



EMPEROR ENERGY
L I M I T E D

30th April 2021
ASX Market Announcements
ASX Limited
20 Bridge Street
Sydney NSW 2000

March 2021 Quarterly Activities Report

Highlights

- **Purchase of license for newly acquired 3D Seismic Data covering the Judith Gas Field.**
- **Interpretation and Analysis of the new Seismic Data has been commenced by Emperor Energy's consulting Geologists and Geophysicists. The new Seismic Data is shown to provide a major improvement in definition of seismic imagery.**
- **Amplitude response (key hydrocarbon indicator) is shown to extend up-dip from the Judith-1 well into the Greater Judith Structure supporting existing assessments of prospectivity.**
- **Amplitude response in interpreted Kipper Gas Sands is also seen on the new seismic to possibly extend from the currently producing Kipper Gas Field (operated by Exxon Mobil) into the Vic/P47 Exploration Permit owned 100% by Emperor Energy.**
- **APA completed the Pre-Front End Engineering Design ('Pre-FEED') for the provision of midstream infrastructure and services related to gas that is planned to be produced from the 100% Emperor Energy owned Judith Gas Field subject to successful appraisal drilling by Emperor Energy.**
- **The Pre-FEED is premised on Judith Gas Field Dynamic Modelling delivering simulated gas production of:**
 - o **80 Million Standard Cubic Feet per day (MMscfd) sustained across 25 years.**
 - o **4 vertical production wells being used at production commencement with an additional 5th well introduced in year 15.**
- **The Pre-FEED design nominates:**
 - o **Subsea completion tying 4 x wells to a 6-slot subsea gas collection manifold.**
 - o **A 40km x 300mm gas delivery pipeline and well control umbilical connecting the Judith Gas Field to the site of the APA owned Orbost Gas Plant.**
 - o **A separate Judith field gas processing train, constructed on the site of the existing Orbost Gas Processing Plant.**
 - o **An 11km x 250mm diameter gas export pipeline connecting to the Eastern Gas Pipeline at the existing Newmerella gas metering station.**



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1. New Seismic Data purchased - Interpretation and analysis commenced.

On 8th April Emperor Energy advised that it has completed a commercial agreement with global seismic company CGG for the purchase of a license to access newly acquired 3D seismic data covering the Judith Gas Field and Greater Judith Structure. (Figure 1)

This new seismic data was acquired by CGG during 2020 as part of a multi-client 3D Seismic Survey that covered much of the Offshore Gippsland Basin including the Judith Gas Field. Seismic acquisition was carried out using state-of-the-art equipment and techniques incorporating 7000 m long acquisition cables to generate the highest quality reservoir resolution seen so far in the Gippsland Basin.

Preliminary processed 3D data which includes a MAZ merge with CGG's previous legacy reprocessed data has been received by EMP with final processed data expected to be delivered by CGG later in 2021.

Initial examination of the new data by EMP's consulting Geologists and Geophysicists confirms a major improvement in seismic data quality compared to previous seismic imagery providing high definition across the Judith Gas Field and much of the Greater Judith Structure. Some further improvement in data quality is expected in the final processed data volume.

High seismic amplitude (low impedance) response is used as a potential indicator of gas. Seismic sections across the Judith Gas Field indicate that high amplitude/low impedance responses are well developed in the sections correlating with the Judith gas sands intersected in the Judith-1 well, and also in the interpreted underlying Longtom reservoirs, and can be seen extending significantly up-dip into the Greater Judith Structure from the original Judith-1 gas discovery drilled in 1989 by Shell. (Figure 2).

The improved seismic data quality in the new seismic volume will allow Amplitude Versus Offset (AVO) modelling to be employed as a Direct Hydrocarbon Indicator (DHI) in these reservoir sands across the Greater Judith Structure.

Initial examination of the new seismic also shows the presence of high amplitude responses indicative of the possible presence of gas in interpreted Kipper Gas Sands extending from the currently producing Kipper Gas Field (operated by Exxon Mobil) into the southeastern corner of Vic/P47. The possible extension of the Kipper Gas Field into Vic/P47 will be assessed by future work.

