



**EMPEROR ENERGY**  
L I M I T E D

30 July 2021

ASX Market Announcements  
ASX Limited  
20 Bridge Street  
Sydney NSW 2000

## **June 2021 Quarterly Activities Report**

### **Highlights**

- **Purchase of license for newly acquired 3D Seismic Data covering the Judith Gas Field**
- **New Seismic Data provides a significant increase in data quality and resolution**
- **Structural Interpretation of the Judith Gas Field carried out using the new 3D Seismic Data validates previous interpretation**
- **Positive results from AVO Gas Indicator shows strong responses through Judith Gas Sands extending over at least 500m of vertical relief within the Judith Structure**
- **AVO response tied back to and correlated with historic Judith 1 and Kipper 1 Well data**
- **AVO Gas Indicator shows further strong response in the additional exploration target of the interpreted Longtom 200 Gas Sand located below the Total Depth of the Judith 1 Well**
- **AVO Gas Indicator shows good conformity of AVO anomalies with the Greater Judith structural closure at all target levels, increasing the chances of exploration success and significantly de-risking the planned Judith 2 Well**
- **Increase in resource evaluation confidence fully justifies expenditure on new seismic data**
- **Capital Raise of \$1,000,000 completed in June to fund forward exploration activity**

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

On 8 April 2021 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.



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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.

The license provides Emperor Energy with access to Survey Data over and around the Judith Gas Field comprising 37km<sup>2</sup> 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.

The cost of the license to Emperor Energy is a total of AUD \$732,180.90 and is 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 (NOPATA) 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.

## **2. Structural Interpretation of Judith using New Seismic Data**

On 11 June 2021 Emperor Energy advised that its' team of consulting geologists and geophysicists were progressing through analysis of the Multi Client 3D Seismic Data.

The initial phase of technical work was to complete a revised analysis of the Judith structure through interpretation of the new seismic data to then develop new structural mapping and a 3-dimensional view of each gas bearing reservoir sand penetrated by the Judith-1 Discovery Well.

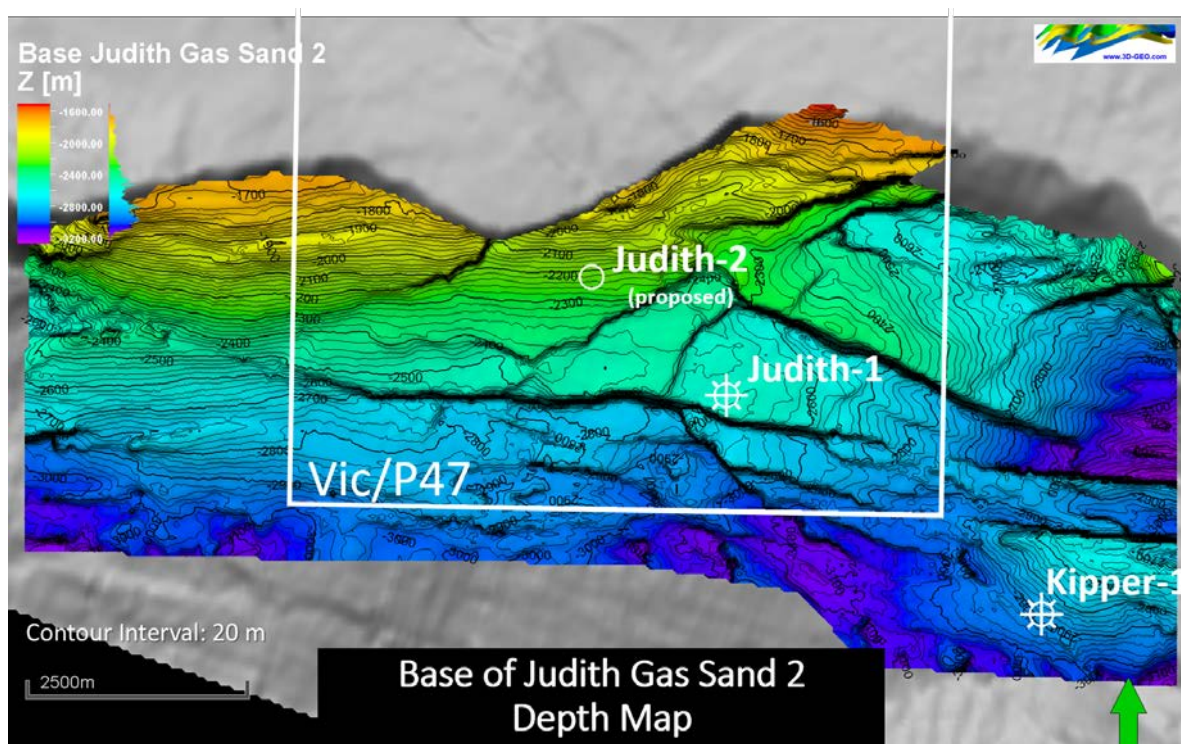
Figure 1 below shows the interpreted base of the Judith Gas Sand 2 across a depth range of 1600m to 3000m below the sea floor. Similar maps have been produced for other gas sand horizons. Figure 2 shows how the Judith Gas Field fits into a regional perspective including the previously producing Longtom and currently producing Kipper gas fields.

