

ASX:EEG

Quarterly Report

For the period ending 30 June 2020



Highlights

At the close of Q2 2020, Empire Energy Group Limited (“Empire” or the “Company”) is on the eve of exciting advances with the Company in readiness for the drilling of its first well in the highly-prospective and increasingly-active Beetaloo Sub-basin of the Northern Territory, Carpentaria-1. The upcoming drilling program represents a key milestone in the development of Empire’s 100%-owned 14.5-million-acre shale petroleum project areas in the Beetaloo-McArthur Basins.

Highlights of Q2 2020 include:

- **Locking in the well pad location and initiating site preparation for the drilling of the Carpentaria-1 well in EP187** for commencement of drilling operations late Q3 2020
- **Long-lead items such as the wellhead and drill pipe for the Carpentaria-1 well ordered after the end of the Quarter**
- **Leading oil and gas industry professional, Mr Peter Cleary appointed as a Non-Executive Director**
- **Netherland Sewell & Associates independent resource report assesses that Empire holds a total best estimate Prospective Resource of 13.46Tcf across its Northern Territory properties**, including over 2.3Tcf in the Velkerri Shale and 14 million barrels of oil equivalent in the liquids rich Kyalla Shale
- **The Territory Economic Reconstruction Commission** interim report stated strong support for the development of the onshore gas industry in the Northern Territory
- **Further Empire Director share buying during the Quarter**

Empire has on issue 36,218,754 unlisted options at A\$0.30 per share expiring on 26 September

Comments from Managing Director Alex Underwood:

Having demonstrated that the shales of the Beetaloo Sub-basin extend into EP187 following the 2019 2D seismic program, our team has had a busy quarter preparing for the upcoming drilling campaign. Our well to be drilled in EP187, Carpentaria-1, will be only the second well drilled in the Beetaloo Sub-basin since the lifting of the fracking moratorium. The first well, Kyalla-117, was a horizontal well drilled by Origin Energy which is expected to be fracture stimulated and flow tested later this year.

We have commenced the preparatory works for the upcoming drilling program including selection of a preferred drilling contractor and ordering of long-lead items including casing and a well head. Civil construction will commence shortly and we expect to mobilise the rig to site within weeks.

The drilling of Carpentaria-1 is a defining moment for our Company. It represents the culmination of over 2 years’ work building our financial capacity and Board and management capabilities.

We look forward to commencing the drilling program and sharing the results with shareholders soon.

NT Operations

The Empire technical team's work across the Quarter has been centred on the Carpentaria-1 well in EP187 with the field work now escalating for its start in the coming weeks.

Following acquisition, processing and interpretation of Empire's 231-line kilometres of 2D seismic, across its most southern tenement (NT) EP187, the team has delineated and resolved the easterly portion of the Beetaloo Sub-basin into EP187. Two prospective portions, one of approximately 40,000 acres (~160km²), and a second prospect area which extends across approximately 25,000 acres (~100km²) lie entirely within Empire's acreage.

Using this data and interpretations, the location for spudding of Carpentaria-1 well has now been pin-pointed and groundwork has been started. The arrival of the certified Prospective Resource assessment by Netherland Sewell & Associates has also helped to inform this selection. Well engineering design is complete, and the Well Operations Management Plan (WOMP) is under review with engineers from the Northern Territory Department of Primary Industries and Resources.

Following a tendering process a preferred drilling contractor has been selected to drill, case, well-head and suspend Carpentaria-1. The design allows for the re-entry of the well for a vertical fracture stimulation and flow test followed by completion of a multi-staged horizontal wellbore after the wet season. Empire expects to sign and announce a drilling contract imminently.

The Carpentaria-1 well will be drilled to a planned depth of ~2,900 metres. This will allow Empire's technical team to fully evaluate the productive capacity of targeted Velkerri Shale and Kyalla Shale. Data acquisition will include an extensive suite of wireline log data, the taking of large diameter rotary sidewall cores, and Diagnostic Fracture Integrity Testing (DFIT). DFITs are an accurate and cost-effective planning tool to determine multiple diagnostic fracture stimulation calibration parameters, ahead of the future full fracture stimulation program.

