

## Regulatory Story

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**Empyrean Energy PLC** - EME Final Results  
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9 August 2019

### **Empyrean Energy PLC ('Empyrean' or 'the Company') Final Results**

Empyrean Energy is pleased to announce its final results for the year ended 31 March 2019. The full Report and Accounts will be made available on the Company's website in the coming days. To view the press release with the illustrative maps and diagrams please use the following link: [http://www.rns-pdf.londonstockexchange.com/rns/5539I\\_1-2019-8-9.pdf](http://www.rns-pdf.londonstockexchange.com/rns/5539I_1-2019-8-9.pdf)

#### **HIGHLIGHTS**

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

- 31% increase in best case prospective resources (un-risked) following comprehensive processing and interpretation of 3D seismic data;
- Oil Migration Study completed;
- Independent audit by Gaffney, Cline and Associates ('GCA') assessed Oil in-place estimates as:
  - Audited un-risked Mean Oil-in place of 884 million barrels of oil (MMbbl) for the three prospects; and
  - Audited un-risked P10 upside of 1,588 MMbbl for the three prospects.
- GCA estimate Geological Chance of Success of Jade and Topaz prospects is 32% and 30% respectively; and
- Petroleum Contract ('PSC') for Block 29/11 signed.

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

- Gross 2C (contingent) resources audited by GCA in the field of 276Bcf (48.78 MMboe) of recoverable; dry gas and gross 3C resources of 392 Bcf (69.3MMboe), representing additional field upside;
- Significant exploration upside with the Tambak prospect identified beneath the central area of Mako gas field. Tambak is part of the drilling programme planned for Q4 2019;
- Plan of Development ('POD') for the Mako Gas field, including reserves certification, approved by Indonesian Ministry of Energy and Minerals; and
- Agreement with AIM-listed Coro Energy Plc entered to fund the majority of exploration and appraisal drilling program planned for Q4 2019 for cash and shares.

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

- Natural gas sales initially commenced at Dempsey in July 2018;
- 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; and
- Technical evaluation including comprehensive sub-surface analysis continuing to refine program at the Alvares gas project and the prospectivity along the "Dempsey trend".

#### ***Corporate***

- Tax refunds totalling US\$1.32 million (~ £1.0 million) received; and
- Placement to raise US\$1.31 million (£1.03 million) completed.

#### **Post reporting period**

#### ***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%)***

- Mako gas field appraisal and Tambak exploration prospect drilling programme agreed and set to commence Q4 2019; and
- Empyrean receives final cash and share consideration from Coro Energy, bringing the total received by Empyrean to US\$295,000 in cash and 6,090,504 Coro shares for a 1.5% reduction of interest in the Duyung PSC.

**Empyrean CEO Tom Kelly said, "Empyrean has made significant progress during the year across its diversified asset portfolio and laid a solid foundation for exploration success through its activities to advance and de-risk the prospects.**

*Empyrean has been very active at its China project during the year, increasing and independently validating its resource base and decreasing exploration risk through rigorous seismic data*

*analysis and an oil migration study completed during the year. The substantive work completed to date has established excellent, large scale drilling targets on Block 29/11 with relatively low geological risk. The recent confirmation that gas clouds are present over the Jade and Topaz prospects add further confidence to the technical merits of the project.*

*In Indonesia, Empyrean, Conrad and our new partner, Coro Energy have agreed on the drilling programme at the Duyung PSC which is set to commence in Q4 2019. The two well drilling programme will appraise the existing Mako discovery and also test the deeper Tambak exploration prospect. This programme is now largely funded through the US\$10.5m received by the Joint Venture as part of the Coro transaction, and the US\$295,000 cash consideration received by Empyrean.*

*In California, having commenced natural gas flows from Dempsey in July 2018, the partners have paused activity to conduct detailed technical evaluation focused on the reservoir development to determine the programme going forward.*

*On the corporate front the Company benefited from the receipt of US\$1.3 million in tax refunds during the year, and also successfully completed a placement in November 2018. These cash inflows were sufficient to meet operational and working capital requirements. Significantly a large part of the costs for the near-term drilling program at Indonesia are now also covered.*

*We believe that the near-term combination of exploration and appraisal drilling at the Mako gas discovery in Indonesia, coupled with the enormous potential upside at our drill-ready Jade and Topaz conventional oil prospects make Empyrean a tantalising and unique exposure to the sector. We look forward to further progress on both of these exciting projects."*

### **Chairman's Statement**

After the restructuring of its activities in 2016, which included the sale of our interest in the Sugarloaf asset in Texas, Empyrean has for the past two years developed into a highly active exploration company, with three exciting projects in China, Indonesia and the United States.

At Block 29/11, located in the Pearl River Mouth Basin, offshore China, where Empyrean holds 100% exploration rights and is the operator, Empyrean has continued to make important progress during the year. 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 were revised upwards in June 2018 and subsequently increased further, and independently validated, by Gaffney, Cline and Associates, 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.

In addition, Gaffney, Cline and Associates 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. Just recently, in May 2019, 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.

In Indonesia, the Company entered into an agreement with the operator, Conrad Petroleum and Coro Energy pursuant to which Coro acquired a 15% interest in the Duyung PSC. As part of this transaction Empyrean's interest in the project reduced from 10% to 8.5%, with Empyrean receiving cash consideration and shares in Coro. Importantly, Coro are contributing US\$10.5m to the drilling programme at Duyung, which will largely fund the drilling of an exploration well to test the Tambak prospect, located below the central Mako field, and also an appraisal well in the southern area of the Mako field. Empyrean see this transaction as mutually beneficial for all parties. Having received approval of the Plan of Development from the Indonesian regulators in March 2019, the drilling campaign is expected to commence in Q4 2019.

Empyrean continues to partner with ASX listed Sacgasco Limited, in a joint venture to test a group of projects in the Sacramento Basin California, including two mature gas prospects in Dempsey (EME 30%) and Alvares (EME 25%) and also further identified follow up prospects along the Dempsey trend (EME 30%). Technical evaluation continues to be undertaken to determine the approach going forward, including prioritising targets for drilling.

On the corporate front, the Company has maintained sufficient cash reserves through the receipt of US\$1.32 million (approximately £1 million) in tax refunds during the year and also the successful completion of a share placement in November 2018 to raise a further US\$1.31 million (£1.03 million). As mentioned above, partial funding has also been secured to cover the drilling programme in Indonesia later this year.

Finally, I would like to thank the Board and staff for their contribution during the year, in particular our executives Tom Kelly and Gaz Bisht who have worked tirelessly this year to give Empyrean the best chance for future success at its existing projects. The Board also continues to evaluate other opportunities to add to its existing portfolio.

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**Patrick Cross**

Non-Executive Chairman

9 August 2019

## **Operational Review**

The 2019 financial year has been a successful one for Empyrean on a number of fronts, highlighted by ongoing progress towards appraisal, development and production at the Mako gas discovery in Indonesia and the de-risking of the large prospects in Block 29/11, China.

Empyrean and its partners have methodologically carried out detailed and comprehensive subsurface and technical evaluation during the financial year on its projects in China and Indonesia that has significantly advanced and de-risked these assets.

Systematic technical work on Empyrean operated 100% working interest in Block 29/11, offshore China has matured two drill-ready low risk-high reward prospects.

In Duyung PSC in offshore Indonesia, Empyrean reduced its interest by 1.5% through the Coro Energy transaction in 2019, as detailed further below. This transaction brought US\$10.5m in

funding for the drilling of two critical wells in the permit.

Empyrean also has a 25-30% working interest in a package of gas projects in the Sacramento Basin, onshore California. Following successfully drilling Dempsey 1-15 to Basement and flowing sale gas, 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.

Empyrean has retained an interest in the Riverbend Project (10% WI) located in the Tyler and Jasper counties, onshore Texas and a 58.084% WI in the Eagle Oil Pool Development Project, located in the prolific San Joaquin Basin onshore, Southern California. No technical work has been undertaken on these projects during the year.

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

Block 29/11 is located in the prolific Pearl River Mouth Basin, offshore China approximately 200km Southeast of Hong Kong. The acquisition of this block heralded a new phase for Empyrean when it became an 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.

#### 31% Uplift in Best Case Gross Prospective (Un-risked) Resources

In June 2018, the Company announced the results of comprehensive processing and interpretation of the 608km<sup>2</sup> of new 3D seismic data that it successfully acquired during 2017. The analysis firmed up key prospects which were initially identified by the vintage regional 2D seismic survey and were initially mapped on the partially available (seismic Survey Boat Raw) 3D in September 2017.

Following the successful acquisition of a large 3D survey Empyrean focused on processing the seismic data optimally. Empyrean had regular interaction with the China Offshore Oil Services Limited ('COSL') processing team at all stages of the project. Time ('PSTM') and Depth ('PSDM') processing of the 3D seismic data was completed in January 2018. The final processed data is of high-quality that has clearly imaged the potential reservoirs, faults and deeper basin.

Arising from the 3D seismic interpretation, the Jade and Topaz prospects were developed into better defined and very substantial opportunities. The Pearl Prospect, which was a substantial lead based on the vintage regional 2D seismic has evolved into a substantial prospect following the 3D seismic. The results indicate that all three prospects are large and are in favourable geological settings.

Figure1: Block 29/11, Pearl River Basin, Offshore China.

Based on the results of the comprehensive processing and interpretation of the final 3D data, the prospective (un-risked) resources of the three major high graded prospects were revised upwards (Table 1) from previously reported estimates because of detailed mapping and improved assessment of reservoir parameters. Gross (100%) 'Best' case Prospective Resources combined were revised to 774 MMbbl on an un-risked basis.

