



# EMPYREAN

ENERGY PLC

**EMPYREAN ENERGY PLC**  
**Registered Number 05387837**

**Interim Results 30 September 2019**



## Highlights

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### ***Block 29/11, Pearl River Mouth Basin, China (EME 100%)***

- Comprehensive analysis of 3D seismic confirms the presence of well-defined "gas clouds" over Jade and Topaz prospects, further mitigating exploration risk; and
- The presence of gas clouds has been used to discover a number of significant oil accumulations globally.

### ***Duyung PSC Project, Indonesia (EME 10%)***

- Successful Mako gas field appraisal drilling programme completed;
- Appraisal well (Tambak-2) logs confirm excellent quality reservoir at a ~ 13.5km step out from Mako South-1;
- Tambak-1 encountered very well-developed upper sandstone unit, ~ 17 feet thick, together with a lower sandstone unit ~ 66 feet thick, providing an overall gross thickness of approximately 83 feet of intra-Muda sandstone;
- Wireline logs confirming the excellent permeabilities and porosities within the intra-Muda reservoir;
- Results of successful appraisal of Tambak-1 and Tambak-2 expected to provide significant uplift in overall tank size and potential recoverable resources at the Mako gas field; and
- Independent re-assessment of resources commissioned, which is expected to be completed during Q1 2020.

### ***Sacramento Basin, California (EME 25-30%)***

- Technical evaluation for future drilling program nears completion.

### ***Corporate***

- Placement at 10p per share raised £365,580 (US\$450,406) before costs in September 2019.

For further information please visit [www.emyreanenergy.com](http://www.emyreanenergy.com) or contact the following:

#### **Empyrean Energy plc**

Tom Kelly Tel: +618 9380 9920

#### **Cenkos Securities plc (NOMAD)**

Neil McDonald nmcdonald@cenkos.com Tel: +44 (0) 131 220 9771  
Pete Lynch plynch@cenkos.com Tel: +44 (0) 131 220 9772

#### **St Brides Partners Ltd (Public Relations Adviser)**

Priit Piip priit@stbridespartners.co.uk Tel: +44 (0) 20 7236 1177  
Cosima Akerman cosima@stbridespartners.co.uk Tel: +44 (0) 20 7236 1177

## Chairman's Statement

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Empyrean continued to make progress on its portfolio of exploration projects, primarily in China and Indonesia, during the six months to 30 September 2019.


The Company has continued activity at its China project during the period, in preparation for the drilling of an initial exploration well under the PSC terms. To date the Company has completed a substantial volume of work on the project, increasing and independently validating its resource base and decreasing exploration risk through rigorous seismic data analysis and an oil migration study completed earlier in the year. During the reporting period comprehensive analysis of the excellent quality 3D seismic data acquired by Empyrean has confirmed the presence of well-defined low reflectivity zones ('gas clouds'), adding further confidence to the technical merits of the project. Gaffney and Cline has estimated close to a 1 in 3 chance of geological success at Jade and Topaz, which is particularly exciting. The Company now looks forward to finalising preparations to drill the first of the large scale, relatively low risk targets on Block 29/11.

Post-period end, the operator in Indonesia, Conrad Petroleum, has conducted a successful appraisal of the Mako gas discovery (comprising the Tambak-1 and Tambak-2 wells), confirming the presence of a large, areally extensive single gas accumulation. The results of the successful appraisal drilling in both Tambak-1 and Tambak-2 should see a significant increase in the gross resources in the Mako gas field to be included in the independent assessment of resources, currently envisaged for completion during Q1 2020.

In California, the ongoing technical evaluation is now near completion to determine the future drilling program for 2020.

In September, the Company completed a placement of its shares at 10p, raising approximately £365,000 to meet contributions to the first phase of the successful drilling campaign in Indonesia and for its general working capital requirements. The Company requires to put in place additional funding in order to finance its share of costs for the second phase of drilling in Indonesia and to fund its ongoing activities across the portfolio. I am therefore pleased that the Company has today announced the signing of a new two-year, £10 million equity placement facility with Long State Investments to provide Empyrean with long-term access to capital and the ability to draw on the facility at its sole discretion, if required. We are also currently assessing several other financing and strategic alternatives to provide the Company with additional short-term working capital, having received indications of interest from a number of potential investors and with the earlier restrictions on the resale of the Coro shares received by Empyrean as consideration for the sale of part of its interest in Indonesia now lifted. Further announcements will be made in due course.

The Company continues to assess other acquisition opportunities in parallel with the current activities and will also evaluate any attractive divestment opportunities in due course.



**Patrick Cross**

Non-Executive Chairman

24 December 2019



## Operational Review

### China Block 29/11 Project (100% WI)

#### Summary

Block 29/11 is located in the prolific Pearl River Mouth Basin, offshore China, approximately 200km Southeast of Hong Kong. Empyrean is the operator with 100% of the exploration rights of the permit during the exploration phase of the project. In the event of a commercial discovery, China National Offshore Oil Corporation Limited (CNOOC) will have a back in right to 51% of the permit.