The objectives and outcomes of the well are as follows:

- To assess and prove the extension, depth, and thickness of the productive target shales (Kyalla and Velkerri) in Empire's EP187 permit;
- To understand rock properties, hydrocarbon content, formation permeability and reservoir pressure as they relate to ability of the shales to produce;
- To gather data to be used for hydraulic stimulation planning and execution;
- To 'high-grade' the target shale, that is to test for the most productive intervals so they can be targeted in vertical hydraulic stimulation and testing, followed by future horizontal well placement and extended production testing; and
- To refine seismic interpretation and enhance further prospective gas resource estimates, and those for associated hydrocarbons.

After the end of Q2, Empire submitted a revised Environment Management Plan to the Northern Territory Department of Environment and Natural Resources as a provision to permit drilling to straddle the prescribed dry / wet-season, although significant rains are not typical early in the wet season.

Long-lead items for the well, including casing and wellhead were ordered and will travel from the port of Brisbane to site. Empire has also received its Northern Territory water extraction licence in support of the drilling campaign and completed preliminary civil work for the commencement of well pad preparation and water well drilling.

Empire incurred US\$385,222 of exploration expenses on its Northern Territory assets during the Quarter

Prospective Resource Assessment

During the Quarter, Empire engaged Netherland, Sewell and Associates (“NSAI”), a world-recognised international firm of petroleum consultants, to generate an independent resource report for the Company’s Northern Territory acreage which spans much of the McArthur Basin and its Beetaloo Sub-basin.

NSAI assessed that Empire holds a total best estimate prospective resource of 13.46Tcf, including over 2.3Tcf in the Velkerri Shale and 14 million barrels of oil equivalent in the liquids rich Kyalla Shale. To put this into perspective for shareholders, were this quantity of gas proven, it would be sufficient to support the construction of three LNG trains and could transform the Northern Territory economy.

A summary of the results of the NSAI report are summarised in the table below.

Reservoir	Undiscovered Original Gas-in-Place (BCF)			Unrisked Gross (100%) Prospective Gas Resources (BCF)			Unrisked Gross (100%) Prospective Oil Equivalent Volumes (MMBOE)		
	Low Estimate (1U)	Best Estimate (2U)	High Estimate (3U)	Low Estimate (1U)	Best Estimate (2U)	High Estimate (3U)	Low Estimate (1U)	Best Estimate (2U)	High Estimate (3U)
Lower Kyalla	496	724	1,073	24	72	161	5	14	34
Middle Velkerri*	9,303	12,516	16,597	1,283	2,339	4,751	215	397	825
Barney Creek*	17,667	59,652	155,058	1,633	11,053	45,380	274	1,886	8,011
Total*	27,466	72,892	172,728	2,940	13,464	50,292	494	2,297	8,870

**Note: Empire has aggregated the OGIP and prospective resources estimated by NSAI by arithmetic summation. NSAI did not evaluate the Wollgorang Formation, which has been previously externally evaluated.*

Shareholders should refer to the Empire Energy Group Limited ASX announcement dated 18 May 2020 for the full Prospective Resource estimate.

Empire's Chief Geoscientist, Dr Alex Bruce, presenting to the Board



Empire's COO David Evans (right) assists with Board deliberations. MD Alex Underwood (left), Non-executive Director Peter Cleary (centre) and Chairman Paul Espie (right)



