

# **Investor Presentation**

January 2018





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**Contingent and Prospective Resources**: The information in this presentation that relates to Contingent Resources and Prospective Resources for Melbana Energy is based on, and fairly represents, information and supporting documentation compiled by Peter Stickland, a Non-Executive Director of Melbana Energy. Mr Stickland B.Sc (Hons) has over 25 years of relevant experience, is a member of the European Association of Geoscientists & Engineers and the Petroleum and Exploration Society of Australia, and consents to the publication of the resource assessments contained herein. The Contingent Resource and Prospective Resource estimates are consistent with the definitions of hydrocarbon resources that appear in the Listing Rules. Conversion factors: 6 Bscf gas equals 1 MMboe; 1 bbl condensate equals 1 boe.

### **Company Overview**

Company Data	
Index	S&P/ASX All Ordinaries
ASX Ticker	ASX:MAY
Shares on issue	~1,666m
<b>Options/ SPRs</b>	~210m/ ~5.3m
Market Cap	~ <b>\$27m</b> (12 Jan)
Cash (31/12/17)	~\$6.4m
Debt	Nil
Enterprise Value	~\$20m

#### 12 month share price performance



7.2%

5.6%

## Shareholders Cadence Asset management Board & Management

Top 20 shareholders 30%

## Continuity of Leadership with CEO Robert Zammit

**Board of Directors** 

### **Board & Management**

CEO



Robert Zammit Chief Executive Officer (BD & Commercial since 2011)



Andrew Purcell Non-Executive Chairman



Michael Sandy Non-Executive Director



Peter Stickland Non-Executive Director (former MD)





Colin Naylor CFO & Company Secretary



Errol Johnstone Chief Geoscientist



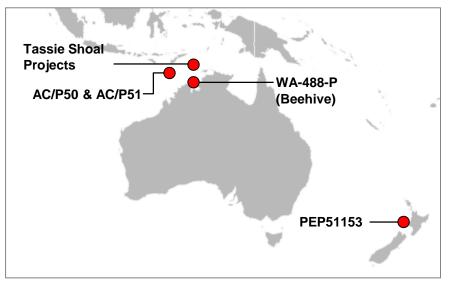
Dean Johnstone Senior Geoscientist



Dr. Rafael Tenreyro Cuba Representative

### Melbana Summary





#### New Zealand – Pukatea-1

- High impact drilling to **commence ~25 January 2018** (Melbana 30% share),
- ~1 month to reach total depth
- Prospective Resource of primary objective of 12.4 million boe\*, reservoir capable of rates up to 5,000 barrels per day
- Secondary target increases likelihood of moveable oil to ~50%
- Potential to deliver significant share price re-rating on success

#### Cuba – Block 9

- Exploration potential of ~12.5 billion barrels of oil-in-place with recoverable Prospective Resources of 637 million barrels\*
- Proven oil trend, ~30km from 11 billion barrel oil-in-place field
- High graded Alameda-1 and Zapato-1 with combined prospective potential of 200 million barrels of recoverable\*
- Targeting drilling 2 wells commencing around mid 2018
- Potential Farmout data room open

#### Australia - Beehive

- Beehive prospect potentially the largest undrilled conventional target in Australia
- Total and Santos to fully fund a 3D seismic survey, operated by Santos,
- Aiming to shoot survey mid 2018
- Melbana retains 20%, fully carried through first well drilled in WA-488-P if Total and/or Santos exercise farm-in option

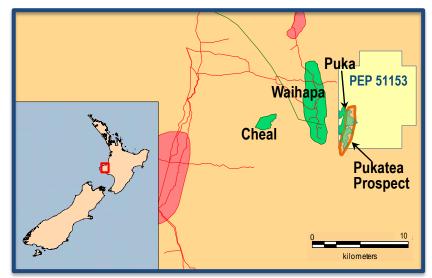
#### Other

- Melbana continues to assess both asset based and corporate business development initiatives
- \* (100% share, unrisked Best Estimate) See Prospective Resources Cautionary Statement on page 8