Following the completion and interpretation of the 3D seismic data acquired on Block 29/11, the prospective resources (un-risked) of all three prospects on the Block (Jade, Topaz and Pearl) were independently validated, by Gaffney and Cline, who completed an audit of the Company's oil in place estimates in November 2018. Total mean oil in place estimates on the three prospects are now 884 MMbbl on an un-risked basis.

#### Oil in place (MMbbl) audited by Gaffney and Cline

Prospect	P90	P50	P10	Mean	GCoS
Jade	93	187	395	225	32%
Topaz	211	434	891	506	30%
Pearl	38	121	302	153	15%

In addition, Gaffney and Cline estimated close to a 1 in 3 chance of geological success at Jade and Topaz, which is particularly pleasing. Exploration risk has been further mitigated by the completion of an oil migration study during June 2018 which established oil migration pathways into all three prospects. During the reporting period, in May 2019 as detailed further below, the Company further solidified the technical merits of the project by confirming the presence of well-defined gas clouds over the Jade and Topaz prospects.

Having completed the Geophysical Service Agreement phase (GSA) successfully, Empyrean signed the PSC for Block 29/11 with CNOOC in September 2018. The contract came into effect on 13 December 2018 with the first phase commitment being the drilling of one exploration well within a 2.5 year period.

#### *Presence of Gas Clouds on 3D seismic data further mitigates exploration risk at Jade and Topaz prospects*

In May 2019 the Company announced that comprehensive analysis of the excellent quality 3D seismic data acquired by Empyrean during 2017 had confirmed the presence of well-defined low reflectivity zones ('gas clouds') in the overburden strata above the Jade and Topaz structures on offshore China Block 29/11. On good quality 3D seismic, the presence of gas clouds has been used as an effective exploration tool in prolific basins worldwide including the North Sea, Gulf of Mexico, and the Malaysian Sabah basin, resulting in the discovery of significant amounts of oil. CNOOC gave authorisation to Empyrean to independently analyse their 3D seismic data immediately west of Block 29/11 over 4 large oil discoveries located close to Block 29/11. This analysis confirmed the presence of gas clouds in the overburden on all 4 discoveries. At the same time, three dry wells drilled by CNOOC in proximity to the discoveries, outside Block 29/11, have been analysed, and the 3D seismic data over these wells confirms the lack of any gas clouds. Similar technical work was carried out over two dry wells in Block 29/11. These wells were drilled prior to Empyrean's involvement and without any 3D seismic data. Both wells confirm the lack of any gas clouds in overburden. As a result, it is Empyrean's interpretation that the



## Operational Review

presence of well-defined gas clouds in the overburden on both the Jade and Topaz structures mitigates the exploration risk on these prospects significantly. The Pearl prospect does not have 100% coverage with 3D seismic to enable the same comprehensive analysis and assessment at this point in time.

### Duyung PSC Project, Indonesia (EME 10%)

#### Summary

In April 2017, Empyrean acquired from Conrad Petroleum Pte Ltd (**Conrad**) a 10% shareholding in West Natuna Exploration Ltd (**WNEL**), which holds a 100% Participating Interest in the Duyung Production Sharing Contract (**Duyung PSC**) in offshore Indonesia and is the operator of the Duyung PSC. Subject to final government approvals, this shareholding will be reduced to 8.5% following the agreement for Coro Energy plc ("**Coro**") to acquire a 15% interest in the Duyung PSC from WNEL, completed on a pro rata basis from the existing owners, as announced in February 2019. The gross cost of the drilling programme is expected to be approximately \$17MM-19MM to the PSC partners on a fully tested basis, including rig mobilisation and de-mobilisation, for which Coro is funding US\$10.5MM. Empyrean is funding 8.5% of the additional drilling campaign costs over and above the Coro funding.

The Duyung PSC covers an offshore permit of approximately 1,100km<sup>2</sup> in the prolific West Natuna Basin. The main asset in the permit is the Mako shallow gas discovery that has an independently verified 2C and 3C gas resource of between 430-650 Bcf recoverable gas, that was completed before drilling the Mako South-1 well.

#### Mako Gas Field - Contingent Resources certified by Gaffney and Cline

Category		1C	2C	3C
Gas Recoverable	(Bcf)	184	276	392

The Mako South-1 well exceeded the Company's expectations encountering excellent reservoir quality rock with high permeability sands in the multi Darcy range with 23 feet of gas bearing reservoir. This zone flowed gas at a stabilised rate of 10.9 million cubic feet per day through a 2 inch choke. The gas is of high-quality being close to 100% methane.