Developments in the NT petroleum sector

- On 7 April 2020, Origin Energy announced it had agreed with joint venture partner Falcon Oil & Gas (“Falcon”) to increase its interest in the Beetaloo Basin joint venture by 7.5% in exchange for increasing its carry of Falcon’s share of costs by A\$25m over the coming years.¹ The transaction implies a valuation of A\$333m for 100% of the project, noting that this transaction has been executed during a period of depressed LNG and oil prices. Mr Frank Calabria the Managing Director of Origin Energy commented “**Reflecting our positive view of the potential of the resource, we have increased our interest in the Beetaloo Basin to 77.5 per cent** and agreed changes to the joint operating agreement, providing greater control over the timing, direction and budgets for future project activity. We announced a temporary pause in exploration activity as a result of COVID-19 and look forward to when we can recommence activity”.²
- On 15 May 2020, Reuters reported that Italian energy group ENI (MI: ENI) is considering selling its natural gas assets in Australia. Eni owns the Blacktip Gas Project in the shallow waters off the Northern Territory and has equity interests in the Bayu-Undan gas and condensate field and the associated Darwin LNG plant.
- On 26 May 2020, it was announced that Territory-born-and-raised businessman, former Dow Chemical Chairman and CEO, Andrew Liveris, and former Chief Minister, Paul Henderson, had been appointed as co-chairs of the Territory Economic Reconstruction Commission.³ On 20 July 2020, the Commission released its first report. The report reiterates the Commission’s support for the development of an onshore gas industry in the Northern Territory and recommends that the Territory Government, in conjunction with the Australian Government, accelerates the preliminary design and development assessments for critical enabling infrastructure to support development of the Beetaloo Sub-basin in the event commercial feasibility is proven. The report also identifies opportunities arising from gas development, including the manufacturing of petrochemicals and other downstream manufacturing sectors such as packaging, consumer products, building materials and pipes and cables, initially using gas from offshore sources, then gas and liquids from the Beetaloo Sub-basin. The final report is due in November.⁴
- On 28 May 2020, Santos announced it had completed the acquisition of ConocoPhillips’ northern Australia and Timor-Leste assets for US\$1.265 billion and a contingent payment of US\$200 million subject to final investment decision on Barossa.⁵

¹ Origin Energy ASX release dated 7 April 2020

² Origin Energy March Quarterly Report dated 30 April 2020

³ Michael Gunner MLA, Chief Minister of the Northern Territory release entitled “Territory Economic Reconstruction Update” dated 26 May 2020

⁴ Territory Economic Reconstruction Commission First Report, July 2020

⁵ Santos ASX release dated 28 May 2020



Other News

2020 Empire Annual General Meeting

Empire held its 2020 Annual General Meeting on 14 July 2020 using a hybrid in-person and virtual internet format. All resolutions, except for the spill motion were carried by shareholders. Empire's board and management look forward to keeping shareholders abreast of all developments over the rest of the financial year and thereafter as it executes its strategy for shareholder value creation.



2020 AGM Videoconference

New Non-Executive Director Appointment – Peter Cleary

The Empire board was strengthened during the Quarter with the addition of Mr Peter Cleary. Mr Cleary is a leader in the energy sector having a distinguished 29-year career in the industry with Santos as Vice President Strategy and Corporate Development and Vice President LNG Markets and Eastern Australia Commercial, the North West Shelf Venture and BP.

Mr Cleary is currently a Senior Consultant with Diamond Gas International, Mitsubishi Corporation's LNG marketing and business development subsidiary as well as Shinka Management, a group that advises on the application of Japanese productivity practises to clients in 26 countries.



Mr Cleary's industry experience, relationships and track record will support Empire as it matures its Northern Territory properties through appraisal to development and ultimately production.

Northern Territory Elections

On Saturday 22 August 2020, the Northern Territory will hold general elections for the Legislative Assembly of the Northern Territory Parliament. All 25 seats in the Legislative Assembly will be contested for a new fixed four-year term.

The Australian Labor Party (ALP) majority government led by Chief Minister Michael Gunner MLA is attempting to win a second term of government.

Northern Territory Border Re-opening

The Northern Territory border opened on 17 July 2020 for interstate travellers not arriving at the Northern Territory from identified coronavirus hotspots. Currently in New South Wales the Sydney metropolitan area, Blue Mountains, Port Stephens Shire and Eurobodalla Shire (Batemans Bay region) and Victoria are deemed coronavirus hotspots by the Northern Territory.

Empire has a COVID-19 Management Plan approved by the NT Chief Medical Officer that includes exemptions for crossing the Northern Territory border and movement within the Northern Territory. The COVID-19 Management Plan allows Empire employees and contractors to conduct activities in the field including the drilling of the Carpentaria-1 well.

Empire's Northern Territory and US operations are governed by COVID-19 protocols which aim to reduce the risk of transmission between our employees, contractors and the people living in the communities in which we operate.