## New Zealand

### Onshore New Zealand – PEP51153 Overview

- Melbana has 30% interest in PEP51153, operated by TAG Oil Ltd ("TAG" 70%)
- Located onshore in New Zealand <10km east of TAG's producing Cheal field
- Independent expert values TAG's 2P reserves in nearby fields at ~A\$20/barrel\* on NPV10 basis
- Contains the high impact Pukatea prospect
- Prospective resources 12.4 MMboe to 40 MMboe (Best to High Estimates, 100% share)
- Close to existing infrastructure with multiple low cost alternative development paths for any discoveries
- NZ fiscal terms amongst best in the world
- Robust natural gas market in the North Island of New Zealand

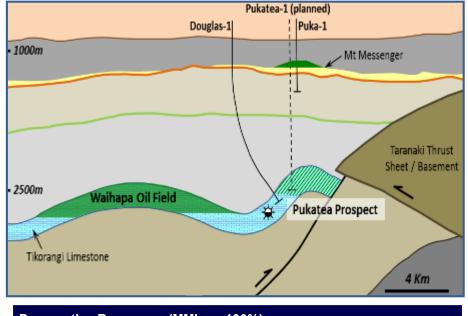




## Onshore New Zealand – Pukatea-1 (Melbana 30%)

### Drilling commences ~25 January 2018

- Prospective resources at primary objective estimated to range from 1.3 to 40 million barrels (Low-High estimates, 100% share)
- Targeting a highly productive conventional reservoir in the Tikorangi Limestone directly below the Puka oil pool
- Production capability from the Tikorangi Limestone proven at the adjacent Waihapa oil field with individual initial rates up to 5,000 barrels/day and produced in excess of 23 MMstb of oil to date
- Good reservoir and oil shows demonstrated by 2012 Douglas-1 well drilled down-dip at the edge of the Pukatea prospect, with more than 350m of up-dip potential
- Secondary objective at shallow Mt. Messenger with ~50% chance of oil
- Drilling commencing ~25 January 2018
- Anticipate ~33 days to reach primary objective
- Melbana's share of costs ~A\$2M (excl. testing)



#### Prospective Resources (MMboe, 100%)

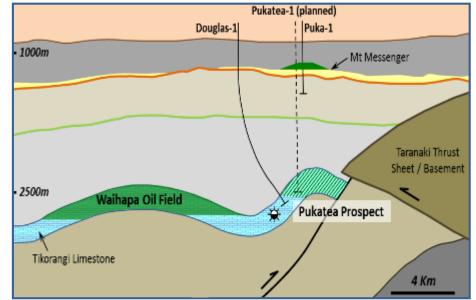
	CoS*	Low	Best	Mean	High
Pukatea (Tikornagi)	19%	1.3	12.4	17.1	40

Prospective Resources Cautionary Statement - The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Future exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons. \* Chance of Success

### PEP51153: Puka Field (Melbana 30%)

### Additional data from Pukatea-1 may be catalyst for production restart

- Puka oil field discovered in 2012
- Oil reservoired in Mt. Messenger sandstones at ~1,300 metres depth
- Oil is 44<sup>o</sup> API sweet, waxy crude, linked to Brent benchmark
- Puka-1 and Puka-2 suspended January 2015 due to falling oil prices and mechanical issues
- Pukatea-1 estimated to have a ~50% chance of encountering oil bearing sands at the Mt.
   Messenger on way to reaching primary, deeper Tikorangi objective
- Re-commencement of the Puka field production may be viable if moveable oil encountered in Mt. Messenger at Pukatea-1

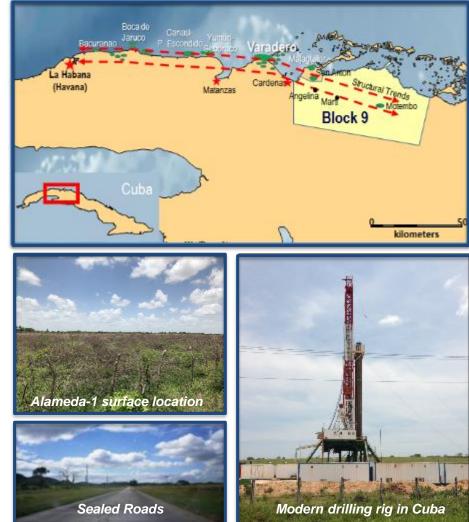


Contingent Resources (MMboe, 100%)					
	1C	2C	3C		
Puka (Mt. Messenger)	0.3	0.6	1.8		