Table 1:

Block 29/11 China: Gross Prospective (un-risked) Resources MMbbl						
Timeline	September 2017			June 2018		
	(Seismic Boat Raw 3D data)			(Final Processed 3D data)		
Prospect	Low Case	Best Case	High Case	Low Case	Best Case	High Case
Jade	89	103	143	94	190	303
Topaz	280	365	498	292	435	728
Pearl	84	123	206	94	149	256

Given, one of the major challenges with resource estimation rests heavily with an estimation of Gross Rock Volume ('GRV'), a critical step to reducing the uncertainty of estimating GRV is to better understand and quantify velocity field and depth conversion. As a result, two approaches were taken for depth 'conversion of time' interpretation of the seismic marker for the potential reservoir top. The resulting two GRVs from two structure maps were then combined to generate an industry standard probabilistic result using Monte Carlo simulation with 1,000 trials

(using Crystal Ball software). This probabilistic method has produced Gross Prospective (un-risked) Resources as shown below (Table 2).

**Table 2:**

<b>Block 29/11 China: Gross Prospective (un-risked) Resources MMbbl</b>				
<b>Probabilistic Estimates</b>				
<b>Prospect</b>	<b>P90</b>	<b>P50</b>	<b>P10</b>	<b>Mean</b>
<b>Jade</b>	110	183	230	202
<b>Topaz</b>	298	431	631	453
<b>Pearl</b>	105	152	220	159

*Cautionary Statement: The estimated quantities of oil that may potentially be recovered by the application of a future development project relates to undiscovered accumulations. These estimates 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.*

#### *Oil Migration Study Completed*

Substantial geological work was also undertaken during late 2017/early 2018, focusing on migration pathways of oil in the basin which culminated in an Oil Migration Study ('**the Study**') which was completed in June 2018.

The Study established the maturity profile of source rock, and unambiguously established that the source rock in the Baiyun Sag East ('**BSE**') area was at peak maturity when oil expulsion commenced. The main implications for Block 29/11 prospectivity are very positive with the entire source rock within BSE interpreted to have produced abundant hydrocarbons. In addition, any potential oil accumulation in Block 29/11 prospects are expected to be light and of good quality, and therefore similar to the oil discoveries around Block 29/11 that range from 33-38 API.

The Study validated the interpreted oil migration pathways from the known oil sources of the Enping Formation (Paleocene aged) within the BSE into the several oil discoveries made by CNOOC Limited to the immediate West and South of Block 29/11 since 2010, and thus provided strong evidence of a prolific petroleum system in the area. At the same time, the Study interprets effective migration pathways from BSE towards the northern flank of the Baiyun uplift where the Jade and Topaz prospects are located.

In addition, 28km<sup>2</sup> of 3D seismic data that was acquired outside Block 29/11 over the 2013 CNOOC Limited oil discovery LH 23-1d-1 which is located 8km west of the Jade prospect, helped confirm potential "fill-and-spill" pathways to the Jade structure from the oil discovery. Whilst early exploration techniques such as this are no guarantee of exploration success, the Company believes that this form of 'seismic tie' to a nearby known discovery helps to reduce the risks associated with exploration and helps to provide an improved understanding of the geology in the basin and within Block 29/11.

Comprehensive interpretation of the 2017 3D seismic data also mapped a new sub-basin called Baiyun Sag North ('**BSN**'). BSN is located between the Jade and Topaz prospects and is entirely within Block 29/11. The Study confirms a potential effective migration pathway from BSN into Jade and Topaz.

#### **Figure 2: Proven and interpreted migration pathways from Baiyun Sag East**

The Study also indicated that the Pearl Prospect is potentially located in a migration shadow for oil migrating from BSE or BSN. As a result, further work has been done focusing on the possibility of migration from the Huizhou Sag located NW of Block 29/11. The Liuhua 11-1 field complex that contained an estimated 1.1 billion barrels of oil is located immediately North of Block 29/11 and has been interpreted to have received oil from Huizhou Sag. Additional work completed now indicates that the Pearl prospect is located favourably for receiving oil charge from Huizhou Sag.

#### *Petroleum Contract Signed*

The initial contractual term called Geophysical Service Agreement was for two years with a work programme commitment of acquisition, processing and interpretation of 500km<sup>2</sup> of 3D seismic data.

Having successfully completed the committed work program for the GSA, the Company exercised its option to enter a PSC on the Block, on pre-negotiated terms, with CNOOC. The PSC was signed on 30 September 2018 with the date of commencement of implementation of the PSC being 13 December 2018.

The first phase of the contract is for 2.5 years with a commitment to drill one exploration well to a depth of 2,500m or to the Basement Formation. Under the PSC terms, Empyrean has the option of entering the second phase after relinquishing 25% of the current area. The second phase has a commitment of drilling one additional exploration well to a depth of 2,500m or to the Basement Formation within a further 2 years.

*Gaffney, Cline and Associates Independent Audit increases Total Mean Oil-in-place to 884 MMbbl*

In November 2018 Empyrean announced the results of an independent audit completed by Gaffney, Cline & Associates, an independent petroleum advisory firm, of the Company's oil initially in place estimates over the Jade, Topaz and Pearl prospects at Block 29/11 (the 'STOIP Audit').

Empyrean requested that GCA undertake the STOIP Audit and an assessment of the geological chance of success ('GCoS') of the three prospects identified on Block 29/11 following the comprehensive internal processing and interpretation of the 3D seismic data that the Company had completed. GCA's audit primarily consisted of reviewing, checking and validating the available data and existing interpretations and auditing the technical work that has been performed by EME and its contractors.

GCA used a probabilistic method to generate its results and estimated the STOIP using a 1D Monte Carlo model based on estimates of gross rock volume and reservoir parameters.

GCA's estimates of STOIP for the Jade, Topaz and Pearl Prospects together with GCA's estimates of GCoS are shown in Table 3 below. Of particular note is that, as well as validating the Company's internal estimates, Total Mean Oil in-place increased by 9% to 884 MMbbl on an un-risked basis and GCA estimated the GCoS of the Jade and Topaz prospects at 32% and 30% respectively. Total P10 estimates increased by 47% to 1588 MMbbl from 1081 MMbbl on an un-risked basis.

**Table 3: EME and GCA estimates of STOIP (November 2018)**

Block 29/11 China: Oil in-place MMbbl									
EME Internal Estimate					GCA STOIP Audit				
June 2018					November 2018				
Prospect	P90	P50	P10	Mean	P90	P50	P10	Mean	GCoS
Jade	110	183	230	202	93	187	395	225	32%
Topaz	298	431	631	453	211	434	891	506	30%
Pearl	105	152	220	159	38	121	302	153	15%

*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.*

**Duyung PSC, Indonesia (10% WI)**

*Background*

In April 2017, Empyrean acquired from Conrad Petroleum a 10% shareholding in West Natuna Exploration Ltd ('WNEL'), which held a 100% Participating Interest in the Duyung Production Sharing Contract ('Duyung PSC') in offshore Indonesia and is the operator of the Duyung PSC.

The Duyung PSC covers an offshore permit of approximately 1,100km<sup>2</sup> in the prolific West Natuna Basin. The permit includes the Mako gas discovery. The Mako gas field is an enormously large, shallow structural closure, with an area extent of over 350km<sup>2</sup>, approximately 16km from

the closest third party access point to the WNTS pipeline system which delivers gas from Indonesia to Singapore.

### Figure 3: Mako Gas field, Duyung PSC, Indonesia

The Mako gas field was discovered by Mako South-1 well drilled by WNEL in 2017. The drilling operations included the acquisition of two conventional core in the main reservoir followed by comprehensive testing operations. The Mako reservoir flowed up to 10.8MMscf/d of dry gas on test, proving commercial viability of the gas discovery. The commercial viability is further supported by four wells drilled by previous operators that have penetrated the reservoir section. As a result, the reservoir distribution is reasonably well understood.

An independent resource audit of the Mako gas field was completed by Gaffney, Cline and Associates in January 2019, resulting in the following gross resource certification:

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

#### *Reduction of Interest for Cash and Shares*

In February 2019 Empyrean announced that it had entered into a binding, conditional purchase agreement ('the **Agreement**') pursuant to which AIM listed Coro Energy plc ('**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 and the contribution of US\$10.5 million by Coro toward the 2019 drilling campaign at the Mako gas field ('**Coro Transaction**'). The cash and share component of the consideration were paid pro rata to the existing owners of WNEL, being Empyrean, which currently had a 10% effective interest in the Duyung PSC, and Conrad, 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 ('**Consideration Shares**'). Empyrean received cash consideration of US\$295,000 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).

Following completion of the transaction, including the payment by Coro of US\$10.5 million which was received in April 2019 as partial funding of the 2019 drilling programme at the Mako gas field and receipt of the necessary Government and regulatory approvals, WNEL will make a direct transfer of interest in the Duyung PSC to Empyrean and the other owners. Empyrean's interest therefore will be a direct ownership in the PSC and no longer held through WNEL. The owners of the Duyung PSC will be Conrad (76.5%), Empyrean (8.5%) and Coro (15%).

#### *Plan of Development Approval for Mako Gas Field*

In March 2019 Empyrean announced that the Ministry of Energy and Minerals in Indonesia had approved the Plan of Development ('POD') for the Mako Gas Field, securing tenure until 2037. The POD approval was required ahead of the upcoming drilling programme at the Duyung PSC, as detailed below. The approval is also an important step in advancing negotiations and ultimately executing a Gas Sales Agreement ('**GSA**') with the buyer in Singapore for the off-take of Mako gas.

#### *Mako Gas Field Appraisal and Drilling Program*

In April 2019 Empyrean, Conrad and Coro agreed the upcoming drilling programme in the Duyung PSC. The campaign will comprise two wells, one exploration well designed to test the Tambak prospect beneath the central area of the Mako gas field, and one appraisal well designed to appraise the intra-Muda sandstone reservoir in the southern area of the Mako field. The drilling campaign is anticipated to start in Q4 2019, with each well taking approximately 33 days to drill and test. The gross cost of the programme is expected to be approximately US\$17-19 million on a fully tested basis, including rig mobilisation and de-mobilisation, with the high range assuming the exploration well success. As part of the transaction to acquire its 15% interest in the PSC, Coro will be contributing US\$10.5 million to the total cost of the drilling



campaign with the balance to be covered by the Partners pro rata to their respective interests. Emyrean will retain an 8.5% interest in the PSC.