Broker Research Coverage

During the Quarter, Blue Ocean Equities increased its base value of Empire shares by 55% from A\$0.49 to A\$0.76 per share following NSAI's prospective resource assessment release. Blue Ocean Equities has retained its BUY recommendation, with a Price Target of A\$0.75 per share and Strategic Target Price of A\$0.85 per share.

Taylor Collison also increased its Empire Target Price to A\$0.31 per share, equivalent to the low-point of its valuation range of A\$0.31 to A\$1.47 per share reflecting the current technical market and operating uncertainties, noting the potential for a significant re-rating on resumption of drilling. Taylor Collison retained its BUY recommendation for Empire.

Research as a Service ("RaaS") updated its own research coverage of Empire with an updated base case valuation of A\$0.58 per share (previously A\$0.51 per share), following the release of Empire's P50 prospective resource upgrade and progress towards drilling.

Research reports can be found on Empire's website <https://empireenergygroup.net/investor-information/research-and-media/>.

Further Empire Director Share Acquisition

During the Quarter, Empire Directors Alex Underwood and John Warburton collectively acquired 260,633 Empire shares on market. Empire Directors collectively own 19,749,633 Empire shares acquired for cash of >A\$4.4 million.

As approved by shareholders at the 2020 Annual General Meeting, Mr Paul Espie AO has taken Restricted Share Rights in lieu of cash for his director fees since 1 July 2019 and continued to do so throughout the Quarter.

Forthcoming Unlisted Options Expiry

Empire has on issue 36,218,754 unlisted options at A\$0.30 per share expiring on 26 September 2020. Holders of these options must exercise their options on or before the expiry date, otherwise the options will expire.

Energy Market Update

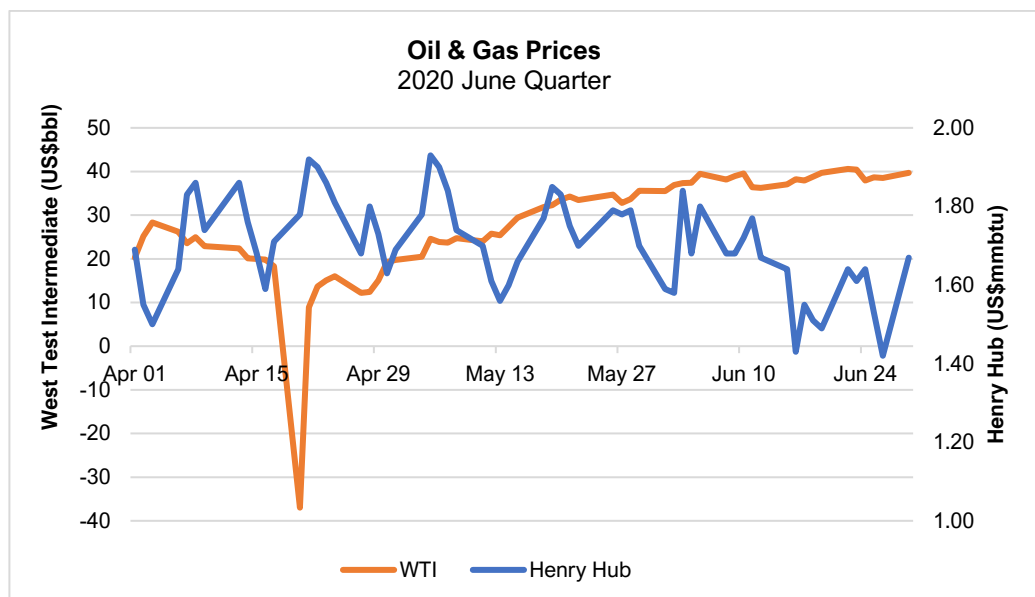
While commodity price volatility is expected to continue over 2020, Empire's US gas production assets are well hedged, and our Northern Territory assets are being appraised to deliver production into future domestic and Asian gas markets