## Cuba

## Cuba Block 9 – An Overview

- Multi-billion barrel conventional oil potential, located within close proximity to existing infrastructure
- 100% unencumbered interest in Block 9 PSC (2,380km<sup>2</sup> or 588,000 acres) located onshore in Cuba
- 25 year term in total (awarded in 2015)
- 8.5 year exploration period (to 2023):
  - Current sub-period (to Nov 2019) minimum work program drill one well, firm budget US\$4.55m
  - Bank guarantee in place for 50% of approved firm budget.
- MAY targeting drilling two wells commencing around mid 2018.
- Cuban civil engineering consultancy firm engaged and survey of well sites commenced
- Equipment/contractor procurement and permitting underway
- Farmout process underway, with a number of potential farminees visiting data room



## Cuba Block 9 – An Oil Rich Region

#### **Cuba Prospectivity and Market**

- Represents under-explored south-eastern margin of the Gulf of Mexico - one of the world's great petroleum mega provinces
- Limited application of modern exploration techniques due to 50+ year US embargo
- Cuba currently producing ~45,000 barrels of oil and 3 million cubic metres of gas per day
- Strong national focus on growing production
- ~50% of oil imported (mostly from Venezuela)

#### **Block 9 Prospectivity**

- Lightly explored but contains natural oil seeps and has several small discoveries
- Along trend from Varadero oil field (>11 billion barrels oil-in-place)
- Potential for Varadero type structures in Block 9
- Adjacent to TSX-listed Sherritt International's producing area (~14,000 barrels per day at operating cost of ~US\$8/bbl in Q3 2017)\*



US Geological Survey (2004): "Total undiscovered technically recoverable reserves in North Cuba Basin of 4.6 billion barrels of crude oil, 9.8Tcf of natural gas and 900 million barrels of natural gas liquids"

## Cuba Block 9 – Resource Assessment

### Exploration potential for over 12.5 billion barrels of oil-in-place

- Exploration potential of over 12.5 billion barrels of oil-in-place and Prospective Resources of 637 million barrels (unrisked Best Estimate, 100% basis)
- 19 individual leads identified in conventional plays
- Depths between 2,000 and 4,000 metres
- High potential multi-target Alameda prospect identified close to historical oil recoveries
- Recoverable volumes conservatively estimated using the historical 5% recovery factor for nearby Cuban fields
- Higher quality light crude oil potential in Block
  9 demonstrated by historical oil recoveries
- Ongoing assessment may add further potential
- Additional secondary objectives in Upper Sheet and Shallow Tertiary plays

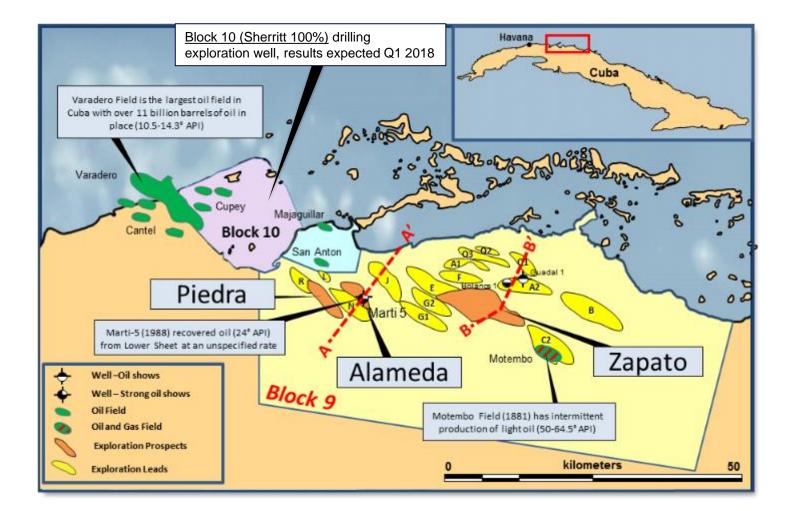


Block 9 Exploration Potential	Low	Best	High	Mean
	MMstb	MMstb	MMstb	MMstb
Oil-in-Place (unrisked, 100%)	1,181	12,746	44,151	18,518
Prospective Resources (recoverable, unrisked, 100%)	59	637	2,208	926