The Tambak prospect is an inverted anticlinal structure located beneath the main Mako gas field in the central area of the field. The prospect contains approximately 250 Bcf of prospective resources in the mid-case and is risked at a 45% chance of success. The well will be drilled to a total depth of approximately 1,370 metres true vertical depth sub-sea ('TVDSS'), with a testing suite planned for both the intra-Muda Mako reservoir level as well as the Lower Gabus prospective target horizons.

**Figure 4: Tambak Prospect, Duyung PSC, Indonesia**

The second well in the programme Tambak-2 (Mako-2), approximately 12.5km south of the Mako South-1 well, is an appraisal well which is designed to intersect the intra-Muda reservoir at approximately 380 metres TVDSS. A full evaluation suite including coring, wireline logging and open hole testing of the reservoir section is planned. The well will provide an important calibration point for the southern area of the field and is planned to demonstrate further contingent resource, which in turn will support the gas marketing efforts.

**Figure 5: Mako Gas field appraisal drilling programme, Duyung PSC, Indonesia**

**Multi Project Farm-in in Sacramento Basin, California (25%-30% WI)**

*Background*

In May 2017, Emyrean agreed to farm-in to a package of opportunities including the Dempsey and Alvares prospects in the Northern Sacramento Basin, onshore California. The rationale for participating in this potentially significant gas opportunity was a chance to discover large quantities of gas in a relatively 'gas hungry' market. Another attractive component of the deal was the ability to commercialise a potential gas discovery using existing gas facilities that are owned by the operator.

**Figure 6: California Projects Location Map**

The first exploration well, Dempsey 1-15, was drilled to a TD of 2,970 metres (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.

A total of three zones (Zone 2, 3, and 4) in the well were 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".

The joint venture is now integrating the subsurface data with regional geology and seismic data to evaluate additional more attractive targets in thicker reservoir units for future drilling. An option remains to side-track the well to evaluate a new section of the Stoney Creek reservoirs.

The Dempsey Trend AMI, in which Emyrean will 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.

In parallel to the above, the joint venture continues evaluation work at the Alvares-1 well. 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.

**Figure 7: Dempsey 1-15 well**

In August 2018 Sacgasco obtained regulatory approval to test the potential of gas in the overlooked natural gas in the Alvares-1 well.

Empyrean can earn a 25% working interest in the Alvares appraisal prospect by paying 33.33% of the costs of the next Alvares appraisal well.

Empyrean will provide technical assistance to Sacgasco to further mature prospects within the Dempsey Trend AMI and will also have an option to participate in the already identified prospects on the following basis:

- Prospect #1: EME pays 60% of dry hole cost (i.e. to testing and setting production casing or abandonment) to earn 30% WI
- Prospect #2: EME pays 45% of dry hole cost (i.e. to testing and setting production casing or abandonment) to earn 30% WI
- Prospect #3: EME pays 45% of dry hole cost (i.e. to testing and setting production casing or abandonment) to earn 30% WI

**Riverbend Project (10%)**

Located in Jasper County, Texas, USA, the Cartwright No.1 re-entry well produces gas and condensate from the arenaceous Wilcox Formation.

The Cartwright No.1 well is currently virtually suspended producing only nominal amounts of gas condensate.

Little or no work has been completed on the project in the year and no budget has been prepared for 2019/20 whilst the Company focuses on other projects. The Company fully impaired the carrying value of the asset at 31 March 2017 and any subsequent expenditure, mainly for license fees, has been expensed through the profit and loss statement.

**Eagle Oil Pool Development Project (58.084% WI)**

The Eagle Oil Pool Development Projects is located in the prolific San Joaquin Basin onshore, southern California.

No appraisal operations were carried out during this period. It is anticipated that, should there be a sustained improvement in the oil price, a vertical well test of the primary objective, the Eocene Gatchell Sand, followed by a horizontal appraisal well, would be the most likely scenario.

Little or no work has been completed on the project in the year and no budget has been prepared for 2019/20 whilst the Company focuses on other projects. The Company fully impaired the carrying value of the asset at 31 March 2017 and any subsequent expenditure, mainly for license fees, has been expensed through the profit and loss statement.

*The information contained in this report was completed and reviewed by the Company's Executive Director (Technical), Mr Gajendra (Gaz) Bisht, who has over 30 years' experience as a petroleum geoscientist.*

**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 estimated quantities of oil that may potentially be recovered by the application of a future development project relates to undiscovered accumulations. These estimates 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.

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

9 August 2019

## Strategic Report

### Business Overview and Likely Future Developments

The Company and its partners continued to progress exploration and development activities at each of its three projects during the year, with the aim of de-risking these projects and ultimately maximising value for its shareholders. Further details on these activities is provided in the Operations and Outlook section below.

In November 2018 the Company raised funds of US\$1.31 million (£1.03 million) through a placing of 10,280,000 shares at 10p per share. The funds raised were to support the current exploration programs and for working capital purposes.

The strategy is to continue to add value for shareholders by participating in late-stage, mature exploration projects with low assessed geological risks. The Board and management recognise that exploration for hydrocarbons is a risky venture and there will be failures and challenges, however the Company has a team with a proven track record of finding hydrocarbons and advancing projects through exploration, appraisal and into production. The oil price remains robust and supports the current business strategy.

Management continually evaluates project opportunities that meet strict investment guidelines with an aim of adding value for all shareholders.

### Operations and Outlook

As at 31 March 2019 the Company has the following interests:

The Company has an interest in Block 29/11 offshore China (100% during exploration and 49% upon any commercial discovery). Empyrean is the operator with 100% of the exploration rights of the 1800km<sup>2</sup> permit during the exploration phase of the project. Empyrean completed a 608km<sup>2</sup> 3D seismic acquisition survey in August 2017 and comprehensive processing and interpretation of the 3D seismic data, in addition to further geological work, has confirmed the structural viability and substantial prospective (un-risked) resources at the three key prospects ('**Jade, Topaz and Pearl**'). These internal estimates were subsequently independently audited and revised upwards. The Company has successfully completed an oil migration study which has confirmed potential oil migration pathways into all three prospects and subsequent to year-end further enhanced the technical merits of the Jade and Topaz prospects through the identification of well-defined gas clouds over those prospects. The Company signed a PSC for Block 29/11 with CNOOC in September 2018 with the first phase commitment being the drilling of one exploration well within a 2.5 year period.

The Company acquired a 10% interest in the 1,100km<sup>2</sup> Duyung PSC, offshore Indonesia, from Conrad Petroleum Ltd ('**Conrad**') in April 2017. The main asset in the permit is the Mako shallow gas discovery which has Gross 2C (contingent) resources of 276 Bcf (48.78 MMboe) of recoverable dry gas and 3C resources of 392 Bcf (69.3 MMboe), as verified by an independent audit during 2019. The appraisal well, Mako South-1, was spudded in June 2017 with results exceeding expectations encountering excellent reservoir quality rock with high permeability

sands. On the back of results from the Mako South-1 well the operator has received approval from the Indonesian regulator of a detailed Plan of Development, and the JV partners have an agreed drilling campaign comprising two wells. The first well is an exploration well designed to test the Tambak prospect beneath the central area of the Mako gas field, and the second well is an appraisal well designed to appraise the intra-Muda sandstone reservoir in the southern area of the Mako field. The Tambak prospect is an inverted anticlinal structure located beneath the main Mako gas field in the central area of the field. The prospect contains approximately 250 Bcf of prospective resources in the mid-case and is risked at a 45% chance of success. The drilling campaign is anticipated to start in Q4 2019.

Following a transaction with AIM-listed Coro Energy plc during early 2019, both the operator, Conrad Petroleum, and Empyrean divested part of their interest in the Duyung PSC. Empyrean's interest reduced from 10% to 8.5% interest, having received cash and shares from Coro. As part of this transaction Coro is funding US\$10.5 million of the costs of the 2019 drilling programme.

The Company entered into an agreement with ASX listed Sacgasco Limited (**Sacgasco**), a Sacramento Basin focused natural gas developer and producer, in May 2017, to test a group of projects in the Sacramento Basin California, including two mature, multi-TcF gas prospects in Dempsey (EME 30%) and Alvares (EME 25%) and further identified follow up prospects along the Dempsey trend (EME 30%). Following completion of an appraisal and exploration well, Dempsey 1-15, the operator tested multiple gas zones which resulted in the production of commercial gas flows before the well was shut in for technical evaluation following water ingress into the well. The joint venture is now integrating the subsurface data with regional geology and seismic data to evaluate additional attractive targets in thicker reservoir units for future drilling at Dempsey. An option remains to side-track the well to evaluate a new section of the Stoney Creek reservoirs. In parallel to the above, the joint venture continues evaluation work at the Alvares-1.

The Company also has a 58.084% working interest in the Eagle Oil Pool Development Project asset in California and a 10% working interest in the Riverbend Project in Texas. Further detailed analysis on all projects is provided in the Operational Review.

### **Going Concern**

The Company's principal activity during the year has been the exploration, evaluation, appraisal and development of its exploration projects. At year end the Company had a cash balance of US\$0.33m (2018: US\$0.39m) and made a profit after income tax of US\$0.15m (2018: loss of US\$2.63m).

The Directors have prepared cash flow forecasts for the Company covering the period to 31 August 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, near term funding requirements for the Duyung PSC exploration and appraisal drilling are now largely funded by Coro Energy through the recently completed transaction.

The Directors have therefore concluded that it is appropriate to prepare the Company's 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 financial statements do not include the adjustments that would result if the Company was unable to continue as a going concern.

### **Post Reporting Date Events**

Significant events post reporting date were as follows:

In April 2019 Empyrean advised that it has received its pro-rata share of the final cash and share component of the Coro transaction. The total cash and share consideration paid by Coro was US\$2.95 million in cash and US\$1.85 million in Coro shares, to acquire a 15% interest in the Duyung PSC. Empyrean received cash of US\$295,000 and shares with a value of US\$185,000. Coro also paid US\$10.5 million toward the 2019 drilling campaign at the Duyung PSC.

