 1.73 Tcf
<b>Net Prospective Resource Magnum</b>	<b>P90</b> 101 Bcf	<b>P50</b> 349 Bcf	<b>Mean</b> 507 Bcf	<b>P10</b> 1.04 Tcf
<b>Related Area of Closure</b>	29.4 km <sup>2</sup> (7,250 acres)	51 km <sup>2</sup> (12,570 acres)	54.5 km <sup>2</sup> (13,470 acres)	91 km <sup>2</sup> (22,440 acres)

Source: MPE

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Buy	Share price appreciation anticipated.
Accumulate	Share price appreciation anticipated but the risk/reward is not as attractive as a "Buy". Alternatively, for the share price to rise it may be contingent on the outcome of an uncertain or distant event. Analyst will often indicate a price level at which it may become a "Buy".
Neutral	Take no action. Upside & downside risk/reward is evenly balanced.
Reduce / Take profits	It is anticipated to be unlikely that there will be gains over the investment time horizon but there is a possibility of some price weakness over that period.
Sell	Significant price depreciation anticipated.
No Rating	No recommendation.
Speculative Buy	Share price could be volatile. While it is anticipated that, on a risk/reward basis, an investment is attractive, there is at least one identifiable risk that has a meaningful possibility of occurring, which, if it did occur, could lead to significant share price reduction. Consequently, the investment is considered high risk.

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