**Prospective Resources Cautionary Statement -** The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Future exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

## Cuba Block 9 – 19 Leads in Conventional Play

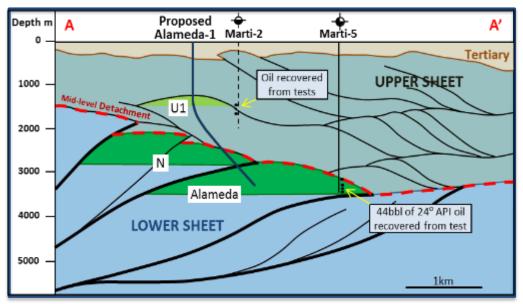
### Priority drill targets identified – Alameda, Zapato and Piedra



## Cuba Block 9 – Alameda Prospect

### Multi-target exploration drilling opportunity close to historic oil recoveries

- Primary objective in depth range from 3,000 to 3,700 metres
- Marti-5 (drilled 1988) recovered lighter oil (24°API) and had oil shows over an 850 metre gross interval from the Alameda objective
- 32% chance of success at primary objective
- Two shallower secondary objectives
- Combined exploration potential of over 2.5 billion barrels oil-in-place and 130 million barrels of recoverable oil (unrisked Best Estimate, 100% basis)
- Alameda-1 targeting up dip of known oil at two levels
- Currently designing well to test Alameda with potential for drilling around mid-2018
- Estimated 80 days to drill ~4000m from commencement of drilling



#### Alameda Recoverable Prospective Resources (100%, MMstb)

Objective	CoS*	Low	Best	High	Mean
U1	17%	2	25	93	38
Ν	22%	4	41	129	56
Alameda	32%	3	65	214	91

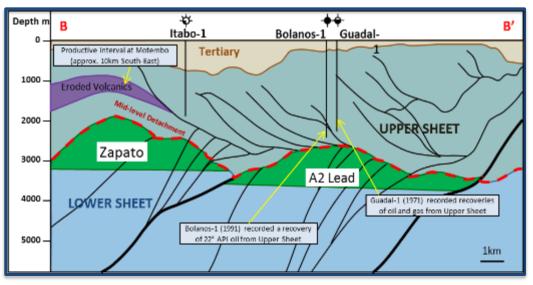
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## Cuba Block 9 – High Potential Zapato Prospect

### Multiple structures with hundred million barrel exploration potential

- Zapato Prospect is a large structure targeting fractured carbonate objective
- Close to the shallower Motembo oil field which historically produced high quality light crude, demonstrating working oil system
- Crest of structure at approximately 2,000 metres with nearly 1,000 metres vertical relief
- A2 Lead is a large structure supported by two nearby shallow wells that recovered oil from the upper sheet above the deeper A2 lower sheet target



#### Zapato & A2 Recoverable Prospective Resource (100%, MMstb)

	CoS*	Low	Best	High	Mean
Zapato	25%	5	71	297	118
A2 Lead	21%	9	69	213	93

**Prospective Resources Cautionary Statement -** The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Future exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

\* Chance of Success

## Cuba Block 9 – preparations for drilling in 2018

### Securing people, permits, equipment and services

- Cuba Block 9 PSC field work commenced
- Survey completed of Alameda-1 and Zapato-1 well sites, camp site and access road
- Benign surface conditions encountered at well site locations
- Appointed drilling planning coordinator
- Initiated field work with experienced local Cuban contractors
- Currently undertaking the engineering design for the surface facilities associated with the well
- Initiated permitting process, including environmental approvals required to begin exploration drilling targeted for around mid-2018
- Initiated procurement process for major equipment, service contractors and long lead items