The average closing Henry Hub natural gas spot price over Q2 2000 was US\$1.70mmbtu representing levels not reached since 1999, as a result of lower demand. Data by IHS Markit suggests that daily natural gas deliveries to US LNG facilities had fallen to less than 4.0Bcf/d in June vs. a record of 9.8Bcf/d in late March 2020. A mild winter in the Northern Hemisphere

and COVID-19 mitigation efforts across the world have reduced the demand for gas in the US and US LNG imports into Europe and Asia.⁶

The low Henry Hub gas price is however reducing US gas production due to less drilling activity and planned production curtailments. In its July Short-Term Energy Outlook, the US EIA forecast US dry natural gas production of 89.2Bcf/d in 2020 and 84.2Bcf/d in 2021, down from 92.2Bcf/d in 2019. The US EIA expects that falling gas production will put upward pressure on natural gas prices through to the end of 2021 forecasting that Henry Hub spot prices will average US\$1.93mmbtu in 2020 and US\$3.10mmbtu in 2021.⁷

The WTI (West Texas Intermediate) closed on 30 June 2020 at US\$39.27bbl having opened the Quarter on 1 April 2020 at US\$20.51bbl, representing 91 per cent increase. Though WTI did witness a healthy price increase between these dates, the Quarter was characterised by volatility including a fall in the spot price to ~US\$(37)bbl, as “stay-at-home” orders to limit the spread of COVID-19 crimped the demand for oil globally. The IEA Oil Market Report – July 2020, indicated that global oil supply fell by 2.4mmbbl/d in June, to a nine-year low of 86.9mmbbl/d which represents a cut in world oil output by ~14mmbbl/d since April 2020, led by record OPEC+ and other producer cuts. Global oil demand also fell by 16.4mmbbl/d year-on-year in the Quarter as lockdowns were imposed to combat COVID-19. The IEA forecasts global oil demand will decline by 7.9mmbbl/d in 2020 and recover by 5.3mmbbl/d in 2021, however the recent rise in the speed of COVID-19 transmission adds further uncertainty.⁸



Despite current volatility in global energy markets, the long-term future for LNG is sound. In its latest Energy Outlook for 2019, BP forecast Asian LNG imports rising to 448mtpa of LNG per annum by 2040,⁹ representing a compounding annual growth rate (CAGR) of 3.4% from 2017 levels. The Oxford Institute for Energy Studies (OIES): Oxford Energy Forum also forecasts significant increased Asian LNG demand out to 2030 of 368mtpa.¹⁰

⁶ US Energy Information Administration article “U.S. liquefied natural gas exports have declined by more than half so far in 2020” dated 23 June 2020

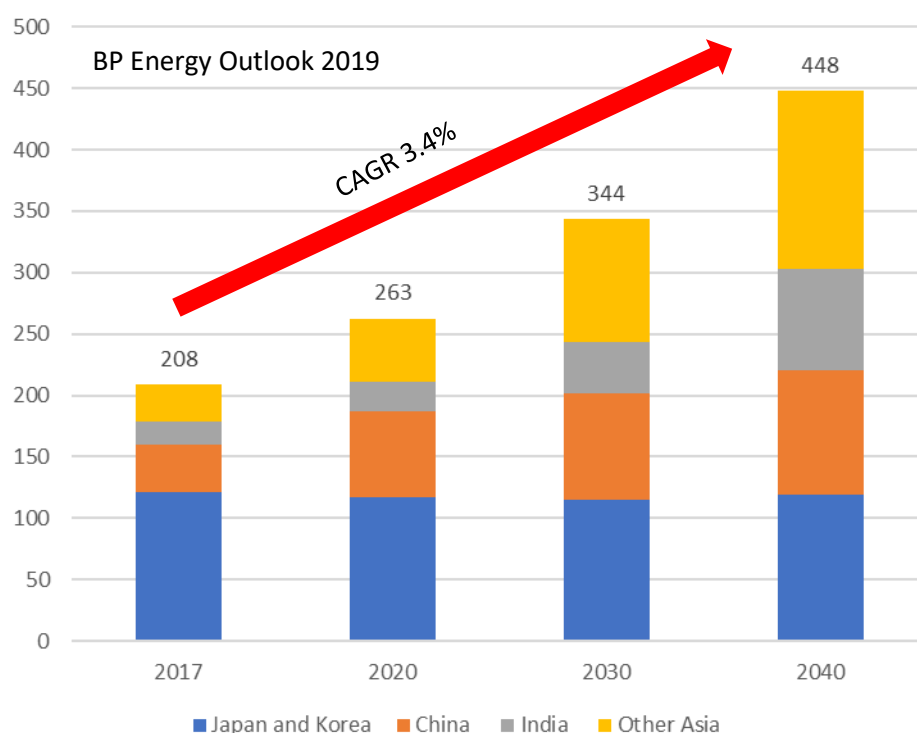
⁷ US Energy Information Administration July Short-Term Energy Outlook