In April 2019 Empyrean, Conrad Petroleum, and Coro agreed the upcoming drilling programme in the Duyung PSC. The campaign will comprise two wells, one exploration well designed to test the Tambak prospect beneath the central area of the Mako gas field, and one appraisal well designed to appraise the intra-Muda sandstone reservoir in the southern area of the Mako field. The drilling campaign is anticipated to start in Q4 2019, with each well taking approximately 33 days to drill and test. The gross cost of the programme is expected to be approximately US\$17-19 million on a fully tested basis, including rig mobilisation and de-mobilisation, with the high range assuming the exploration well success. As part of the transaction to acquire its 15% interest in the PSC, Coro will be contributing US\$10.5 million to the total cost of the drilling campaign with the balance to be covered by the Partners pro rata to their respective interests.

In May 2019 the Company announced that comprehensive analysis of the excellent quality 3D seismic data acquired by Empyrean during 2017 has 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 the overburden. As a result, it is Empyrean's interpretation that the 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.

On 9 July 2019 Tom Kelly exercised 15,000,000 options at an exercise price of £0.02. The closing share price of the Company on 9 July 2019 was £0.0905.

## Statement of Comprehensive Income For the Year Ended 31 March 2019

	Notes	2019 US\$'000	2018 US\$'000
<b>Revenue</b>		-	30
<b>Cost of sales</b>			
Operating costs		-	(1)
Impairment of oil and gas properties	2, 8	(47)	(48)
Total cost of sales		(47)	(49)
<b>Gross loss</b>		(47)	(19)

## Administrative expenditure

Administrative expenses		<b>(375)</b>	(397)
Compliance fees		<b>(212)</b>	(225)
Directors' remuneration		<b>(386)</b>	(415)
Foreign exchange differences		<b>(49)</b>	114
Total administrative expenditure		<b>(1,022)</b>	(923)
<b>Operating loss</b>	2	<b>(1,069)</b>	(942)
Finance income/(expense)	3	<b>1,114</b>	(2,558)
Fair value revaluation	8	<b>98</b>	-
<b>Profit/(loss) from continuing operations before taxation</b>		<b>143</b>	(3,500)
Tax benefit in current year	5	<b>2</b>	797
<b>Profit/(loss) from continuing operations after taxation</b>		<b>145</b>	(2,703)
Profit on discontinued operations net of tax		-	73
<b>Profit/(loss) after taxation</b>		<b>145</b>	(2,630)
<b>Total comprehensive profit/(loss) for the year</b>		<b>145</b>	(2,630)
Earnings per share from continuing operations (expressed in cents)			
- Basic	6	<b>0.03c</b>	(0.71)c
- Diluted		<b>0.03c</b>	(0.71)c
Earnings per share from discontinued operations (expressed in cents)			
- Basic	6	-	0.02c
- Diluted		-	0.02c

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

### Statement of Financial Position For the Year Ended 31 March 2019

Company Number: 05387837	Notes	2019 US\$'000	2018 US\$'000
<b>Assets</b>			
<b>Non-current assets</b>			
Oil and gas properties: exploration and evaluation	7	<b>9,075</b>	7,820
Investments	8	<b>3,200</b>	2,572
Total non-current assets		<b>12,275</b>	10,392
<b>Current assets</b>			
Trade and other receivables	9	<b>37</b>	183
Corporation tax receivable	5	-	1,320

Cash and cash equivalents		<b>332</b>	388
Total current assets		<b>369</b>	1,891
<b>Liabilities</b>			
<b>Current liabilities</b>			
Trade and other payables	10	<b>374</b>	374
Provisions		<b>54</b>	54
Derivative financial liabilities	11	<b>1,349</b>	2,463
Total current liabilities		<b>1,777</b>	2,891
<b>Net current liabilities</b>			
		<b>(1,408)</b>	(1,000)
<b>Net assets</b>			
		<b>10,867</b>	9,392
<b>Shareholders' equity</b>			
Share capital	13	<b>1,232</b>	1,205
Share premium reserve		<b>26,524</b>	25,280
Share based payment reserve		<b>69</b>	10
Retained losses		<b>(16,958)</b>	(17,103)
<b>Total equity</b>			
		<b>10,867</b>	9,392

The Financial Statements were approved by the Board of Directors on 9 August 2019 and were signed on its behalf by:

\_\_\_\_\_  
Patrick Cross  
Chairman

Thomas Kelly  
Chief Executive Officer

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

## Statement of Cash Flows

For the Year Ended 31 March 2019

	Notes	2019 US\$'000	2018 US\$'000
Payment for operating activities - continuing operations		<b>(971)</b>	(1,002)
Receipt of corporation tax		<b>1,322</b>	17
<b>Net cash inflow/(outflow) from operating activities</b>	12	<b>351</b>	(985)
Net proceeds from disposal of discontinued operations		-	73
Purchase of oil and gas properties: exploration and evaluation - continuing operations		<b>(1,424)</b>	(7,725)
Acquisition of investments		<b>(530)</b>	(2,572)
Prepayments received - proceeds from disposal of investments		<b>175</b>	-
Receipt of/(payment for) exploration bonds and bank guarantees		<b>150</b>	(150)
<b>Net cash outflow for investing activities</b>		<b>(1,629)</b>	(10,374)
Issue of ordinary share capital		<b>1,314</b>	5,635
Payment of equity issue costs		<b>(43)</b>	(108)

<b>Net cash inflow from financing activities</b>	<b>1,271</b>	<b>5,527</b>
<b>Net decrease in cash and cash equivalents</b>	<b>(7)</b>	<b>(5,832)</b>
Cash and cash equivalents at the start of the year	<b>388</b>	6,106
Forex gain/(loss) on cash held	<b>(49)</b>	114
<b>Cash and cash equivalents at the end of the year</b>	<b>332</b>	<b>388</b>

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

### Statement of Changes of Equity For the Year Ended 31 March 2019

		Share capital	Share premium reserve	Share based payment reserve	Retained loss	Total equity
	Note	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
<b>Balance at 1 April 2017</b>		<b>754</b>	<b>18,466</b>	<b>2,421</b>	<b>(16,894)</b>	<b>4,747</b>
Loss after tax for the year		-	-	-	(2,630)	(2,630)
Total comprehensive loss for the year		-	-	-	(2,630)	(2,630)
<i>Contributions by and distributions to owners</i>						
Shares issued in the period	13	451	6,922	-	-	7,373
Equity issue costs		-	(108)	-	-	(108)
Transfer of expired options		-	-	(2,421)	2,421	-
Share based payment expense		-	-	10	-	10
<b>Contributions by and distributions to owners</b>		<b>451</b>	<b>6,814</b>	<b>(2,411)</b>	<b>2,421</b>	<b>7,275</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	13	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>

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

### Notes to the Financial Statements For the Year Ended 31 March 2019



**Basis of preparation**

The Company's financial statements 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 preparation of financial statements in compliance with adopted IFRS requires the use of certain critical accounting estimates. It also requires Company management to exercise judgment in applying the Company's accounting policies. The areas where significant judgments and estimates have been made in preparing the financial statements and their effect are disclosed below.

**Basis of measurement**

The financial statements have been prepared on a historical cost basis, except for the following items (refer to individual accounting policies for details):

- Investments
- Derivative financial liability

**Nature of business**

The Company is a public limited company incorporated and domiciled in England and Wales. The address of the registered office is 200 Strand, London, WC2R 1DJ. The Company is in the business of financing the exploration, development and production of energy resource projects in regions with energy hungry markets close to existing infrastructure. The Company has typically focused on non-operating working interest positions in projects that have drill ready targets that substantially short cut the life-cycle of hydrocarbon projects by entering the project after exploration concept, initial exploration and drill target identification work has largely been completed.

**Going concern**

The Company's principal activity during the year has been the acquisition and development of its exploration projects. At year end the Company had a cash balance of US\$0.33m (2018: US\$0.39m) and made a profit after income tax of US\$0.15m (2018: loss of US\$2.63m).

The Directors have prepared cash flow forecasts for the Company covering the period to 31 August 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, near term funding requirements for the Duyung PSC exploration and appraisal drilling are now largely funded by Coro Energy through the recently completed transaction.

The Directors have therefore concluded that it is appropriate to prepare the Company's 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 financial statements do not include the adjustments that would result if the Company was unable to continue as a going concern.

**Basis of accounting and adoption of new and revised standards***(a) New and amended standards adopted by the Company:*

IFRS 15 'Revenue from Contracts with Customers' was issued by the IASB in May 2014. It is effective for accounting periods beginning on or after 1 January 2018. The adoption of IFRS 15 has no impact on the 31 March 2019 financial statements as material revenues were not earned in this period or the comparative period.

IFRS 9 'Financial Instruments' was published in July 2014 and it is effective for accounting periods beginning on or after 1 January 2018. It is applicable to financial assets and financial liabilities, and covers the classification, measurement, impairment and de-recognition of financial assets and financial liabilities together with a new hedge accounting model. The Company has assessed the impact of this standard on the accounting for the investment in West Natuna Exploration Limited, which has resulted in the investment being valued at fair value through profit or loss. Refer to Note 8 for details on the fair value assessment, which did not result in a material adjustment on transition to IFRS 9.

There were no other new standards effective for the first time for periods beginning on or after 1 April 2018 that have had a significant effect on the Company's financial statements.

*(b) Standards, amendments and interpretations that are not yet effective and have not been early adopted:*

Any standards and interpretations that have been issued but are not yet effective, and that are available for early application, have not been applied by the Company in these financial statements. International Financial Reporting Standards that have recently been issued or amended but are not yet effective have not been adopted for the annual reporting period ended 31 March 2019:

IFRS 16 'Leases' was issued by the IASB in January 2016 and is effective for accounting periods beginning on or after 1 January 2019. The Directors are currently evaluating the financial and operational impact of this standard, however do not consider that it will have a material impact as the Company does not currently have any material lease arrangements.