#### Duyung PSC Drilling Programme - October/November 2019

During October and November 2019, the operator conducted a successful appraisal drilling campaign in the Duyung PSC, comprising two wells. Both wells appraised the intra-Muda sands of the Mako gas field with one of those wells also designed to test the deeper Tambak prospect in the Lower Gabus interval.

#### Tambak-2

The Tambak-2 well successfully reached a total depth of 1,650 feet on 15 October 2019, the top of the targeted intra-Muda reservoir depth came in as prognosed approximately 10 feet up-dip to Conrad's Mako South-1 gas discovery well over 13.5 km away.

A full logging suite was acquired, including formation pressure measurements, confirming a 33 feet gross gas pay zone (30 feet net) with formation permeabilities calculated to be over 1 Darcy across the best quality zone. The pressures and gas-water contact depth in Tambak-2 are the same as those encountered in Mako South-1, confirming a very large "single-tank" or areal extent of the Mako gas field.



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While preparing for a Drill Stem Test (DST) across the intra-Muda reservoir, an inflatable open hole bridge plug (**packer**), used to isolate the gas-bearing reservoir for testing, failed. During operations to recover the packer, the well started flowing natural gas to surface. For safety reasons, the well was immediately shut in. Subsequently, utilising the appropriate well control practices, the well was killed using heavy mud containing barite. A significant quantity of the heavy mud was lost in the highly permeable intra-Muda reservoir.

Following this operation, the well was conditioned, and the DST equipment set in place into the wellbore. Two separate DST attempts failed to flow gas to the surface due to the heavy formation damage from the kill mud.

### *Tambak-1*

The Tambak-1 well, located approximately 4.5 km north of the Mako South-1 well, was designed to both appraise the Mako gas field and test the underlying Tambak exploration prospect.

Following a DST, which flowed dry gas at 11.4 MMscf/d on a 181/64 inch (2.8 inch) choke with well head tubing pressure being maintained at 225psi, operations concluded in late November 2019, resulting in the highly successful appraisal of the Mako gas field. The Tambak-1 well encountered 82 feet of total intra-Muda reservoir sandstones with 56 feet of better quality upper sandstone, confirmed a common gas-water contact across the field and culminated in the DST demonstrating the potential deliverability of the Mako reservoir.

The well was deepened beneath the Mako field to a depth of 5,062 feet true vertical depth sub-sea (TVDSS) to test the Tambak exploration prospect. The well encountered multiple sandstone intervals in the Lower Gabus section as predicted, with corresponding hydrocarbon shows seen while drilling. However, petrophysical interpretation of wireline log data has concluded that these sandstones have low gas saturations and attempts to collect fluid samples and pressure data demonstrate low permeabilities.

Tambak-1 was plugged and abandoned, as originally planned, prior to the Asian Endeavour 1 rig being demobilised. While there is still more comprehensive well data to be retrieved from down hole tools and gauges, the drilling campaign was completed within the expected time frame and within budget. All of the data is being analysed and updated into static and dynamic models for the field.

### *Conclusion*

In summary, the appraisal of the intra-Muda sandstones of the Mako gas field has been better than expected with better quality sands and a thicker reservoir encountered and the flow test now from two wells has confirmed the deliverability of Mako gas. The deeper Tambak prospect has failed to provide a commercial discovery but this disappointment has largely been offset by the excellent appraisal results at Mako which we believe will deliver a significant uplift in overall tank size.

As per the table above, an independent review by Gaffney Cline & Associates previously ascribed gross 2C resources of 276 Bcf (48.78 MMboe) of recoverable dry gas in the Mako field with gross 3C resources of 392 Bcf (69.3 MMboe) representing additional field upside. The valuable information collected from this campaign will be used to revisit the resource estimates for the field.

## Operational Review

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The Duyung PSC partners will be commissioning an independent assessment of resources, which we currently expect to be completed during Q1 2020.

### **Sacramento Basin, California (EME 25-30%)**

#### *Summary*

In May 2017, Empyrean agreed to farm-in to a package of opportunities including the Dempsey and Alvares prospects in the Northern Sacramento Basin, onshore California.

The first exploration well, Dempsey 1-15, was drilled to a TD of 9,747 feet in September 2017. Comprehensive data was collected including wireline logs in the Dempsey 1-15 well. The analysis confirmed numerous potentially gas-bearing zones. A comprehensive production testing programme was conducted to assess the production capability of these zones through Q4 2017 and Q1 2018 with three zones in the well tested.

In July 2018, Dempsey 1-15 commenced production of sales gas into pipeline at an approximate rate of 1,300 mcf per day from combined zones in Kione Sandstone and deeper cretaceous zones. However, the flow rate was not sustainable longer term due to a relatively tight and poor-quality reservoir and subsequent water ingress into the well resulted in the well-being shut in for technical evaluation to determine the zone from which the water was entering and to provide for forward program alternatives. A workover is required to reduce water flow (interpreted to be from separate wet reservoirs) in the wellbore. A detailed and comprehensive analysis of subsurface data is to be undertaken with the aim of finding a better-quality reservoir along the "Dempsey trend".