Emperor Energy's consulting Geologists and Geophysicists will continue with detailed interpretation and analysis of the seismic data throughout April and into May. This will include redefinition of fault blocks and gas sand horizon continuity within each block, seismic correlation against the Kipper 1 and South East Longtom 1 wells along with AVO analysis to highlight potential gas reservoirs.



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2. Commercial Arrangements for purchase of Seismic License

Emperor Energy and CGG completed a binding commercial agreement for the sale and purchase of a license to access the seismic data.

The license provides Emperor Energy with access to Survey Data over and around the Judith Gas Field comprising 37km² within Exploration Permit Vic/P47 as well as further areas outside of Vic/P47 to the west, south and east that are required to fully define the Greater Judith structure. (Figure 1).

The cost of the license to Emperor Energy is a total of AUD \$732,180.90 and will be payable via staged payments across a period of 12 months commencing in April 2021. These favourable payment terms have been factored into EMP's cashflow and capital commitment schedule for the next 12 months.

The purchase of the Seismic License also fulfills a key condition of the approval granted on 23 December 2020 by the National Offshore Petroleum Titles Authority (NOPTA) for the "Variation and Suspension of Work Program and Extension of Permit Term: Petroleum Exploration Permit Vic/P47". This approval extended the required timeframe to drill the Judith-2 Exploration Well to 22 August 2023.