#### **Tax**

The major components of tax on profit or loss include current and deferred tax. Current tax is based on the profit or loss adjusted for items that are non-assessable or disallowed and is calculated using tax rates that have been enacted or substantively enacted by the reporting date. Tax is charged to the income statement, except when the tax relates to items credited or charged directly to equity, in which case the tax is also dealt with in equity.

*(a) Deferred tax*

Deferred tax assets and liabilities are recognised where the carrying amount of an asset or liability in the statement of financial position differs to its tax base. Recognition of deferred tax assets is restricted to those instances where it is probable that taxable profit will be available, against which the difference can be utilised. The amount of the asset or liability is determined using tax rates that have been enacted or substantively enacted by the reporting date and are expected to apply when the deferred tax liabilities/(assets) are settled/(recovered). The Company has considered whether to recognise a deferred tax asset in relation to carried-forward losses and has determined that this is not appropriate in line with IAS 12 as the conditions for recognition are not satisfied.

#### **Foreign currency translation**

Transactions denominated in foreign currencies are translated into US dollars at contracted rates or, where no contract exists, at average monthly rates. Monetary assets and liabilities denominated in foreign currencies which are held at the year-end are translated into US dollars at year-end exchange rates. Exchange differences on monetary items are taken to the Statement of Comprehensive Income. Items included in the financial statements are measured using the currency of the primary economic environment in which the Company operates (the functional currency).

#### **Oil and gas assets: exploration and evaluation**

The Company applies the full cost method of accounting for Exploration and Evaluation ('E&E') costs, having regard to the requirements of IFRS 6 'Exploration for and Evaluation of Mineral Resources'. Under the full cost method of accounting, costs of exploring for and evaluating oil and gas properties are accumulated and capitalised by reference to appropriate cash generating units ('CGUs'). Such CGUs are based on geographic areas such as a concession and are not larger than a segment. E&E costs are initially capitalised within oil and gas properties: exploration and evaluation. Such E&E costs may include costs of license acquisition, third party technical services and studies, seismic acquisition, exploration drilling and testing, but do not include costs incurred prior to having obtained the legal rights to explore an area, which are expensed directly to the income statement as they are incurred. Plant, Property and Equipment ('PPE') acquired for use in E&E activities are classified as property, plant and equipment. However, to the extent that such PPE is consumed in developing an intangible E&E asset, the amount reflecting that consumption is recorded as part of the cost of the intangible E&E asset. Intangible E&E assets related to exploration licenses are not depreciated and are carried forward until the existence (or otherwise) of commercial reserves has been determined. The Company's definition of commercial reserves for such purpose is proven and probable reserves on an entitlement basis.

If commercial reserves have been discovered, the related E&E assets are assessed for impairment on a CGU basis as set out below and any impairment loss is recognised in the income statement. The carrying value, after any impairment loss, of the relevant E&E assets is then reclassified as development and production assets within property, plant and equipment and are amortised on a unit of production basis over the life of the commercial reserves of the pool to which they relate. Intangible E&E assets that relate to E&E activities that are not yet determined to have resulted in the discovery of commercial reserves remain capitalised as intangible E&E assets at cost, subject to meeting impairment tests as set out below. E&E assets are assessed for impairment when facts and circumstances suggest that the carrying amount may exceed its recoverable amount. Such indicators include the point at which a determination is made as to whether or not commercial reserves exist. Where the E&E assets concerned fall within the scope of an established CGU, the E&E assets are tested for impairment together with

all development and production assets associated with that CGU, as a single cash generating unit. The aggregate carrying value is compared against the expected recoverable amount of the pool. The recoverable amount is the higher of value in use and the fair value less costs to sell. Value in use is assessed generally by reference to the present value of the future net cash flows expected to be derived from production of commercial reserves. Where the E&E assets to be tested fall outside the scope of any established CGU, there will generally be no commercial reserves and the E&E assets concerned will generally be written off in full. Any impairment loss is recognised in the income statement.

### **Investments**

Under IFRS 9, all investments in equities are required to be measured at fair value. 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 Company's 10% shareholding and lack of significant influence over operations. Financial assets designated as fair value through the 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 8(c) has formed the basis for the fair value assessment at 31 March 2019.

### **Discontinued operations**

A discontinued operation is a component of an entity that either has been disposed of, or that is classified as held for sale, and represents a separate major line of business or geographical area of operations; and is a part of a single coordinated plan to dispose of a separate major line of business or geographical area of operations; or is a subsidiary acquired exclusively with a view to resale. Non-current assets held for sale and discontinued operations are carried at the lower of carrying value or fair value less costs to sell. Any gain or loss from disposal of a business, together with the results of these operations until the date of disposal, is reported separately as discontinued operations. The financial information of discontinued operations is excluded from the respective captions in the financial statements and related notes for the current and comparative period and disclosed as results from discontinued operations.

### **Joint operations**

Joint arrangements represent the contractual sharing of control between parties in a business venture where unanimous decisions about relevant activities are required. Joint venture operations represent arrangements whereby joint operators maintain direct interests in each asset and exposure to each liability of the arrangement. The Company's interests in the assets, liabilities, revenue and expenses of joint operations are included in the respective line items of the financial statements.

### **Financial instruments**

Financial assets and liabilities are recognised in the statement of financial position when the Company becomes party to the contractual provision of the instrument.

#### *(a) Financial assets*

The Company's financial assets consist of financial assets at amortised cost (trade and other receivables, excluding prepayments, and cash and cash equivalents) and financial assets classified as fair value through profit or loss. Financial assets at amortised cost are initially measured at fair value and subsequently at amortised cost. Financial assets designated as fair value through the profit or loss are measured at fair value through the profit or loss at the point of initial recognition and subsequently revalued at each reporting date. Movements in the fair value of derivative financial assets are recognised in the profit or loss in the period in which they occur.

#### *(b) Financial liabilities*

All financial liabilities are classified as fair value through the profit and loss or financial liabilities at amortised cost. The Company's financial liabilities at amortised cost include trade and other payables and its financial liabilities at fair value through the profit or loss include the derivative financial liabilities. Financial liabilities at amortised cost, are initially stated at their fair value and subsequently at amortised cost. Interest and other borrowing costs are recognised on a time-proportion basis using the effective interest method and expensed as part of financing costs in the statement of comprehensive income. Derivative financial liabilities are initially recognised at fair value of the date a derivative contract is entered into and subsequently re-measured at each reporting date. The method of recognising the resulting gain or loss depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged. The Company has not designated any derivatives as hedges as at 31 March 2018 or 31 March 2019.

#### *(c) Impairment*

At each reporting date, the Company assess whether there is objective evidence that a financial instrument has been impaired. Impairment losses are recognised in the Statement of Comprehensive Income.

**Share capital**

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds. Incremental costs directly attributable to the issue of new shares or options for the acquisition of a business are not included in the cost of the acquisition as part of the purchase consideration.

**Share based payments**

The Company issues equity-settled share-based payments to certain employees. Equity-settled share-based payments are measured at fair value at the date of grant. The fair value determined at the grant date of the equity-settled share-based payments is expensed over the vesting period, based on the Company's estimate of shares that will eventually vest. The fair value of options is ascertained using a Black-Scholes pricing model which incorporates all market vesting conditions. Where equity instruments are granted to persons other than employees, the income statement is charged with the fair value of goods and services received.

**Critical accounting estimates and judgements**

The Company makes judgements and assumptions concerning the future that impact the application of policies and reported amounts. The resulting accounting estimates calculated using these judgements and assumptions will, by definition, seldom equal the related actual results but are based on historical experience and expectations of future events. The judgements and key sources of estimation uncertainty that have a significant effect on the amounts recognised in the financial statements are discussed below.

*Critical estimates*

The following are the critical estimates that management has made in the process of applying the entity's accounting policies and that have the most significant effect on the amounts recognised in the financial statements.

*(a) Carrying value of exploration and evaluation assets*

The Company monitors internal and external indicators of impairment relating to its exploration and evaluation assets. Management has considered whether any indicators of impairment have arisen over certain assets relating to the Company's exploration licenses. Management consider the exploration results to date and assess whether, with the information available, there is any suggestion that a commercial operation is unlikely to proceed. In addition, management have considered the likely success of renewing the licences, the impact of any instances of non-compliance with license terms and are continuing with the exploration and evaluation of the sites. After considering all relevant factors, management were of the opinion that no impairment was required in relation to the costs capitalised to exploration and evaluation assets.

*(b) Investments*

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 Company's 10% shareholding and lack of significant influence over operations. Financial assets designated as fair value through the 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 8(c) has formed the basis for the fair value assessment at 31 March 2019.