#### *Technical Evaluation*

The joint venture continues to integrate the subsurface data with regional geology and seismic data to evaluate additional more attractive targets in thicker reservoir units for future drilling.

The Dempsey Trend AMI, in which Empyrean has the right to earn a 30% interest, extends to approximately 250,000 acres (including the Dempsey structure) and includes at least three large Dempsey style identified follow up prospects, including the Anzus and Borba prospects which have shown promising initial interpretation results.

The joint venture continues evaluation work at the Alvares-1 well (regulatory approval was obtained to test the Alvares-1 well in September 2018). The initial plan at Alvares was designed to re-enter and assess the integrity of the wellbore as the basis for a decision to either record modern logs through casing or to identify the more prospective zones for perforation.

During the reporting period the drilling application for the Borba Prospect was approved by the County and post the reporting period the final approval from California Department of Geological and Geothermal Resources was received.

### **Riverbend Project (10%) and Eagle Oil Pool Development Project (58.084% WI)**

Little or no work has been completed on these projects in the period and no budget has been prepared for 2019/20 whilst the Company focuses on other projects.



## Operational Review

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### Definitions

**2C:** Contingent resources are quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations by application of development projects, but which are not currently considered to be commercially recoverable. The range of uncertainty is expressed as 1C (low), 2C (best) and 3C (high).

\* Cautionary Statement: The volumes presented in this announcement are STOIP estimates only. A recovery factor needs to be applied to the undiscovered STOIP estimates based on the application of a future development project. The subsequent estimates, post the application of a recovery factor, will have both an associated risk of discovery and a risk of development. Further exploration, appraisal and evaluation is required to determine the existence of a significant quantity of potentially movable hydrocarbons.

A handwritten signature in black ink, appearing to read "Gajendra Bisht", written over a horizontal line.

**Gajendra Bisht M.Sc. (Tech) in Applied Geology**

Executive Director (Technical)

24 December 2019



**Statement of Comprehensive Income**  
**For the Period Ended 30 September 2019**

		<b>6 months to 30 September 2019 (unaudited) US\$'000</b>	<b>6 months to 30 September 2018 (unaudited) US\$'000</b>	<b>Year ended 31 March 2019 (audited) US\$'000</b>
<b>Revenue</b>		-	-	-
<b>Cost of sales</b>				
Operating costs		-	-	-
Impairment of oil and gas properties		(47)	(51)	(47)
<b>Total cost of sales</b>		<b>(47)</b>	<b>(51)</b>	<b>(47)</b>
<b>Gross loss</b>		<b>(47)</b>	<b>(51)</b>	<b>(47)</b>
<b>Administrative expenditure</b>				
Administrative expenses		(153)	(218)	(375)
Directors' remuneration		(186)	(175)	(212)
Compliance fees		(87)	(42)	(386)
Foreign exchange differences		(18)	(34)	(49)
<b>Total administrative expenditure</b>		<b>(444)</b>	<b>(469)</b>	<b>(1,022)</b>
<b>Operating loss</b>		<b>(491)</b>	<b>(520)</b>	<b>(1,069)</b>
Finance income	5	1,349	1,145	1,114
Fair value revaluation	4	30	-	98
<b>Profit from continuing operations before taxation</b>		<b>888</b>	<b>625</b>	<b>143</b>
Tax benefit in current year		-	5	2
<b>Profit from continuing operations after taxation</b>		<b>888</b>	<b>630</b>	<b>145</b>
<b>Total comprehensive profit for the year</b>		<b>888</b>	<b>630</b>	<b>145</b>
Earnings per share from continuing operations (expressed in cents)				
- Basic	2	0.21c	0.15c	0.03c
- Diluted		0.21c	0.15c	0.03c

**Statement of Financial Position**  
**As at 30 September 2019**

		6 months to 30 September 2019 (unaudited) US\$'000	6 months to 30 September 2018 (unaudited) US\$'000	Year ended 31 March 2019 (audited) US\$'000
<b>Assets</b>				
<b>Non-current assets</b>				
Oil and gas properties: exploration and evaluation	3	9,351	8,590	9,075
Investments	4	3,266	2,866	3,200
Total non-current assets		<b>12,617</b>	11,456	12,275
<b>Current assets</b>				
Trade and other receivables		45	188	37
Cash and cash equivalents		472	230	332
Total current assets		<b>516</b>	418	369
<b>Liabilities</b>				
<b>Current liabilities</b>				
Trade and other payables		468	451	374
Provisions		54	54	54
Derivative financial liabilities	5	-	1,318	1,349
Total current liabilities		<b>522</b>	1,823	1,777
<b>Net current liabilities</b>		<b>(6)</b>	(1,405)	(1,408)
<b>Net assets</b>		<b>12,611</b>	10,051	10,867
<b>Shareholders' equity</b>				
Share capital	6	1,278	1,205	1,232
Share premium		27,304	25,280	26,524
Share based payment reserve		99	39	69
Retained losses		(16,070)	(16,473)	(16,958)
<b>Total equity</b>		<b>12,611</b>	10,051	10,867