⁸ IEA Oil Market Report - July 2020

⁹ BP Energy Outlook 2019 edition

¹⁰ The Oxford Institute For Energy Studies, September 2019: Issue 119

The key demand centres for LNG are expected to be the ASEAN countries, South Asia (Bangladesh, India and Pakistan) and China. The LNG hub at Darwin is likely to play an important role in meeting these growing economies demand for energy and gas as a core industrial feedstock for the manufacture of fertilizers, plastics, building products and a large range of everyday household items.



US Operations

Empire's US operations in Appalachia are more than 80% hedged at US\$2.50 mmbtu for the remainder of 2020. US EBITDA for Q2 2020 was US\$(92)k (Q1 2020: US\$(31)k). Continued low gas prices arising from the impact of COVID-19 on the US economy have been detrimental to financial performance. The local gas network utility, National Fuel Gas Distribution Corporation has allowed monthly meter fees to be waived on low producing meters. The average weighted sales price for gas after hedging was US\$2.33Mcf (Q1 2019: US\$2.69Mcf) as the Henry Hub index traded a multi-decade low.

Though the Henry Hub index forward curve suggests a recovery in gas prices as the winter months near, Empire remains focused on costs and has curtailed all discretionary expenditures.

Empire is continuing to operate under its COVID-19 policy and its status as an essential business. To date, there have been no confirmed cases of COVID-19 amongst Empire's workforce.

Description	3 months to 30 Jun 2020	3 months to 30 Jun 2019	YTD 31 Dec 2020	YTD 31 Dec 2019
Net Oil Production (Bbls)				
Appalachia	82	1,054	420	1,234
Mid-Con	-	31,103	-	64,113
Total Oil	82	32,157	420	65,347
Net Natural Gas Production (Mcf)				
Appalachia	383,514	446,099	837,814	878,703
Mid-Con	-	879	-	2,832
Total Natural Gas	383,514	446,978	837,814	881,535
Net Gas Equivalent (Mcf):				
Appalachia	384,006	452,423	840,334	886,107
Mid-Con	-	187,497	-	387,510
Total	384,006	639,920	840,334	1,273,617
Mcf/d	4,220	7,032	4,617	7,037
Weighted Avg Sales Price (\$/Mcf)				
Before Hedge	1.58	2.46*	1.96	2.61*
After Hedge	2.33	2.76*	2.60	2.84*
Lifting Costs (incl. taxes):				
Total Natural Gas Equivalent (\$/Mcf)	1.29	1.16*	1.17	1.18*

*excluding oil sales to allow for like-for-like comparison

Balance Sheet & Liquidity

Empire's cash balance as at 30 June 2020 was US\$7.1 million, of which A\$9.0 million was held in Australian dollars, with the remainder (US\$0.9 million) held in United States dollars.

During the Quarter, Empire received a forgivable loan of US\$552,600 under the Paycheck Protection Program ("PPP") which forms part of the US *Coronavirus Aid, Relief, and Economic Security Act* (the "CARES Act"). The CARES Act allocated US\$659 billion to the PPP with the objective of incentivising small and medium businesses across the US to retain their employees during COVID-19. PPP loans are administered by the U.S. Small Business Administration and originated by third-party lenders.

PPP loans can be applied to business expenses including payroll, interest, rent and utilities with the quantum of loan forgiveness totalling the amount spent by the borrower on these items ending the earlier of: (a) 31 December 2020; or (b) 24 weeks following loan disbursement date which is an increase on the original terms which provided for an 8 week period of coverage. However, at least 60% of the forgiven amount must have been used for payroll. Empire is only using the loan for forgivable purposes so that it does not have to repay the loan.