**1. Segment 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	Indonesia	USA	Corporate	Total
	US\$'000	US\$'000	US\$'000	US\$'000	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	<b>1,114</b>
Fair value revaluation	-	98	-	-	<b>98</b>
<b>Profit/(loss) before taxation</b>	-	<b>98</b>	<b>(47)</b>	<b>92</b>	<b>143</b>
Tax benefit in current year	-	-	-	2	<b>2</b>
<b>Profit/(loss) after taxation</b>	-	<b>98</b>	<b>(47)</b>	<b>94</b>	<b>145</b>
<b>Total comprehensive profit/(loss) for the financial year</b>	-	<b>98</b>	<b>(47)</b>	<b>94</b>	<b>145</b>

Segment assets	5,222	3,200	3,853	-	<b>12,275</b>
Unallocated corporate assets	-	-	-	369	<b>369</b>
<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	-	-	<b>175</b>
Unallocated corporate liabilities	-	-	-	1,602	<b>1,602</b>
<b>Total liabilities</b>	-	<b>175</b>	-	<b>1,602</b>	<b>1,777</b>

Details	China US\$'000	Indonesia US\$'000	USA US\$'000	Corporate US\$'000	Total US\$'000
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**31 March 2018**

Revenue from continued operations	-	-	30	-	<b>30</b>
Profit on sale of discontinued operations	-	-	73	-	<b>73</b>
Cost of sales of continued operations	-	-	(48)	-	<b>(48)</b>
Cost of sales of discontinued operations	-	-	(1)	-	<b>(1)</b>
<b>Segment result</b>	-	-	<b>54</b>	-	<b>54</b>
Unallocated corporate expenses	-	-	-	(923)	<b>(923)</b>
<b>Operating loss</b>	-	-	<b>54</b>	<b>(923)</b>	<b>(869)</b>
Finance income/(expense)	-	-	-	(2,558)	<b>(2,558)</b>
<b>Loss before taxation</b>	-	-	<b>54</b>	<b>(3,481)</b>	<b>(3,427)</b>
Tax benefit in current year	-	-	-	797	<b>797</b>
<b>Loss after taxation</b>	-	-	<b>54</b>	<b>(2,684)</b>	<b>(2,630)</b>
<b>Total comprehensive loss for the financial year</b>	-	-	<b>54</b>	<b>(2,684)</b>	<b>(2,630)</b>

Segment assets	4,596	2,722	3,254	-	<b>10,572</b>
Unallocated corporate assets	-	-	-	1,711	<b>1,711</b>
<b>Total assets</b>	<b>4,596</b>	<b>2,722</b>	<b>3,254</b>	<b>1,711</b>	<b>12,283</b>

Segment liabilities	41	-	81	-	<b>122</b>
Unallocated corporate liabilities	-	-	-	2,769	<b>2,769</b>
<b>Total liabilities</b>	<b>41</b>	-	<b>81</b>	<b>2,769</b>	<b>2,891</b>

<b>2019</b>	<b>2018</b>
<b>US\$'000</b>	<b>US\$'000</b>

## 2. Operating loss

The operating loss is stated after charging:

Audit and tax fees	<b>(90)</b>	(46)
Impairment of oil and gas properties	<b>(47)</b>	(48)
	<b>(137)</b>	(94)

## Auditor's Remuneration

Amounts paid to BDO LLP and their associates in respect of both audit and non-audit services:

Fees payable to the Company's auditor for the audit of the Company annual accounts	<b>44</b>	32
Fees payable to the Company's auditor and its associates in respect of:		
- Other services relating to taxation	<b>15</b>	14
	<b>59</b>	46

<b>2019</b>	<b>2018</b>
<b>US\$'000</b>	<b>US\$'000</b>

## 3. Finance income/(expense)

Fair value movement on derivative liability	<b>1,114</b>	(2,004)
Revaluation loss on contingent consideration receivable	-	(554)
	<b>1,114</b>	(2,558)

## 4. Directors' emoluments

	Fees and salary		Bonus payment		Social security contributions		Short-term employment benefits (total)	
	2019 US\$'000	2018 US\$'000	2019 US\$'000	2018 US\$'000	2019 US\$'000	2018 US\$'000	2019 US\$'000	2018 US\$'000
<b>Non-Executive Directors:</b>								

Patrick Cross	<b>24</b>	24	-	-	<b>2</b>	2	<b>26</b>	26
John Laycock	<b>14</b>	14	-	-	<b>1</b>	1	<b>15</b>	15
Frank Brophy <sup>(a)</sup>	-	32	-	-	-	-	-	32
<b>Executive Directors:</b>								
Thomas Kelly <sup>(b)</sup>	<b>293</b>	296	-	-	-	-	<b>293</b>	296
Gajendra Bisht <sup>(c)(d)</sup>	<b>220</b>	185	-	-	-	-	<b>220</b>	185
	<b>551</b>	551	-	-	<b>3</b>	3	<b>554</b>	554

- (a) Services provided by F J Brophy Pty Ltd for technical services. Frank Brophy retired as a Non-Executive Director on 31 December 2017.
- (b) Services provided by Apnea Holdings Pty Ltd. In addition to the Director fees above, Apnea Holdings Pty Ltd was paid US\$43,000 for capital raising services for the November 2018 Placement detailed in the Strategic Report, which raised US\$1.31 million. On 13 June 2017 Tom Kelly exercised 15,000,000 options at an exercise price of £0.02. The closing share price of the Company on 13 June 2017 was £0.0388. On 20 February 2018 Tom Kelly exercised 15,000,000 options at an exercise price of £0.04. The closing share price of the Company on 20 February 2018 was £0.119. These options were not granted to Mr Kelly as part of his remuneration but were acquired by Mr Kelly in an arms-length transaction. Mr Kelly has not sold any shares during the reporting period.
- (c) Services provided by Topaz Energy Pty Ltd for technical services. Gajendra Bisht was appointed as an Executive Director on 14 June 2017. 75% of Mr Bisht's fees are capitalised to exploration and evaluation expenditure (Note 7), in addition to 100% of consulting fees Mr Bisht received pre-appointment as director.
- (d) On 4 April 2017 the Company held a Shareholder General Meeting whereby shareholders approved the allotment of 70,000,000 shares at 0.2p each to Topaz Energy Pty Ltd in relation with services provided by Topaz Energy Pty Ltd (a company wholly owned by and of which Gajendra Bisht is a Director) in relation to the introduction of the opportunity and successful award of the permit for 100% of the exploration rights for Block 29/11, China to the Company. These shares were subsequently issued on 21 April 2017. The share issue settled the total value of US\$1,740,000 which was accrued for at 31 March 2017, therefore is excluded from Mr Bisht's Director fees in FY2018.

The average number of Directors was 4 during 2019 and 2018. The highest paid director received US\$293,000 (2018: US\$296,000).

	<b>2019</b>	<b>2018</b>
	<b>US\$'000</b>	<b>US\$'000</b>
<b>5. Taxation</b>		
UK corporation tax (benefit)/charge at 20%	-	(396)
US corporation tax (benefit)/charge at 35%	-	(924)
Total corporation tax (receivable)/payable	-	(1,320)
<b>Factors affecting the tax charge for the year</b>		
Profit/(loss) from continuing operations	<b>143</b>	(3,500)
Profit on discontinued operations	-	73
Profit/(loss) on ordinary activities before tax	<b>143</b>	(3,427)

Profit/(loss) on ordinary activities at US rate of 21% (2018: 21%)	<b>30</b>	(720)
(Non-assessable income)/non-deductible expenses	<b>(232)</b>	534
Movement in provisions	-	6
Over provision in prior year	-	(797)
Deferred tax assets not recognised	<b>202</b>	180
	<b>(2)</b>	(797)
Analysed as:		
Tax (benefit)/charge on continuing operations	<b>(2)</b>	(797)
Tax (benefit)/charge on discontinued operations	-	-
Tax (benefit)/charge in current year	<b>(2)</b>	(797)

#### Unrecognised deferred tax assets

Tax losses <sup>(a)</sup>	<b>3,384</b>	2,911
AMT Federal Credit	<b>358</b>	715
Temporary differences - exploration	<b>1,331</b>	1,425
Temporary differences - other	<b>790</b>	1,088
Deferred tax assets not brought to account	<b>5,863</b>	6,139

(a) If not utilised, carried forward tax losses begin to expire in the year 2033.

**2019**

**2018**

#### 6. 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 in issue being 417,825,466 (2018: 380,423,710).

##### Earnings per share from continuing operations

Profit/(loss) after taxation from continuing operations	<b>US\$145,000</b>	(US\$2,703,000)
Earnings per share - basic	<b>0.03c</b>	(0.71)c

Profit/(loss) after taxation from continuing operations adjusted for dilutive effects	<b>US\$145,000</b>	(US\$2,703,000)
Earnings per share - diluted	<b>0.03c</b>	(0.71)c

##### Earnings per share from discontinued operations

Profit after taxation from discontinued operations	-	US\$73,000
Earnings per share - basic	-	0.02c

Profit after taxation from discontinued operations adjusted for dilutive effects	-	US\$73,000
Earnings per share - diluted	-	0.02c

For the current financial year there are dilutive options on issue. The weighted average number of dilutive shares is 432,825,466. Details of the potentially issuable shares that could dilute earnings per share in future periods are set out in Notes 11 and 13. For the prior financial year the exercise of the options was anti-dilutive and as such the diluted earnings per share was the same as the basic loss per share.

**2019**  
**US\$'000**

**2018**  
**US\$'000**

#### 7. Oil and gas properties: exploration and evaluation



Balance brought forward	<b>7,820</b>	87
Additions <sup>(a)</sup>	<b>1,302</b>	7,781
Impairment <sup>(b)</sup>	<b>(47)</b>	(48)
	<hr/>	
Net book value	<b>9,075</b>	7,820
	<hr/> <hr/>	

- (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 the Company also acquired a working interest in the Sacramento Basin, California. 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 Alvares (EME 25%) and also further identified follow up prospects along the Dempsey trend (EME 30%).
- (b) In light of current market conditions, little or no work has been completed on the Riverbend or Eagle Oil projects in the year and no substantial project work is forecast for either project in 2019/20 whilst the Company focuses on other projects. Whilst the Company maintains legal title it has continued to fully impair the carrying value of the asset at 31 March 2019.

Project	Operator	Working Interest	2019 Carrying Value US\$'000	2018 Carrying Value US\$'000
<i>Exploration and evaluation</i>				
China Block 29/11	Empyrean Energy	100%*	<b>5,222</b>	4,596
Sacramento Basin	Sacgasco	25-30%	<b>3,853</b>	3,224
Riverbend	Huff Energy	10%	-	-
Eagle Oil Pool Development	Strata-X	58.084%	-	-
			<hr/>	
			<b>9,075</b>	7,820

\*In the event of a commercial discovery, and subject to the Company entering PSC, CNOOC Limited will have a back in right to 51% of the permit. As at the date of these financial statements no commercial discovery has been made.

	2019 US\$'000	2018 US\$'000
<b>8. Investments</b>		
Balance brought forward	<b>2,572</b>	-
Additions <sup>(a)</sup>	<b>530</b>	2,572
Fair value revaluation <sup>(b)(c)</sup>	<b>98</b>	-
	<hr/>	
Total investments	<b>3,200</b>	2,572
	<hr/> <hr/>	

- (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.
- (b) 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 8(c) below has formed the basis for the fair value assessment at 31 March 2019.