## Statement of Cash Flows

### For the Period Ended 30 September 2019

Notes	6 months to 30 September 2019 (unaudited) US\$'000	6 months to 30 September 2018 (unaudited) US\$'000	Year ended 31 March 2019 (audited) US\$'000
Cash generated from operating activities – continuing operations	(430)	(624)	(971)
Receipt of corporation tax	-	1,325	1,322
<b>Net cash (outflow)/inflow from operating activities</b>	<b>(430)</b>	<b>701</b>	<b>351</b>
Purchase of oil and gas properties: exploration and evaluation – continuing operations	(323)	(531)	(1,424)
Acquisition of investments	(36)	(294)	(530)
Prepayments received - disposal of investments	120	-	175
Receipt of exploration bonds and bank guarantees	-	-	150
<b>Net cash outflow for investing activities</b>	<b>(239)</b>	<b>(825)</b>	<b>(1,629)</b>
Issue of ordinary share capital	826	-	1,314
Payment of equity issue costs	-	-	(43)
<b>Net cash inflow from financing activities</b>	<b>826</b>	<b>-</b>	<b>1,271</b>
<b>Net increase/(decrease) in cash and cash equivalents</b>	<b>157</b>	<b>(124)</b>	<b>(7)</b>
Cash and cash equivalents at the start of the year	332	388	388
Forex on cash held	(17)	(34)	(49)
<b>Cash and cash equivalents at the end of the period</b>	<b>472</b>	<b>230</b>	<b>332</b>



**Statement of Changes in Equity**  
**For the Year Period 30 September 2019**

	Share capital	Share premium reserve	Share based payment reserve	Retained losses	Total equity
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
<b>Balance at 1 April 2018</b>	<b>1,205</b>	<b>25,280</b>	<b>10</b>	<b>(17,103)</b>	<b>9,392</b>
Profit after tax for the period	-	-	-	630	630
Total comprehensive profit for the period	-	-	-	630	630
<i>Contributions by and distributions to owners</i>					
Share based payment expense	-	-	29	-	29
<b>Contributions by and distributions to owners</b>	<b>-</b>	<b>-</b>	<b>29</b>	<b>-</b>	<b>29</b>
<b>Balance at 30 September 2018</b>	<b>1,205</b>	<b>25,280</b>	<b>39</b>	<b>(16,473)</b>	<b>10,051</b>
<b>Balance at 1 April 2018</b>	<b>1,205</b>	<b>25,280</b>	<b>10</b>	<b>(17,103)</b>	<b>9,392</b>
Profit after tax for the year	-	-	-	145	145
Total comprehensive profit for the year	-	-	-	145	145
<i>Contributions by and distributions to owners</i>					
Shares issued in the period	27	1,287	-	-	1,314
Equity issue costs	-	(43)	-	-	(43)
Share based payment expense	-	-	59	-	59
<b>Contributions by and distributions to owners</b>	<b>27</b>	<b>1,244</b>	<b>59</b>	<b>-</b>	<b>1,330</b>
<b>Balance at 31 March 2019</b>	<b>1,232</b>	<b>26,524</b>	<b>69</b>	<b>(16,958)</b>	<b>10,867</b>
Profit after tax for the period	-	-	-	888	888
Total comprehensive income for the period	-	-	-	888	888
<i>Contributions by and distributions to owners</i>					
Shares issued in the period	46	780	-	-	826
Share based payment expense	-	-	30	-	30
<b>Contributions by and distributions to owners</b>	<b>46</b>	<b>780</b>	<b>30</b>	<b>-</b>	<b>856</b>
<b>Balance at 30 September 2019</b>	<b>1,278</b>	<b>27,304</b>	<b>99</b>	<b>(16,070)</b>	<b>12,611</b>

The accompanying accounting policies and notes form an integral part of these financial statements.

## Statement of Accounting Policies For the Period Ended 30 September 2019

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### **Basis of preparation**

The Company's condensed interim financial statements for the six months ended 30 September 2019 have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union and Companies Act 2006. The principal accounting policies are summarised below. The financial report is presented in the functional currency, US dollars and all values are shown in thousands of US dollars (US\$'000). The financial statements have been prepared on a historical cost basis and fair value for certain assets and liabilities. The same accounting policies, presentation and methods of computation are followed in these financial statements as were applied in the Company's latest audited financial statements for the year ended 31 March 2019, except for adoption of the following new standards:

- (i) IFRS 16: Leases - effective for annual periods beginning on or after 1 January 2019. The adoption of IFRS 16 has no impact on the 30 September 2019 interim financial statements as no material leases were held by the Company in this period or the comparative period.