The quality of the Seismic data has allowed Emperor's geologists and geophysicists to build an updated and more accurate structural interpretation of the Judith Gas Field. There is a dramatic improvement in data resolution across the entire gas field except for relatively small areas at the top of the structure close to the major Rosedale Fault where the combination of steep dips and fault shadow effects still leaves these high areas with some reduction in seismic resolution.

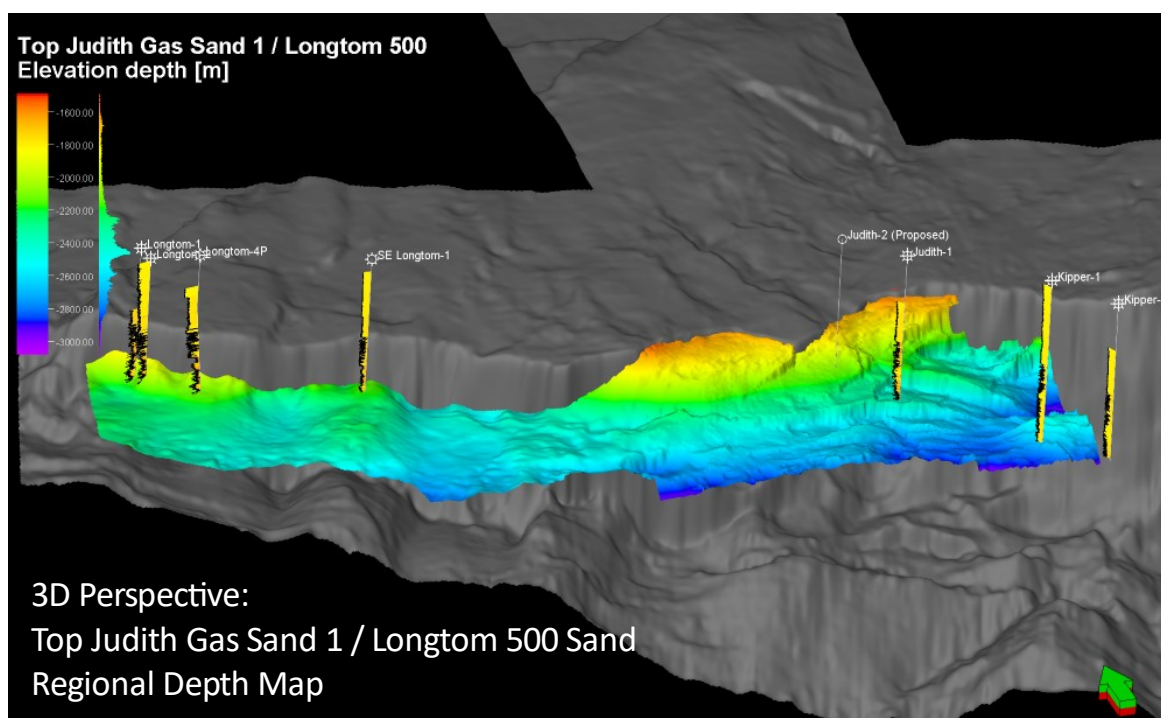
The new data provides a significant step forward in the level of detail available to define the Judith Gas Field and contributes significantly to the de-risking of the proposed Judith-2 Well. Emperor Energy considers the quality of the data and output from its' analysis fully justifies the seismic license expenditure to access the data.