- (c) 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 will be 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 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).

As at 31 March 2019, Empyrean had received part cash proceeds of US\$175,000, recorded as a Prepayment Received in Trade and Other Payables (Note 10). The remaining cash and share components were received in April 2019.

	<b>2019</b>	<b>2018</b>
	<b>US\$'000</b>	<b>US\$'000</b>
<b>9. Trade and other receivables</b>		
Trade and other receivables	1	1
Accrued revenue	30	30
VAT receivable	6	2
Bank guarantee - Duyung PSC	-	150
	<hr/>	<hr/>
Total trade and other receivables	<b>37</b>	<b>183</b>
	<hr/> <hr/>	<hr/> <hr/>
	<b>2019</b>	<b>2018</b>
	<b>US\$'000</b>	<b>US\$'000</b>
<b>10. Trade and other payables</b>		
Trade payables	157	283
Accrued expenses	42	91
Prepayments received - proceeds from disposal of investment	175	-
	<hr/>	<hr/>
Total trade and other payables	<b>374</b>	<b>374</b>
	<hr/> <hr/>	<hr/> <hr/>
	<b>2019</b>	<b>2018</b>
	<b>US\$'000</b>	<b>US\$'000</b>
<b>11. Derivative financial liabilities</b>		
Opening balance	2,463	459
Fair value movement (Note 3)	(1,114)	2,004
	<hr/>	<hr/>

Closing balance	<b>1,349</b>	2,463
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Derivative financial liabilities represent 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 purchased by Apnea Holdings Pty Ltd, a company which is wholly owned by Tom Kelly, CEO of Empyrean. 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 the 2017 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 profit or loss these were revalued at period end. The fair value is measured using a Black-Scholes Model with the following inputs:

Fair value of share options and assumptions

	<b>31 March 2019</b>	<b>31 March 2018</b>
Grant date	27 July 2015	27 July 2015
Expiry date	26 July 2019	26 July 2019
Share price	£0.09	£0.138
Exercise price	£0.02	£0.02
Volatility	77%	79%
Option life	0.33	1.33
Expected dividends	-	-
Risk-free interest rate (based on national government bonds)	0.76%	0.74%

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

Details of financier options outstanding at 31 March 2019 and 31 March 2018 were as follows:

<b>Option Class</b>	<b>Financier options (Tranche 4)</b>
Grant Date	27 July 2015
Options awarded	15,000,000
Exercise price (£)	£0.02
Expiry date	26 July 2019

	<b>2019 US\$'000</b>	<b>2018 US\$'000</b>
<b>12. Reconciliation of net loss to operating cash flows</b>		
Net profit/(loss) before taxation	<b>143</b>	(3,500)
Finance (income)/expense	<b>(1,114)</b>	2,004
Fair value revaluation	<b>(98)</b>	-
Revaluation loss on contingent consideration receivable	-	554
Forex loss/(gain)	<b>49</b>	(114)
Impairment - oil and gas properties	<b>47</b>	48
Share based payments	<b>60</b>	10
(Increase)/decrease in trade receivables relating to operating activities	<b>(5)</b>	64

(Decrease) in trade payables relating to operating activities	<b>(53)</b>	(97)
Increase in provisions	-	29
	<hr/>	<hr/>
<b>Net cash outflow from operating activities before taxation</b>	<b>(971)</b>	<b>(1,002)</b>
	<hr/>	<hr/>
Receipt of corporation tax	<b>1,322</b>	17
	<hr/>	<hr/>
<b>Net cash inflow/(outflow) from operating activities</b>	<b>351</b>	<b>(985)</b>

### 13. Called up share capital

<b>Issued and fully paid</b>	<b>2019</b>	<b>2018</b>
	<b>US\$'000</b>	<b>US\$'000</b>
424,275,110 (2018: 413,995,110) ordinary shares of 0.2p each	<b>1,232</b>	1,205
Opening balance (2019 number: 413,995,110) (2018: 239,833,853)	<b>1,205</b>	754
Placement (number: 10,280,000)	<b>27</b>	-
Share issue (number: 70,000,000)	-	180
Share issue (number: 34,316,551)	-	89
Exercise of options (number: 15,000,000)	-	38
Placement (number: 16,080,000)	-	41
Placement (number: 12,000,000)	-	31
Placement (number: 11,764,706)	-	31
Exercise of options (number: 15,000,000)	-	41
	<hr/>	<hr/>
Closing balance (2019 number: 424,275,110) (2018: 413,995,110)	<b>1,232</b>	1,205

### Share options

The number and weighted average exercise prices of share options are as follows:

	<b>Weighted average exercise price</b>	<b>Number of options</b>	<b>Weighted average exercise price</b>	<b>Number of options</b>
	<b>2019</b>	<b>2019</b>	<b>2018</b>	<b>2018</b>
Outstanding at the beginning of the year	£0.042	17,500,000	£0.028	45,000,000
Issued during the year <sup>(a)</sup>	-	-	£0.170	2,500,000
Exercised during the year	-	-	£0.030	(30,000,000)
	<hr/>	<hr/>	<hr/>	<hr/>
Outstanding at the end of the year	<b>£0.042</b>	<b>17,500,000</b>	<b>£0.042</b>	<b>17,500,000</b>

(a) On 20 January 2018, 2,500,000 unlisted options were issued to the Company Secretary, Jonathan Whyte. The options have an exercise price of £0.17, expire on 30 January 2021 and have a vesting date of 20 January 2019. The options are being expensed over the life of the options, resulting in a share-based payment expense of US\$59,608 to 31 March 2019 (US\$9,799 to 31 March 2018).

Valuation and assumptions of employee options

<b>31 March</b>	<b>31 March</b>
<b>2019</b>	<b>2018</b>

Grant date	30 Jan 2018	30 Jan 2018
Expiry date	30 Jan 2021	30 Jan 2021
Share price	£0.12	£0.12
Exercise price	£0.17	£0.17
Volatility	79%	79%
Option life	3.00	3.00
Expected dividends	-	-
Risk-free interest rate (based on national government bonds)	0.73%	0.73%

The options outstanding at 31 March 2019 have an exercise price in the range of £0.02 to £0.17 (2018: £0.02 to £0.017) and a weighted average remaining contractual life of 0.54 years (2017: 1.54 years). The remaining 15,000,000 financier options have vested and are fully exercisable at the date of this report.

Details of share options outstanding at 31 March 2019 and 31 March 2018 were as follows:

Option Class	Employee Options	Financier options (Tranche 4)
Grant Date	20 January 2018	27 July 2015
Options awarded	2,500,000	15,000,000
Exercise price (£)	£0.17	£0.02
Expiry date	20 January 2021	26 July 2019

Details of share options outstanding at 31 March 2018 are as follows:

Option Class	Employee Options	Financier options (Tranche 4)
Grant Date	20 January 2018	27 July 2015
Options awarded	2,500,000	15,000,000
Exercise price (£)	£0.17	£0.02
Expiry date	20 January 2021	26 July 2019

#### 14. Reserves

Reserve	Description and purpose
Share premium	Amount subscribed for share capital in excess of nominal value.
Share based payment reserve	Records items recognised as expenses on valuation of employee share options.
Retained losses	All other net gains and losses and transactions with owners not recognised elsewhere.

#### 15. Related party transactions

Directors are considered Key Management Personnel for the purposes of related party disclosure.

There were no other related party transactions during the year ended 31 March 2019 other than those payments made in regard to Director remuneration disclosed in Note 4.

#### 16. Financial risk management

The Company manages its exposure to credit risk, liquidity risk, foreign exchange risk and a variety of financial risks in accordance with Company policies. These policies are developed in accordance with the Company's operational requirements. The Company uses different methods to measure and manage different types of risks to which it is exposed. These include

monitoring levels of exposure to interest rate and foreign exchange risk and assessment of prevailing and forecast interest rates and foreign exchange rates. Liquidity risk is managed through the budgeting and forecasting process.

### Credit Risk

Exposure to credit risk relating to financial assets arises from the potential non-performance by counterparties of contract obligations that could lead to a financial loss to the Company.

Credit risk is managed through the maintenance of procedures (such procedures include the utilisation of systems for approval, granting and removal of credit limits, regular monitoring of exposures against such limits and monitoring the financial stability of significant customers and counterparties), ensuring to the extent possible, that customers and counterparties to transactions are of sound credit worthiness. Such monitoring is used in assessing receivables for impairment. Credit terms are generally 30 days from invoice date.

Risk is also minimised by investing surplus funds in financial institutions that maintain a high credit rating.

Credit risk related to balances with banks and other financial institutions are managed in accordance with approved Board policy. The Company's current investment policy is aimed at maximising the return on surplus cash, with the aim of outperforming the benchmark within acceptable levels of risk return exposure and to mitigate the credit and liquidity risks that the Company is exposed to through investment activities.

The following table provides information regarding the credit risk relating to cash and money market securities based on Standard and Poor's counterparty credit ratings.

	2019	2018
	US\$'000	US\$'000
<b>Cash and cash equivalents</b>		
AA- rated	332	388
<b>Total cash and cash equivalents</b>	<b>332</b>	<b>388</b>

### Liquidity risk

Liquidity risk arises from the possibility that the Company might encounter difficulty in settling its debts or otherwise meeting its obligations related to financial liabilities. The Company manages liquidity risk by maintaining sufficient cash or credit facilities to meet the operating requirements of the business and investing excess funds in highly liquid short-term investments. The Company's liquidity needs can be met through a variety of sources, including the issue of equity instruments and short or long-term borrowings.

Alternative sources of funding in the future could include project debt financing and equity raisings, and future operating cash flow. These alternatives will be evaluated to determine the optimal mix of capital resources.