The financial information for the period ended 30 September 2019 does not constitute the full statutory accounts for that period. They have not been reviewed by the Company's auditor. The Annual Report and financial statements for the year ended 31 March 2019 have been filed with the Registrar of Companies. The independent auditor's report on the Annual Report and financial statements was unqualified and did not contain a statement under Section 498(2) or 498(3) of the Companies Act 2006, but did draw attention to a material uncertainty relating to going concern.

### **Going concern**

The Company's principal activity during the year has been the acquisition and development of its exploration projects. The Company had a cash balance of US\$0.47m at 30 September 2019 (US\$0.33m: 31 March 2019), net current liabilities of US\$0.01m at 30 September 2019 (net current liabilities of US\$1.41m: 31 March 2019) and net operating cash outflows of US\$0.43m at 30 September 2019 (US\$0.35m inflows: 31 March 2019).

The Directors have prepared cash flow forecasts for the Company covering the period to 30 November 2020 and show that the Company will require further funding within the next 12 months. The Directors have an appropriate plan to raise additional funds as and when it is required, either through the sale of existing assets, through joint ventures of existing assets or through equity or debt funding. In addition, the Company raised £0.37m (US\$0.45m) in September 2019 through a placement at 10p per share

The Directors have therefore concluded that it is appropriate to prepare the Company's interim financial statements on a going concern basis. However, in the absence of additional funding being in place at the date of this report, these conditions indicate the existence of a material uncertainty which may cast significant doubt over the Company's ability to continue as a going concern and, therefore, that it may be unable to realise its assets and discharge its liabilities in the normal course of business. The interim financial statements do not include the adjustments that would result if the Company was unable to continue as a going concern.

## 1. Segmental analysis

The Directors consider the Company to have three geographical segments, being China (Block 29/11 project), Indonesia (Duyung PSC project) and North America (Sacramento Basin project), which are all currently in the exploration and evaluation phase. Corporate costs relate to the administration and financing costs of the Company and are not directly attributable to the individual projects. The Company's registered office is located in the United Kingdom.

Details	China US\$'000	Indonesia US\$'000	USA US\$'000	Corporate US\$'000	Total US\$'000
<b>30 September 2019</b>					
Revenue from continued operations	-	-	-	-	-
Cost of sales of continued operations	-	-	(47)	-	(47)
<b>Segment result</b>	-	-	(47)	-	(47)
Unallocated corporate expenses	-	-	-	(444)	(444)
<b>Operating loss</b>	-	-	(47)	(444)	(491)
Finance income	-	-	-	1,349	1,349
Fair value revaluation	-	30	-	-	30
<b>Profit/(loss) before taxation</b>	-	30	(47)	905	888
Tax benefit in current year	-	-	-	-	-
<b>Profit/(loss) after taxation</b>	-	30	(47)	905	888
<b>Total comprehensive profit/(loss)</b>	-	30	(47)	905	888
Segment assets	5,479	3,266	3,872	-	12,617
Unallocated corporate assets	-	-	-	516	516
<b>Total assets</b>	<b>5,479</b>	<b>3,266</b>	<b>3,872</b>	<b>516</b>	<b>13,133</b>
Segment liabilities	-	295	-	-	295
Unallocated corporate liabilities	-	-	-	227	227
<b>Total liabilities</b>	-	<b>295</b>	-	<b>227</b>	<b>522</b>

Details	China US\$'000	Indonesia US\$'000	USA US\$'000	Corporate US\$'000	Total US\$'000
<b>30 September 2018</b>					
Revenue from continued operations	-	-	-	-	-
Cost of sales of continued operations	-	-	(51)	-	(51)
<b>Segment result</b>	-	-	(51)	-	(51)
Unallocated corporate expenses	-	-	-	(469)	(469)
<b>Operating loss</b>	-	-	(51)	(469)	(520)
Finance income/(expense)	-	-	-	1,145	1,145
<b>Profit/(loss) before taxation</b>	-	-	(51)	676	625
Tax benefit in current year	-	-	-	5	5
<b>Profit/(loss) after taxation</b>	-	-	(51)	681	630
<b>Total comprehensive profit/(loss)</b>	-	-	(51)	681	630
Segment assets	4,769	3,017	3,821	-	11,607
Unallocated corporate assets	-	-	-	267	267
<b>Total assets</b>	<b>4,769</b>	<b>3,017</b>	<b>3,821</b>	<b>267</b>	<b>11,874</b>
Segment liabilities	-	-	290	-	290
Unallocated corporate liabilities	-	-	-	1,533	1,533
<b>Total liabilities</b>	-	-	<b>290</b>	<b>1,533</b>	<b>1,823</b>