The key terms of the PPP loan are summarised below:

Key Terms	Commentary
Origination Lender	PNC Bank
Borrower	Empire Energy E&P LLC
Facility Size	US\$552,600
Loan Term	Two years
Margin	1.00% p.a. fixed interest rate
Security / Ranking	Fully unsecured and subordinated to existing Macquarie Bank Credit Facility
Financial Covenants	N/A
Repayment	Fully forgivable provided proceeds are applied to allowable expenses such as payroll in accordance with loan terms over a 24-week period following loan disbursement

Empire's existing US\$7.5 million debt facility with Macquarie Bank Limited is drawn to US\$6.7 million. As previously disclosed to shareholders, Macquarie and Empire have entered into a waiver agreement for potential breaches of the financial covenants under the debt facility for all quarterly covenant tests until 31 December 2020 (inclusive).

To provide a level of cash flow stability, the Company has in place a prudent gas hedging policy through put options ensuring price protection below the US\$2.50 per mmbtu strike price for hedged volumes and allowing Empire full exposure to gas prices should they rise above the US\$2.50 per mmbtu strike price.

As at 1 July 2020, Empire's hedge portfolio covers 720,000 mmbtu in 2020 (April to December), 900,000 mmbtu in 2021, 900,000 mmbtu in 2022 and 300,000 mmbtu in 2023:

Period	Volume mmbtu/month	Hedge Type	Strike Price US\$/mmbtu	Premium US\$/mmbtu
Jul 20 to Dec 20	120,000	Put Options	\$2.50	\$0.23
Jan 21 to Dec 21	25,000	Put Options	\$2.50	\$0.23
Jan 21 to Dec 21	25,000	Put Options	\$2.50	\$0.37
Jan 21 to Dec 21	25,000	Put Options	\$2.50	\$0.41
Jan 22 to Dec 22	25,000	Put Options	\$2.50	\$0.35
Jan 22 to Dec 22	50,000	Put Options	\$2.50	\$0.41
Jan 23 to Dec 23	25,000	Put Options	\$2.50	\$0.41

During the Quarter, the company made payments to related parties of US\$85,418. These payments comprised the Managing Director's salary and Non-Executive Directors' fees paid in cash.

Liquidity

Quarter Ended	30/06/2020	31/03/2020	31/12/2019	30/09/2019
Cash (US\$m)	\$7,088,271	\$6,978,526	\$9,923,707	\$3,893,512
Debt (US\$m) ¹¹	\$(7,227,600)	\$(6,675,000)	\$(7,500,000)	\$(7,500,000)
Net Cash /(Debt)¹²	\$(139,329)	\$303,526	\$2,423,707	\$(3,606,488)

Capital Expenditure

Capitalised expenditure of US\$415k included EP187 seismic program costs and plant and equipment for new office headquarters.

Description	3 months to 30/06/2020	3 months to 30/06/2019	YTD 30/06/2020	YTD 30/06/2019
Exploration (US\$)	358,690	67,055	1,194,342	112,179
Property, plant & equipment (US\$)	56,123	-	68,427	-
Capitalised Expenditure (US\$)	414,813	67,055	1,262,769	112,179
Other exploration costs (expensed) (US\$)	26,532	111,786	47,208	243,629

This ASX release has been authorised by the Empire Board of Directors.

For queries about this release, please contact:

Alex Underwood, Managing Director

Ph: (02) 9251 1846

info@empiregp.net

¹¹ Note: Debt is comprised of US\$6,675,000 owing under the Senior Secured Facility with Macquarie Bank Limited and US\$552,600 forgivable loan under the PPP