The following table details the Company's non-derivative financial instruments according to their contractual maturities. The amounts disclosed are based on contractual undiscounted cash flows. Cash flows realised from financial assets reflect management's expectation as to the timing of realisation. Actual timing may therefore differ from that disclosed. The timing of cash flows presented in the table to settle financial liabilities reflects the earliest contractual settlement dates.

Less than 6 months	6 months to 1 year	1 to 6 years	Total
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	US\$'000	US\$'000	US\$'000	US\$'000
Trade and other payables (2019)	157	-	-	157
Trade and other payables (2018)	283	-	-	283

### Capital

In managing its capital, the Company's primary objective is to maintain a sufficient funding base to enable the Company to meet its working capital and strategic investment needs. In making decisions to adjust its capital structure to achieve these aims, through new share issues, the Company considers not only its short-term position but also its long-term operational and strategic objectives.

### Foreign exchange risk

The Company operates internationally and is exposed to foreign exchange risk arising from various currency exposures. Foreign exchange risk arises from future commitments, assets and liabilities that are denominated in a currency that is not the functional currency of the Company. The Company's borrowings and deposits are largely denominated in US dollars. Currently there are no foreign exchange hedge programmes in place. However, the Company treasury function manages the purchase of foreign currency to meet operational requirements.

As at 31 March 2019 the Company's net exposure to foreign exchange risk was as follows:

	2019 US\$'000	2018 US\$'000
<b>Net foreign currency financial assets</b>		
Cash and cash equivalents - GBP	196	380
<b>Total net exposure</b>	<b>196</b>	<b>380</b>

The effect of a 10% strengthening of the USD against the GBP at the reporting date on the GBP-denominated assets carried within the USD functional currency entity would, all other variables held constant, have resulted in an increase in post-tax loss for the year and decrease in net assets of US\$19,600 (2018: US\$38,000).

### Fair value

Fair values are those amounts at which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction. Fair values may be based on information that is estimated or subject to judgement, where changes in assumptions may have a material impact on the amounts estimated. Areas of judgement and the assumptions have been detailed below.

Where possible, valuation information used to calculate fair value is extracted from the market, with more reliable information available from markets that are actively traded. In this regard, fair values for listed securities are obtained from quoted market prices. Where securities are unlisted and no market quotes are available, fair value is obtained using discounted cash flow analysis and other valuation techniques commonly used by market participants.

The following methods and assumptions are used to determine the net fair values of financial assets and liabilities:

- Cash and short-term investments - the carrying amount approximates fair value because of their short term to maturity;
- Trade receivables and trade creditors - the carrying amount approximates fair value;
- Derivative financial assets and liabilities - initially recognised at fair value through profit and loss at the date the contract is entered into and subsequently re-measured at each reporting date the fair value of the derivative financial liability options is calculated using a Black-Scholes Model. Measurement inputs include share price on measurement date, exercise price of the instrument, expected volatility (based on weighted average historic volatility adjusted for changes expected due to publicly available information), weighted average expected life of the instruments (based on historical experience and

general option holder behaviour), expected dividends, and the risk-free interest rate (based on government bonds); and

- Investments - 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 Company's 10% shareholding and lack of significant influence over operations. Financial assets designated as fair value through the 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 8(c) has formed the basis for the fair value assessment at 31 March 2019.

No financial assets and financial liabilities are readily traded on organised markets in standardised form.

#### *Financial Instruments Measured at Fair Value*

The financial instruments recognised at fair value in the statement of financial position have been analysed and classified using a fair value hierarchy reflecting the significance of the inputs used in making the measurements. The fair value hierarchy consists of the following levels:

- Quoted prices in active markets for identical assets or liabilities (Level 1);
- Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (as prices) or indirectly (derived from prices) (Level 2); and
- Inputs for the asset or liability that are not based on observable market data (unobservable inputs) (Level 3).

Financial instruments at fair value and methods used to estimate the fair value are summarised below:

<b>Financial Instruments at Fair Value</b>	<b>31 March 2019 Fair Value US\$'000</b>	<b>31 March 2018 Fair Value US\$'000</b>
<b>Financial assets</b>		
Investments (Level 2) <sup>(a)</sup>	3,200	-
<b>Total financial assets</b>	<u>3,200</u>	<u>-</u>
<b>Financial liabilities</b>		
Derivative financial liability (Level 3) <sup>(b)</sup>	1,349	2,463
<b>Total financial liabilities</b>	<u>1,349</u>	<u>2,463</u>

(a) The Company's interest in the Duyung PSC is classified under IFRS 9 as a financial asset at fair value through profit or loss. The purchase agreement detailed in Note 8(c) has formed the basis for the fair value assessment at 31 March 2019.

(b) The fair value of the Level 3 derivative financial liability has been determined using a Black-Scholes option pricing model, refer to Note 11 for detailed valuation inputs and assumptions. Increases or decreases in significant unobservable inputs would cause an increase or decrease in fair value.

Financial instruments by category are summarised below:

<b>Financial Instruments by Category</b>	<b>Fair Value Through Profit or Loss</b>		<b>Amortised Cost</b>	
	<b>31 March 2019 US\$'000</b>	<b>31 March 2018 US\$'000</b>	<b>31 March 2019 US\$'000</b>	<b>31 March 2018 US\$'000</b>
<b>Financial assets</b>				
Cash and cash equivalents	-	-	332	388
Trade and other receivables	-	-	37	183
Investments	3,200	-	-	2,572
<b>Total financial assets</b>	<u>3,200</u>	<u>-</u>	<u>369</u>	<u>3,143</u>
<b>Financial liabilities</b>				



Trade and other payables	-	-	157	283
Derivative financial liability	1,349	2,463	-	-
<b>Total financial liabilities</b>	<b>1,349</b>	<b>2,463</b>	<b>157</b>	<b>283</b>

### Cash and cash equivalents

Cash and short-term deposits in the Statement of Financial Position comprise cash at bank and in hand and short-term deposits with an original maturity of three months or less. For the purposes of the Cash Flow Statement, cash and cash equivalents consist of cash and cash equivalents as defined above and which are readily convertible to a known amount of cash and are subject to an insignificant risk of change in value, net of outstanding bank overdrafts.

### 17. Events after the reporting date

In April 2019 Empyrean advised that it has received its pro-rata share of the final cash and share component of the Coro transaction. The total cash and share consideration paid by Coro was US\$2.95 million in cash and US\$1.85 million in Coro shares, to acquire a 15% interest in the Duyung PSC. Empyrean received cash of US\$295,000 and shares with a value of US\$185,000. Coro also paid US\$10.5 million toward the 2019 drilling campaign at the Duyung PSC.

In April 2019 Empyrean, Conrad Petroleum, and Coro agreed the upcoming drilling programme in the Duyung PSC. The campaign will comprise two wells, one exploration well designed to test the Tambak prospect beneath the central area of the Mako gas field, and one appraisal well designed to appraise the intra-Muda sandstone reservoir in the southern area of the Mako field. The drilling campaign is anticipated to start in Q4 2019, with each well taking approximately 33 days to drill and test. The gross cost of the upcoming drilling programme is expected to be approximately US\$17-19 million on a fully tested basis, including rig mobilisation and demobilisation, with the high range assuming exploration well success. As part of the transaction to acquire its 15% interest in the PSC, Coro will be contributing US\$10.5 million to the total cost of the drilling campaign with the balance to be covered by the Partners pro rata to their respective interests.

In May 2019 the Company announced that comprehensive analysis of the excellent quality 3D seismic data acquired by Empyrean during 2017 has 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 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.

On 9 July 2019 Tom Kelly exercised 15,000,000 options at an exercise price of £0.02. The closing share price of the Company on 9 July 2019 was £0.0905.

No other matters or circumstances have arisen since the end of the financial year which significantly affected or could significantly affect the operations of the Company, the results of those operations, or the state of affairs of the Company in future financial years.

### 18. Committed expenditure

The Company has met all commitments on all three key projects during the current financial year.

### Block 29/11 offshore China

The Company's committed work program for the GSA phase for Block 29/11 included acquisition, processing and interpretation of 500km<sup>2</sup> for a 3D seismic survey, and a financial commitment of US\$3 million. The Company exceeded the work program commitments during the 2018 financial year.

Having successfully completed the committed work program for the first phase GSA, the Company exercised its option to enter a PSC on the Block, on pre-negotiated terms, with CNOOC on 30 September 2018, with the date of commencement of implementation of the PSC being 13 December 2018. The first phase of the contract is for 2.5 years with a commitment to drill one exploration well to a depth of 2,500m or to the Basement Formation.

Additional commitments for the 2020 financial year consist of an annual assistance fee to CNOOC of US\$60,000 and an annual personnel representative fee to CNOOC of approximately US\$160,000.

#### **Duyung PSC offshore Indonesia**

The Indonesian regulators have approved the Plan of Development and the drilling programme for the Duyung PSC has been approved. The gross cost of the programme is expected to be approximately US\$17-19 million to the joint venture partners on a fully tested basis, including rig mobilisation and de-mobilisation, with the high range assuming exploration well success. Financial commitments and related cash calls will be finalised ahead of the drilling commencement in Q4 2019. As advised, Coro Energy are contributing USD\$10.5 million to the costs of the drilling programme.

Depending on the results of the exploration and appraisal well program, Empryan expects its net costs to be approximately US\$550,000 to US\$725,000.

#### **Sacramento Basin assets onshore California**

The Company earned a 30% interest in the Dempsey Prospect by paying US\$2,100,000 towards the costs of drilling the Dempsey 1-15 exploration well. These drilling costs had a promoted cap of US\$3,200,000 and the Company paid its share of additional costs at Dempsey 1-15, including completion costs. At the time of this report, the work plan, cost estimates and timing of further expenditure for the Dempsey prospect have not been finalised. The Company will earn a 25% interest in the Alvares appraisal prospect by paying 33.33% of the costs of the Alvares appraisal well. At the time of this report, the work plan, cost estimates and timing of expenditure for the Alvares prospect have not been finalised. The Company incurs annual cash calls for its share of associated lease obligations.

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