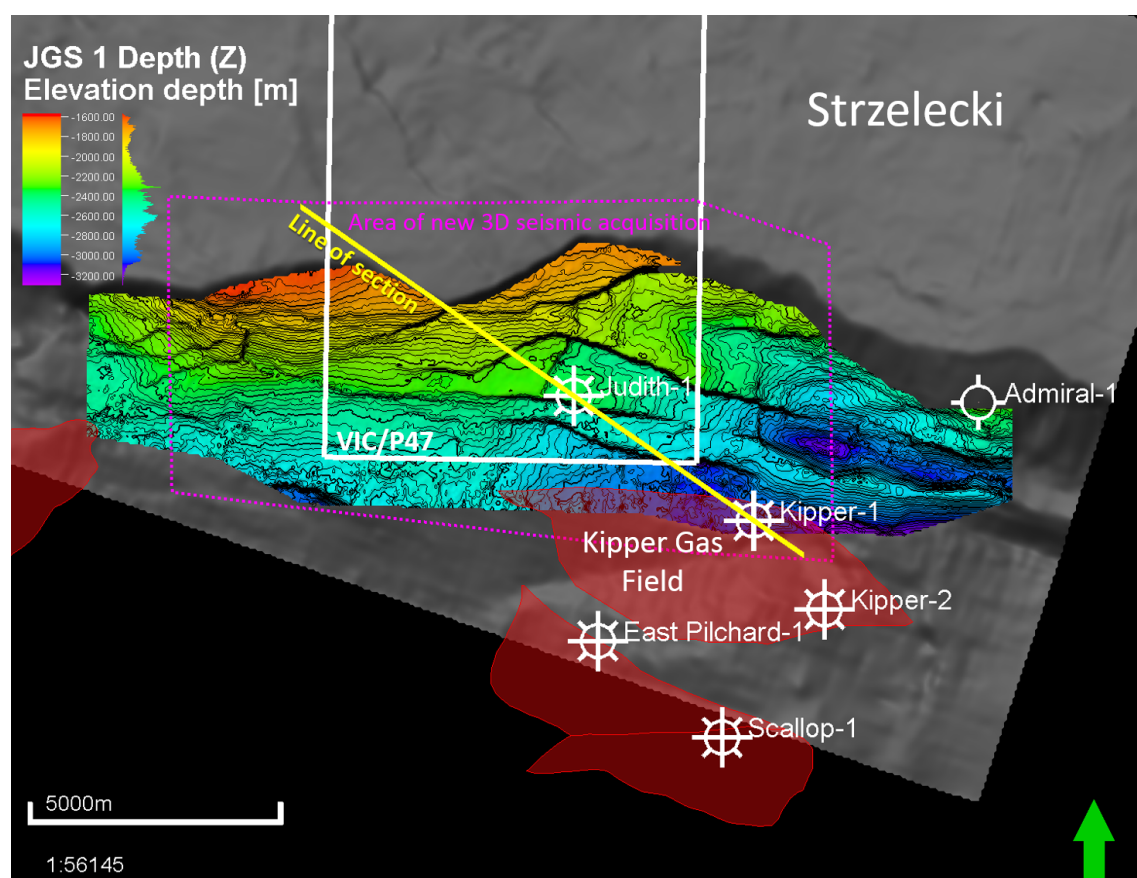


Figure 1: Map showing Vic/P47 Exploration Permit boundary (White line), EMP licensed area of new seismic acquisition (Purple line) and location of Seismic Section (Yellow line) shown in Figure 2



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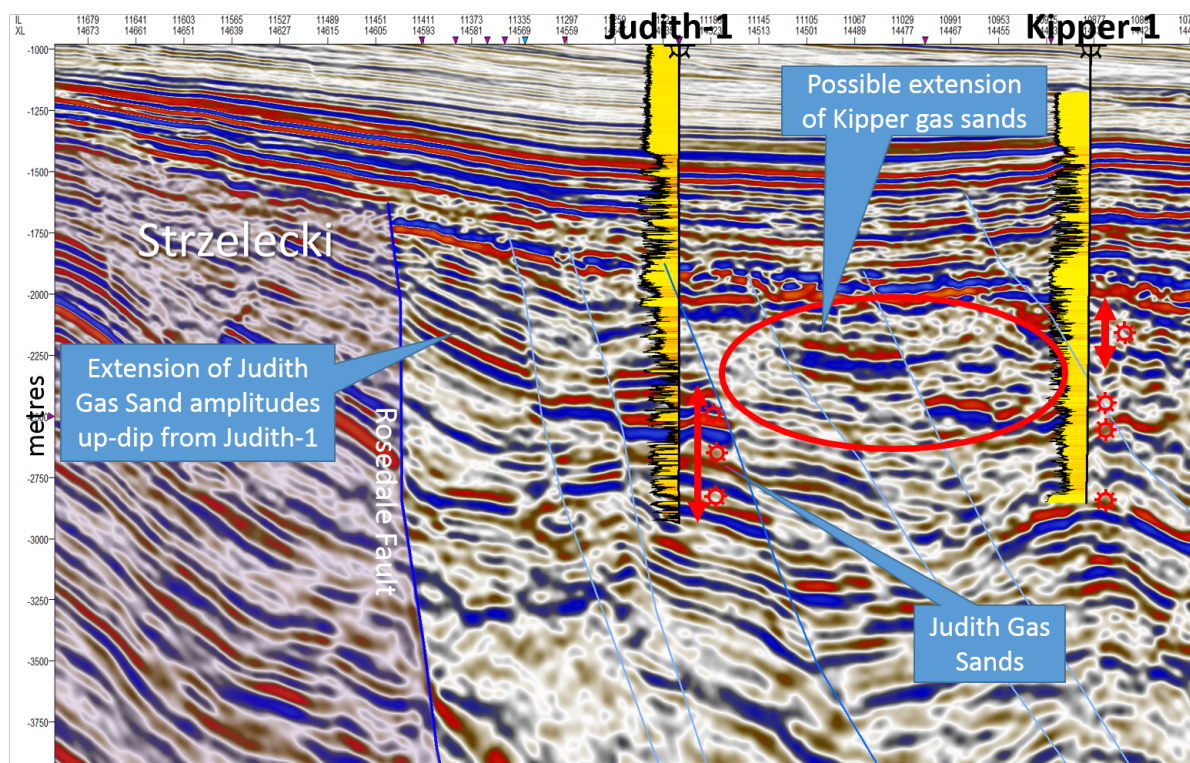


Figure 2: Seismic cross section showing amplitude in Judith Gas Sands at Judith-1 Well, Extension of Judith Gas Sand amplitudes up-dip from Judith and possible extension of Kipper Gas Sands.
(Seismic image generated under license with CGG)

3. Completion of Pre-FEED

On 17th February Emperor Energy announced that APA Group (ASX:APA) had completed the Pre-Front End Engineering Design (Pre-FEED) for the provision of midstream infrastructure and services related to gas that will potentially be produced from the Judith Gas Field in the 100% Emperor Energy owned VIC/P47 Permit in the offshore Gippsland Basin, Victoria.