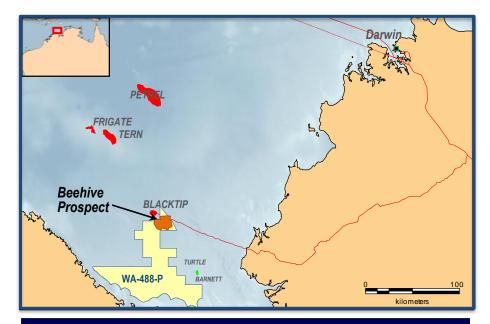


## WA-488-P (Beehive)

## Australia – giant Beehive Prospect

### Seismic Funding and Farmin Option Agreement with Total and Santos

- Beehive Prospective Resources estimated to range from 97 to 2,033 million barrels (100% share, Low-High estimates)
- Potentially the largest undrilled oil prospect
  offshore Australia
- Recent agreement with Total and Santos to fully fund a 3D seismic survey
- Seismic acquisition expected mid-2018, to be operated by Santos
- Melbana to retain 20% and be fully carried through first well drilled in WA-488-P if Total and/or Santos exercise farm-in option
- Shallow water, suitable for lower cost jack-up drilling rig
- Developable by FPSO or pipeline



#### Prospective Resources (MMboe, 100%)

Beehive	CoS*	Low	Best	Mean	High
Carboniferous objective	16%	97	558	940	2033

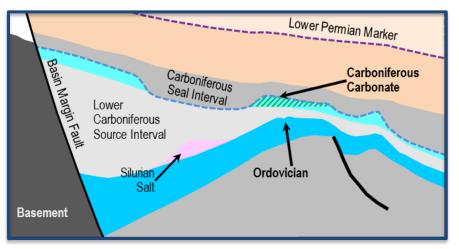
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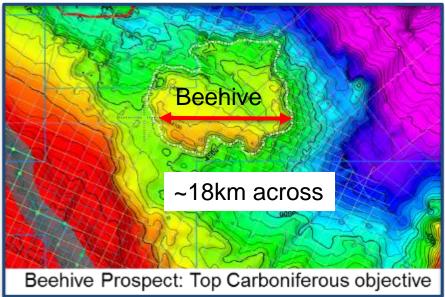
\* Chance of Success

### Australia – Beehive Prospect

### Beehive – a feature of enormous scale

- Beehive is a significant, multi billion barrel oil prospect located on WA-488-P
- Dominant hydrocarbon type is expected to be oil
- Located in ~40 metres water depth
- Target depth 4,000 4,500m
- Prospect reservoir is an isolated carbonate platform of Carboniferous age
- Enormous feature:
  - Carbonate platform is 18km across (approx. same as Melbourne CBD to Airport)
  - Mapped closure ~140km<sup>2</sup>
  - Vertical relief ~400 metres





### **Investment Highlights**

#### **New Zealand**

- High impact Pukatea-1 drilling commencing ~25 January 2018
- ✓ Pukatea has a Best Estimate Prospective Resource of 12.4 million boe\* (unrisked, 100% share)
- ✓ High Leverage and near term production in success case due to proximity to existing infrastructure

#### Cuba

- Only ASX listed company with Cuban energy exposure
- Block 9 exploration potential increased 50% to >12 billion barrels of oil-in-place and Prospective Resources of >600 million barrels (unrisked Best Estimate, 100% share)\*
- Priority drill targets identified:
  - Alameda Prospect
  - Zapato and Piedra Prospects
- Targeting drilling of up to 2 wells commencing around mid 2018
- Farmout process underway, significant interest

#### Australia

- Beehive prospect located in WA-488-P is potentially the largest undrilled target in Australia
- Recent execution of Seismic Funding and Farmin Option with Total and Santos
- ✓ Total and Santos to fully fund a 3D seismic survey, with Santos to operate, expected mid 2018
- Melbana retain 20% and fully carried through first well drilled in WA-488-P if Total and/or Santos exercise farm-in option

### Melbana Catalysts



### Multiple potential catalysts to support a significant re-rating

NEW ZEALAND PEP51153

- Pukatea-1 to commence drilling ~25 January 2018
- Two oil objectives in one well
- High leverage and near term production in success case

CUBA BLOCK 9 PSC

- Drilling results in Q1 2018 in adjacent Block 10 PSC
- Drill preparation milestones
- Potential farmout transaction
- Up to two wells to be drilled commencing around mid 2018