Details	China US\$'000	Indonesia US\$'000	USA US\$'000	Corporate US\$'000	Total US\$'000
<b>31 March 2019</b>					
Revenue from continued operations	-	-	-	-	-
Cost of sales of continued operations	-	-	(47)	-	(47)
<b>Segment result</b>	-	-	(47)	-	(47)
Unallocated corporate expenses	-	-	-	(1,022)	(1,022)
<b>Operating loss</b>	-	-	(47)	(1,022)	(1,069)
Finance income/(expense)	-	-	-	1,114	1,114
Fair value revaluation	-	98	-	-	98
<b>Profit/(loss) before taxation</b>	-	98	(47)	92	143
Tax benefit in current year	-	-	-	2	2
<b>Profit/(loss) after taxation</b>	-	98	(47)	94	145
<b>Total comprehensive profit/(loss) for the financial year</b>	-	98	(47)	94	145
Segment assets	5,222	3,200	3,853	-	12,275
Unallocated corporate assets	-	-	-	369	369
<b>Total assets</b>	<b>5,222</b>	<b>3,200</b>	<b>3,853</b>	<b>369</b>	<b>12,644</b>
Segment liabilities	-	175	-	-	175
Unallocated corporate liabilities	-	-	-	1,602	1,602
<b>Total liabilities</b>	-	<b>175</b>	-	<b>1,602</b>	<b>1,777</b>

	6 months to 30 September 2019 (unaudited)	6 months to 30 September 2018 (unaudited)	Year ended 31 March 2019 (audited)
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## 2. Earnings per share

The basic earnings per share is derived by dividing the profit/(loss) after taxation for the year attributable to ordinary shareholders by the weighted average number of shares on issue being 431,260,240 (2018: 413,995,110). For the current financial period, exercise of options on issue is anti-dilutive and as such the diluted earnings per share is the same as the basic loss per share. Details of potentially issuable shares that could dilute earnings per share in future periods are set out in Note 6.

### Earnings per share from continuing operations

Profit after taxation from continuing operations

Earnings per share – basic	US\$888,000 0.21c	US\$630,000 0.15c	US\$145,000 0.03c
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Profit after taxation from continuing operations  
adjusted for dilutive effects

Earnings per share – diluted	US\$888,000 0.21c	US\$630,000 0.15c	US\$145,000 0.03c
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	6 months to 30 September 2019 (unaudited)	6 months to 30 September 2018 (unaudited)	Year ended 31 March 2019 (audited)
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## 3. Oil and gas properties: exploration and evaluation

Balance brought forward	9,075	7,820	7,820
Additions <sup>(a)</sup>	323	821	1,302
Impairment	(47)	(51)	(47)
Net book value	9,351	8,590	9,075

(a) The Company was awarded its permit in China in December 2016. Block 29/11 is located in the Pearl River Mouth Basin, offshore China. Empyrean is operator with 100% of the exploration right of the Permit during the exploration phase of the project. The initial contractual term is for two years with a work programme commitment of acquisition, processing and interpretation of 580km<sup>2</sup> of 3D seismic data. In May 2017 Empyrean entered into a joint project with ASX listed Sacgasco Limited, to test a group of projects in the Sacramento Basin, California, including two mature, multi-TcF gas prospects in Dempsey (EME 30%) and Alvarez (EME 25%) and also further identified follow up prospects along the Dempsey trend (EME 30%).

## 4. Investments

	6 months to 30 September 2019 (unaudited)	6 months to 30 September 2018 (unaudited)	Year ended 31 March 2019 (audited)
Balance brought forward	3,200	2,572	2,572
Additions <sup>(a)(b)</sup>	36	294	530
Fair value revaluation <sup>(c)</sup>	30	-	98
Net book value	3,266	2,866	3,200



- (a) The Company acquired a 10% working interest in the Duyung PSC, Indonesia during the 2018 financial year. For further information, please refer to the Operational Review. In April 2019 the Company also acquired shares in AIM listed Coro valued at US\$185,000 as part of the purchase agreement detailed in Note 4(b) below.
- (b) In February 2019 Empyrean announced that it had entered into a binding, conditional purchase agreement (the Agreement) pursuant to which AIM listed Coro would acquire a 15% interest in the Duyung PSC from WNEL for aggregate consideration in cash and Coro shares of US\$4.8 million (of which Empyrean received US\$295,000 in cash and 6,090,504 Coro shares) and the contribution of US\$10.5 million by Coro toward the 2019 drilling campaign at the Mako gas field. The cash and share component of the consideration was paid pro rata to the existing owners of WNEL, being Empyrean, which currently had a 10% effective interest in the Duyung PSC, and Conrad Petroleum Ltd, which currently had a 90% effective interest in the Duyung PSC, each through shareholding in WNEL.