4. Scope of Pre-FEED:

The Scope of the Pre-FEED included:

- The Pre-FEED design for a Gas Processing Plant, Subsea Pipeline and Export Pipeline to connect to the Eastern Gas Pipeline.
- Refinement of indicative project cost estimates and project scheduling.
- A Budget estimate for a Front End Engineering Design (FEED) or (Feasibility Study).

APA carried out the Pre-FEED work using a balanced combination of both in house and external expertise. Emperor Energy and APA had previously established a Memorandum of Understanding (MOU) relating to the Judith Gas Project in October 2019. The Pre-FEED is the first stage of work progressed from the MOU.



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5. Project Summary

The design basis for the Pre-FEED has been 80MMscfd (90TJ/day) of sales gas across a 25-year project life with gas processing to meet the AS4564 gas sales specification. This is based on 4 x initial production wells with a 5th well introduced in Year 15 to maintain delivery pressures.

Well delivery rates are based on Gas Reservoir Dynamic Modelling previously completed by Independent Reservoir Engineering Consultants engaged by Emperor Energy.

The subsea design allows for flexible jumper lines to transport raw gas from each well head to a six-slot manifold where all gas is collected and delivered in a single stream to the Pipeline End Termination.

The Pipeline End Termination provides the interface to a 40km x 300mm nominal bore pipeline delivering raw gas to the proposed Judith Processing Plant.

The 300mm pipeline selection provides a suitable balance between friction loss, economics, slugging and ramp up rates. A 40 km subsea control Umbilical from subsea wells to the proposed new Judith field gas processing train at the site of the existing Orbost Gas Processing Plant runs in parallel to the pipeline.



Figure 3: Indicative Image of 4 x Well Subsea Completion Facilities

Image provided courtesy of APA

The design of the Judith processing plant is based on using available space adjacent to the existing Orbost Gas Processing Plant to construct a separate gas train tailored to the Judith gas composition. There will be operating synergies with the existing gas plant.

Sales gas would be delivered through an 11km x 250mm Nominal Bore export pipeline running in parallel with the existing Orbost export pipeline. This would then deliver gas to an upgraded Newmerella gas metering station connecting into the Eastern Gas Pipeline.

The Eastern Gas Pipeline is a key gas supply artery between the Gippsland Basin in Victoria and NSW. The Eastern Gas Pipeline transports natural gas to Sydney, Canberra and Wollongong as well as a number of regional centres.



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Figure 4: Aerial View of existing Orbost Gas Plant

Image provided courtesy of APA

6. Project Execution and Scheduling

The Pre-FEED study provides a Project Execution Plan laying out the basis for project delivery organisation, procurement strategy, contracting strategy, fabrication methodology, logistics, construction methodology, commissioning, and testing.

The key Regulatory approvals required for the project are identified and a detail project schedule has been analysed.

The Pre-FEED study indicates that a Final Investment Decision (FID) could be achieved 14 months after commencing the Project Front End Engineering Design (FEED) otherwise referred to as a Full Feasibility Study. Commercial operation could then be achieved within a further 38 months of the FID.

7. Management Comment

Emperor Energy Director Phil McNamara said: “In late 2020 Emperor Energy significantly reduced Permit Risk when the relevant government authority, NOPTA, extended the Permit Term for the Judith Gas Field. In January 2021 we have seen completion of the Project Pre-Feasibility by APA thus providing clarity on the proposed plant site, approvals process, scheduling and project costs. In early April 2021 we secured a license to an ultra-modern set of Seismic Data across Judith that provides us with far greater clarity in interpretation of the Resource. Step by step Emperor Energy is incrementally piecing this project together with our next major milestone to be securing an Exploration and Production Partner for the drilling of the Judith 2 Well”.