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**Figure 1: Interpreted Depth Map of Judith Gas Sand 2 with the overall structure varying in depth from 3000m (below sea floor) in the South to 1600m (below sea floor) in the North.**



**Figure 2: Regional Depth Map providing perspective on the structural relationship between the Judith, Longtom and Kipper Gas fields.**

### 3. AVO Analysis of Judith Gas Sands 2 and 3

On 11 June 2021 Emperor Energy also advised the next phase of technical analysis of the seismic data carried out was Amplitude Versus Offset (AVO) analysis and modelling that provides a Direct Hydrocarbon Indicator (DHI) in these reservoir sands across the Greater Judith Structure. The AVO analysis compares the seismic amplitude response that has been recorded from geophones located comparatively close to seismic signal source with data from those geophones located at distance from the seismic signal source.

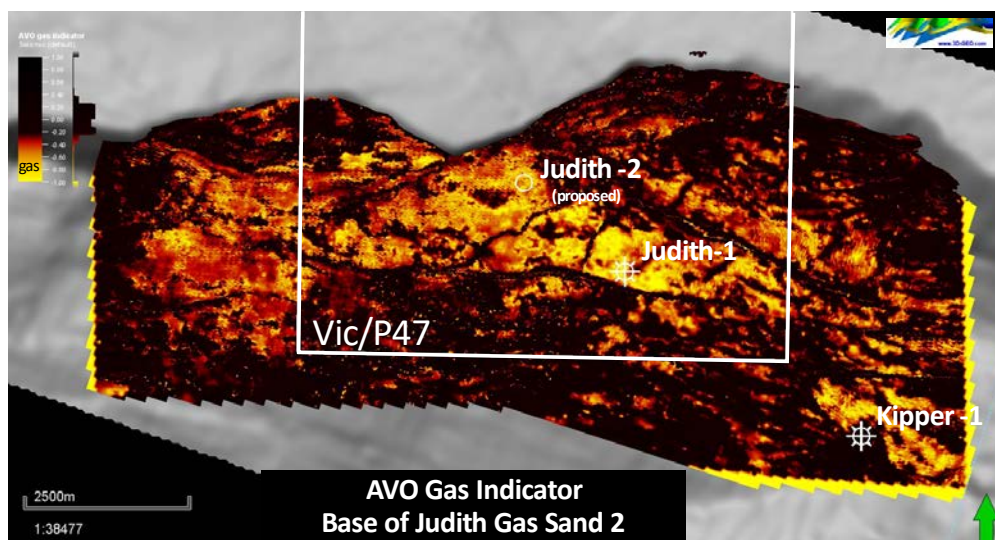
AVO allows a comparison in the variations of fluid properties present in the porous space of the target gas sands. These variations have then been calibrated against data from the gas bearing zones of the existing Judith-1 Well (Drilled by Shell in 1989) and from equivalent gas bearing sands in the nearby Kipper-1 gas discovery drilled and developed as a producing gas field by Exxon Mobil.

AVO analysis provides a calculated geophysical interpretation of where the sand formations are gas charged and not water filled and provides the best available prediction for gas other than drilling.

Results of the AVO analysis have been very encouraging. Figures 3 and 4 below show the outcome of AVO analysis for the Judith Gas Sand 2 and Judith Gas Sand 3. These gas sands have net pay thicknesses of 45m and 85m respectively with a non-gas bearing interval between them of 72m. In both cases the AVO analysis shows strong AVO Gas Indication (brightening to orange) across the Judith Structure both within and outside the Vic/P47 Permit area, including at Kipper-1 to the southeast where gas was recovered during drilling.

Faults that have been interpreted from the seismic data can be seen as darker areas in the AVO response map providing an indication of the extent of the accuracy of data interpretation and the AVO response.

The extent of the strong AVO response indicates interpreted gas extending over more than 500m of vertical relief through the permit area with the gas response extending up-dip in the Judith Gas Field from the Judith-1 Well. This adds considerable support to the Prospective Resource estimates previously published for the Judith Gas Field.