The consideration paid comprised US\$2.95 million in cash and US\$1.85 million in the form of 60,905,037 new ordinary shares in Coro. Empyrean received cash consideration of US\$295,000 (currently recorded as Prepayments Received in Trade and Other Payables until transaction is completed) and Consideration Shares with a value of US\$185,000 for the transfer to Coro of 1.5% of its current 10% interest in the Duyung PSC, reducing its interest to 8.5% once the transaction is completed (currently only subject to government and regulatory approval).

- (c) The Company's interest in the Duyung PSC is classified under IFRS 9 as a financial asset at fair value through profit or loss, due to the 10% shareholding and lack of significant influence over operations. Financial assets designated as fair value through profit or loss are measured at fair value through profit or loss at the point of initial recognition and subsequently revalued at each reporting date. The purchase agreement detailed in Note 4(b) above has formed the basis for the fair value assessment at 30 September 2019 and 31 March 2019.

	<b>6 months to 30 September 2019 (unaudited)</b>	<b>6 months to 30 September 2018 (unaudited)</b>	<b>Year ended 31 March 2019 (audited)</b>
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## 5. Derivative financial liabilities

Opening balance	1,349	2,463	2,463
Fair value movement	<b>(1,349)</b>	(1,145)	(1,114)
Net book value	-	1,318	1,349

Derivative financial liabilities represented the fair value of 15,000,000 options granted to Macquarie Bank and linked to the extension of a now repaid loan facility held with Macquarie Bank. As announced on 13 March 2017, the options were owned by Apnea Holdings Pty Ltd, a company which is wholly owned by Tom Kelly, CEO of Empyrean. Apnea Holdings Pty Ltd exercised the options on 9 July 2019, thereby extinguishing the derivative financial liability.

The options were granted on 27 July 2015 and are referred to as the Tranche 4 options. At the date of grant these were considered to fall outside of the scope of IFRS 2 and unlike Tranches 1-3 were not accounted for as a share-based payment. The Macquarie Bank loan facility was repaid in 2016 but the options did not expire at that point.

During a prior financial year, the Company modified the exercise price of the options. This was deemed to be a substantial modification under IAS 32 and IAS 39. The value of the derivative financial liability was extinguished at that point and the fair value of the modified options recognised at the date that they were granted. As a financial liability at fair value through the profit or loss these were revalued at period end. The fair value was measured using a Black-Scholes Model with the following inputs:

Fair value of share options and assumptions

	30 September 2019	30 September 2018	31 March 2019
Grant date	-	27 July 2015	27 July 2015
Expiry date	-	26 July 2019	26 July 2019
Share price	-	£0.0875	£0.09
Exercise price	-	£0.02	£0.02
Volatility	-	82%	77%
Option life	-	0.83	0.33
Expected dividends	-	-	-
Risk-free interest rate (based on national government bonds)	-	0.81%	0.76%

Expected volatility was determined by calculating the historical volatility of the Company's share price over the expected remaining life of the options.

6. Called up share capital	6 months to 30 September 2019 (unaudited)	6 months to 30 September 2018 (unaudited)	Year ended 31 March 2019 (audited)
<b>Issued and fully paid</b>			
442,930,910 (2018: 413,995,110) ordinary shares of 0.2p each	<b>US\$1,278</b>	US\$1,205	US\$1,232
Opening balance (number: 424,275,110)	<b>1,232</b>	1,205	1,205
Placement (number: 3,655,800)	<b>9</b>	-	-
Exercise of options (number: 15,000,000)	<b>37</b>	-	-
Placement (number: 10,580,000)	-	-	27
Closing balance (number: 442,930,910)	<b>1,278</b>	1,205	1,232

The Companies Act 2006 (as amended) abolishes the requirement for a company to have an authorised share capital. Therefore the Company has taken advantage of these provisions and has an unlimited authorised share capital.

#### Share options and warrants

The following equity instruments have been issued by the Company and have not been exercised at 30 September 2019:

Option Class	Employee Options	Employee Options <sup>(a)</sup>
Grant Date	20 January 2018	17 September 2019
Options awarded	2,500,000	2,500,000
Exercise price (£)	£0.17	£0.125
Expiry date	20 January 2021	30 September 2022

- (a) On 17 September 2019, 2,500,000 unlisted options were issued to the Company Secretary, Jonathan Whyte. The options have an exercise price of £0.125, expire on 30 September 2022 and have a vesting date of 17 September 2020. The options are being expensed over the life of the options.

## **7. Events after the reporting date**

During October and November 2019, the operator conducted a successful appraisal drilling campaign in the Duyung PSC, comprising two wells. Both wells appraised the intra-Muda sands of the Mako gas field with one of those wells also designed to test the deeper Tambak prospect in the Lower Gabus interval. For further information, please refer to the Operational Review.

There were no other significant events post reporting date.