AUSTRALIA BEEHIVE

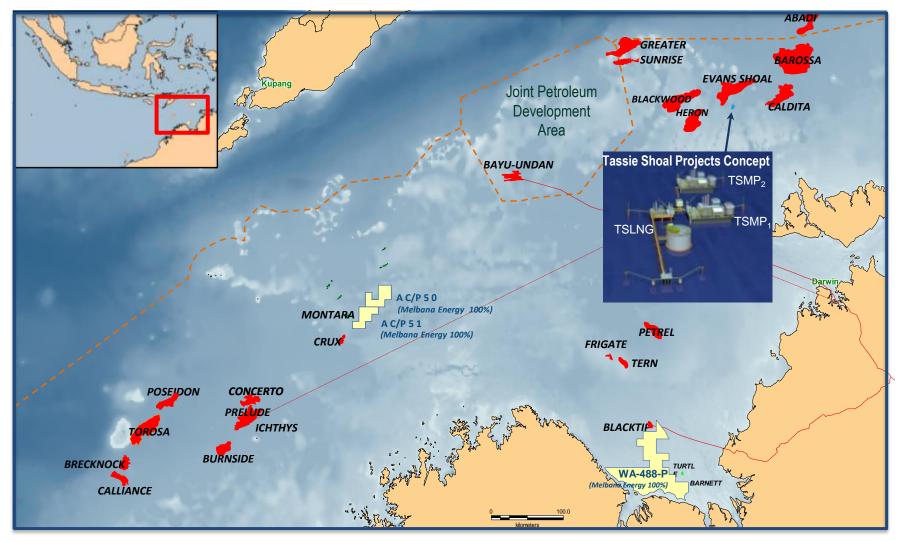
- 3D seismic acquisition, operated by Santos, expected mid 2018, Melbana fully carried
- Potential for Total and/or Santos to exercise farm-in option -Melbana retains 20% and fully carried through first well



## **Other Assets**

### Northern Australia Acreage and Projects

### Discrete upstream projects adjacent to proven hydrocarbons



## AC/P50 & AC/P51 (Melbana 55%\*): Multiple oil targets

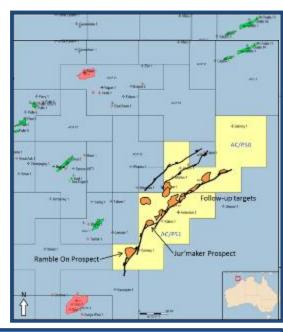
### New amplitude-supported objective identified

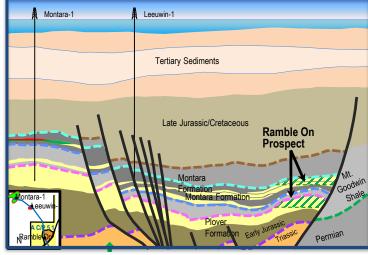
- Identified material Ramble On and Jur'maker oil prospects in proven petroleum system defined on modern 3D seismic data
- Suitable for lower cost jack-up drilling rig
- 3D seismic reprocessing completed (Melbana free carried)
  - Significant improvement in data quality
  - Seismic amplitude-supported objective identified immediately above existing Ramble On prospect
- Rouge Rock Pty Ltd exercised option to farmin for 45% interest in both permits
- Near term activities:
  - Updating prospectivity on reprocessed seismic data
  - Seek to farm out in 2018
  - Future drilling potential if farmout successful

#### Prospective Resources (100%)\*\*

Ramble On	CoS	Low	Best	Mean	High
Oil Scenario (MMstb)	9%	8	39	56	130
Gas Scenario (Bscf)	2%	29	162	461	1,136
Total (MMboe)	11%	8	38	63	150

\* Subject to option by Far Cape Pte Ltd for a 5% carried participating interest in first well in either permit \*\*See Prospective Resources Cautionary Statement on page 8





### Shallow water, innovative low cost development paths for regional stranded gas

- Region has substantial undeveloped low and high CO<sub>2</sub> gas that needs a viable development solution
- Melbana Energy has developed the concepts for siting Methanol and LNG production plants on Tassie Shoal
- Long-dated Federal and State Government Environmental approvals (valid to 2052)
- Tassie Shoal Methanol Plants (TSMP) and Tassie Shoal LNG (TSLNG) dramatically reduce capital costs compared to alternatives
  - Fixed to seabed
  - Offshore modular construction lowers costs
  - Costs of long pipelines to shore avoided
  - Avoids floating facility complexity
- Pre-FEED engineering studies completed
- Established relationships with key technology providers
- Significant potential value by acquiring and/or processing third party discovered but stranded gas and converting into LNG or methanol for sale to international markets