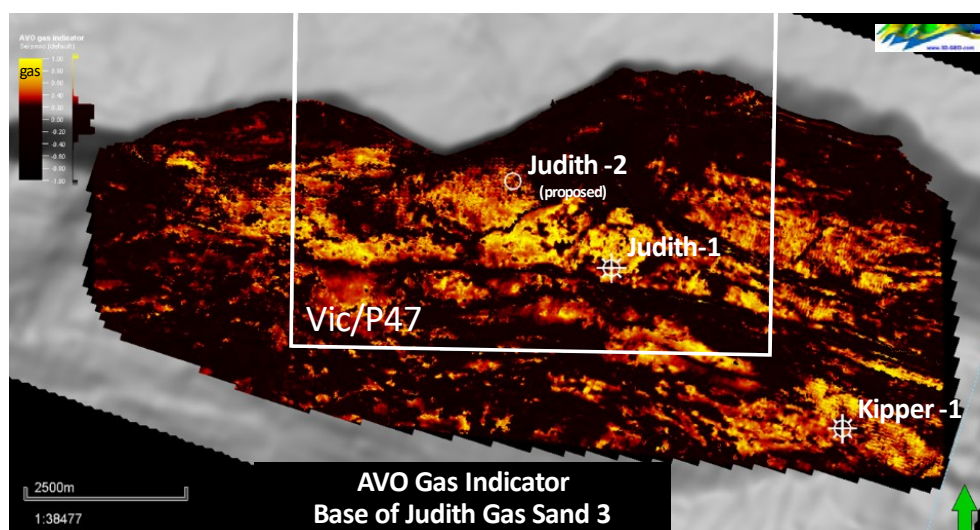


**Figure 3: AVO Gas Indicator in the Judith Gas Sand 2 containing a 45m Net Pay Interval. Areas brightening to orange show a strong AVO gas indicator. (Emperor Energy VicP/47 Permit Boundary shown as white line)**





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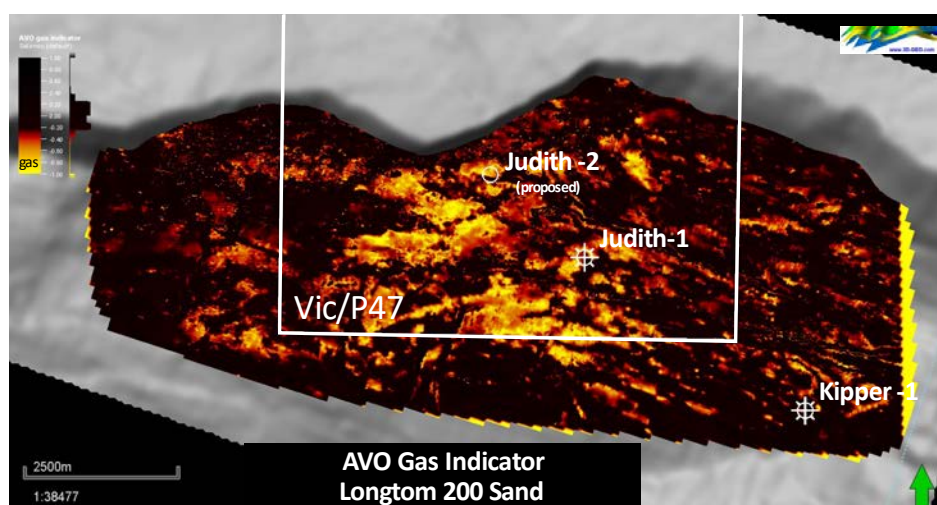


**Figure 4: AVO Gas Indicator in the Judith Gas Sand 3 containing an 85m Net Pay Interval and located 72m beneath the Judith Gas Sand 2. Areas Brightening to orange show a strong gas indicator.**

#### **4. AVO Analysis of Longtom 200 Gas Sand**

The interpreted Longtom 200 gas sand and other Longtom sands are located beneath the Total depth of the Judith-1 Well and have not been previously intersected in the Judith Structure however their presence is clearly visible on the new seismic data. They are seen as providing significant exploration upside for the planned Judith-2 Well that is designed to intersect the Longtom 200 sands at a depth of approximately 3000m. Based on Seismic correlations this sand is the equivalent of the main gas producing sand at the Longtom Gas Field located 15km to the west of Judith.