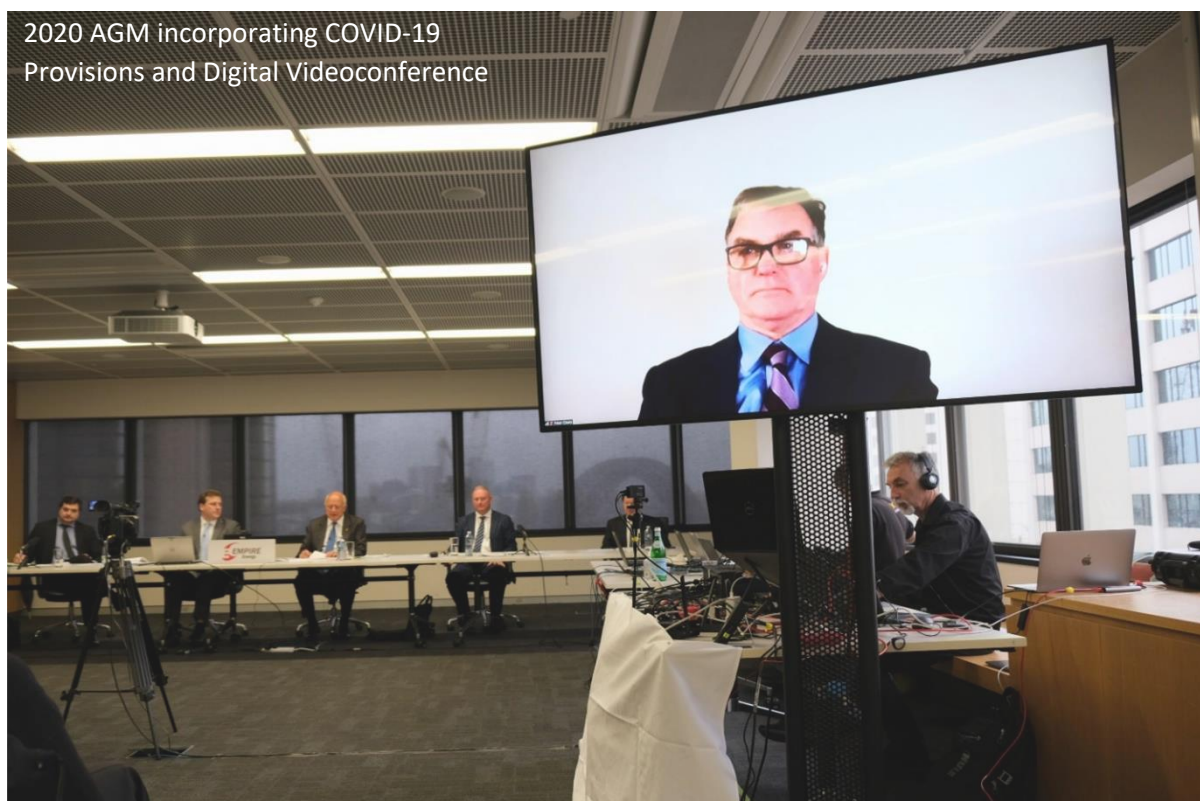
¹² Note: Net Cash / (Debt) is defined as USD equivalent cash minus USD debt for the purposes of this calculation

About Empire Energy

Empire Energy holds over 14.5 million acres of highly prospective exploration tenements in the McArthur and Beetaloo Basins, Northern Territory. Work undertaken by the Company since 2010 demonstrates that the Eastern depositional Trough of the McArthur Basin, of which the Company holds around 80%, has enormous conventional and unconventional hydrocarbon potential. The Beetaloo sub-Basin, in which Empire holds a substantial position, has world-class hydrocarbon volumes in place and a ramp up in industry activity to appraise substantial discoveries already made by major Australian oil and gas operators is ongoing.

Empire Energy is an experienced conventional oil and natural gas producer with operations in the Appalachia region of the USA (New York and Pennsylvania). Empire has been successfully developing and producing oil and gas since 2006.

2020 AGM incorporating COVID-19 Provisions and Digital Videoconference



Registered Office

Level 19, 20 Bond Street
Sydney NSW 2000

Phone: +61 2 9251 1846

Facsimile: +61 4 9251 1022

Website: empireenergygroup.net

Media Enquiries

Julian Malnic (External Affairs)
0427 909 991

Empire Energy Group Limited

ABN 29 002 148 361

Securities Exchange

ASX: EEG

Share Registry

Computershare Investor Services
Phone: 1300 850 505