8. Finalisation of all Payments to Geological Consultants 3D-Geo

The Company announced on 18 January 2021 that the final payment of previously agreed delayed settlement terms with consultants 3D-Geo had been completed via the allocation of a total of 3,500,000



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shares at a price of \$0.033 per share to a total value of \$115,500.

This finalizes all payments for detailed geological studies and associated work carried out by 3D-Geo across a three (3) year time frame in relation to the Judith Gas Field located in Exploration Permit Vic/P47 in the offshore Gippsland Basin, Victoria, Australia. Emperor Energy looks forward to an ongoing technical support relationship with 3D-Geo as work on the Judith Gas Field progresses.

9. Finance

At the end of the quarter, 31st March, the Company's cash balance was \$467,958.

The company paid \$39,270 to directors and management for the quarter ended 31st March 2021 for administration and exploration expenses.

A summary of the cash flow for the quarter are attached in the Appendix 5B.

10. Tenement holding summary

Below is a list of the tenements held by Emperor Energy Limited as of 31st March 2021:

Petroleum Tenement	Location	Beneficial Percentage held
Vic/P47	Victoria	100% / Operator
Backreef Area	Western Australia	100% / Operator

We thank shareholders and our team for their ongoing support and welcome any questions they may have.

This announcement has been authorised for release to the market by the Board of Directors of Emperor Energy Limited

Yours faithfully

Carl Dumbrell

Company Secretary

Ph +61 402 277 282

carl@emperorenergy.com.au



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Corporate Directory

Board of Directors

Carl Dumbrell
Phil McNamara
Nigel Harvey

Company Secretary

Carl Dumbrell

Geological Consultant

Geoff Geary

Project & Business Development Consultant

Malcolm King

Registered office & Principle place of business

Level 21, 201 Sussex Street
Sydney NSW 2000

Mailing Address

GPO Box 5360
Sydney NSW 2001

Auditors

ICP Assurance Services
Suite 2109, Level 21 Castlereagh Street
Sydney NSW 2000

Lawyers

Hopgood Ganim
Level 27, Allendale Square
77 St Georges Tce, Perth WA 6000

Share Registry

Automic Pty Ltd ACN 152 260 814 Trading as Automic Registry Services
Level 5, 126 Phillip Street
Sydney NSW 2000
Phone: 1300 288 664 Overseas callers: +61 2 9698 5414
Email: hello@automicgroup.com.au



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Top 20 Shareholders – ASX: EMP

Position	Holder Name	Holding	%
1	Citicorp Nominees Pty Limited	5,709,032	4.07%
2	ZLD Holdings Pty Ltd	3,810,701	2.71%
3	Hix Corp Pty Ltd	3,480,000	2.48%
4	Sama Zaraah Pty Ltd	3,257,000	2.32%
5	Daniel J Peters	3,064,197	2.18%
6	Craig Graeme Chapman	3,000,000	2.14%
7	Bond Street Custodians Limited	2,916,474	2.08%
8	Eric Frescher	2,865,533	2.04%
9	Gotha Street Capital Pty Ltd	2,768,137	1.97%
10	Philip McNamara	2,402,300	1.71%
11	Arlam Pty Ltd	2,234,541	1.59%
12	H&M Investments Pty Ltd	2,123,143	1.51%
13	Buduci Fond Pty Ltd	1,649,746	1.18%
14	Malcolm King	1,584,756	1.13%
15	Phillip Perry	1,500,000	1.07%
16	Harness Pty Ltd	1,341,667	0.96%
17	Mark O’Leary	1,306,667	0.98%
18	P & K San	1,302,554	0.93%
19	Callum McIntosh	1,300,038	0.93%
20	H&M Investments Pty Ltd	1,283,502	0.91%