AVO analysis in the Longtom 200 sand again shows strong AVO response with gas indications extending across the Judith Structure. The strong AVO response extends from the southern boundary of the permit area up-dip and across the structural closure beyond the planned Judith-2 Well location. The strong AVO gas response is evident over more than 500m of vertical relief, similar to the Judith Gas Sands 2 and 3.



**Figure 5: AVO Gas Indicator in the Longtom 200 Sand located some 70m beneath the base of the Judith Gas Sands, estimated to contain some 60m Gross Pay. Areas brightening to orange show a strong gas indicator.**

## 5. Management Comment

**Emperor Energy Director Phil McNamara said:** “In late 2020 Emperor Energy significantly reduced Permit Risk by securing an extension of Permit Term for the Judith Gas Field. In early 2021 we have seen completion of the Judith Gas Project Pre-Feasibility by APA thus providing clarity on the proposed plant site, approvals process, scheduling and project costs. In April 2021 we secured a license to an ultra-modern set of Seismic Data across Judith that has provided us with far greater clarity in interpretation of the Resource. The subsequent AVO analysis of this seismic data provides consistent indication of Hydrocarbon accumulation within the reservoir sands across the Greater Judith Structure. The combined results of the work done and analysis completed has greatly improved our confidence that Emperor Energy will proceed to secure the Exploration and Production Partner it requires for the drilling of the Judith 2 Well.

## 6. Finance

On 18 June 2021 Emperor Energy announced it had received firm commitments to raise \$1,000,000 through the issue of 33.33 million shares at 3 cents per share in a heavily oversubscribed capital raise.

The share placement was non-brokered and attracted strong demand from existing shareholders who qualify as sophisticated or professional investors. The net proceeds of the Placement strengthen the Company’s balance sheet and provide important funding for the company’s exploration activities.

At the end of the quarter, 30 June 2021, the Company’s cash balance was \$1,166,175.

The company paid \$21,890 to directors and management for the quarter ended 30 June 2021 for administration and exploration expenses.

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

## 7. Extraordinary General Meeting (EGM)

The company held an EGM of shareholders on 21 July 2021, with all resolutions carried. On 28 July 2021 the company issued 12.2 million shares at 3 cents per share to directors and company creditors as approved by the shareholders at the EGM.



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## 8. Tenement holding summary

Below is a list of the tenements held by Emperor Energy Limited as of 30 June 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](mailto: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 1204, 227 Elizabeth 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](mailto:hello@automicgroup.com.au)





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## Top 20 Shareholders – ASX: EMP

Position	Holder Name	Holding	%
1	Carl Dumbrell & controlled holdings	10,109,936	5.41%
2	Scintilla Strategic Investments Limited	9,333,333	4.99%
3	Slade Technologies Pty Ltd	8,333,333	4.73%
4	BNP Paribas Nominees Pty Ltd	6,799,556	3.64%
5	Craig Graeme Chapman	6,333,333	3.39%
6	Phil McNamara & controlled holdings	6,190,396	3.31%
7	Nigel Harvey & controlled holdings	5,406,645	2.89%
8	Gotha Street Capital Pty Ltd	5,268,137	2.82%
9	Citicorp Nominees Pty Limited	4,325,571	2.32%
10	Pharoth San & Kaden San	3,866,912	2.07%
11	Zen88 Pty Ltd	3,700,000	1.98%
12	Hix Corp Pty Ltd	3,480,000	1.86%
13	Sama Zaraah Pty Ltd	3,257,000	1.74%
14	Daniel J Peters	3,064,197	1.64%
15	Littlejohn Embrey Engineering Pty Ltd	3,000,000	1.61%
16	Benjamin Price	2,847,541	1.52%
17	Arlam Pty Ltd	2,234,541	1.20%
18	Malcolm King	2,084,756	1.12%
19	Eric Frescher	1,863,045	1.00%
20	Craig Chapman & Joanne Chapman	1,666,667	0.89%