



EMPEROR ENERGY
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6th April 2022

ASX Market Announcements
ASX Limited
20 Bridge Street
Sydney NSW 2000

Independent Resource Statement – Vic/P47 Permit, Judith Gas Field

Total P50 Un-risked Prospective Gas Resource increases by 50% to 1.848 Tcf

Highlights

- **Interpretation and AVO analysis of recently acquired CGG Multi Client 3D Seismic Survey has highlighted the significant additional potential of the Kipper and Golden Beach sands, overlying the Judith gas sands**
- **P50 Un-risked Prospective Gas Resource in these upper sands assessed at 622 Bcf (Billion Cubic Feet) within Vic/P47 (tied-back to the adjacent Kipper Gas Field)**
- **Total P50 Un-risked Prospective Gas Resource within Emperor Energy's 100% owned Vic/P47 permit increases by 50% to 1.848 Tcf (Trillion Cubic Feet)**
- **New Seismic Survey data significantly reduces risk on previously reported 1.226 Tcf Prospective and 150 Bcf Contingent Resources in the Judith and Longtom sands within the Judith Gas Field**
- **Revised Resource Statement completed by 3D-GEO Pty Ltd, Melbourne**

1. Summary

The Directors of Emperor Energy Limited (Emperor) wish to advise that an Independent Resource Statement has been completed for the Kipper and Golden Beach sands overlying the Greater Judith Gas Field within the 100% Emperor Energy owned Vic/P47 Exploration Permit located in the offshore Gippsland Basin, Victoria (Figure 1).

Independent geological consultants 3D-GEO Pty Ltd have assessed the gas-in-place and recoverable gas volumes in the Kipper and Golden Beach sands overlying the Judith-1 gas discovery within Vic/P47. This follows interpretation of new seismic data over Vic/P47 from CGG's Multi Client 3D seismic survey acquired in 2020. Final processing of the seismic data was completed in November 2021.

3D-GEO has now completed its assessment of the Prospective Resources contained in the Kipper and Golden Beach sands, tied-back to the adjacent Kipper Gas Field. The resources presented are 100% attributable to Vic/P47, of which Emperor Energy holds 100% equity.

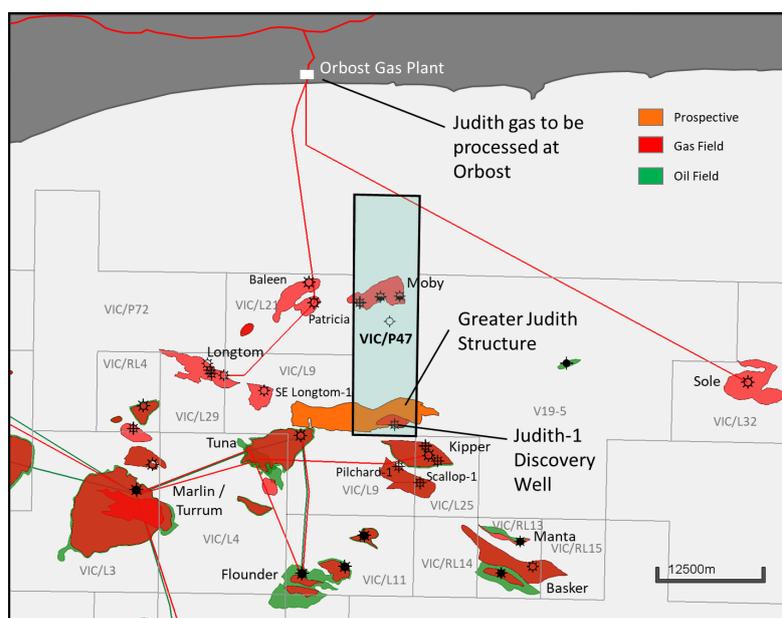


Figure 1: Location of 100% Emperor Energy owned Vic/P47 (offshore Gippsland Basin), showing Judith Gas Field, other regional permits along with nearby oil and gas fields

An Independent Technical Specialist's Report comprising the Kipper and Golden Beach Prospective Resources was provided to Emperor Energy on 31 March 2022 by 3D-GEO Pty Ltd.

3D-GEO has apportioned resources in accordance with the Society of Petroleum Engineers' internationally recognised Petroleum Resources Management System (SPE-PRMS 2018). The results are provided below in Table 1.

Table 1: Summary of Prospective Resources for Judith area of Vic/P47 (3D-GEO, March 2022)

Greater Judith Area		Unrisked Prospective Resources		
		P90	P50	P10
New Resource Statement				
Kipper Sand	Bcf	194	314	478
Upper Golden Beach Sandstone Sequence	Bcf	70	143	247
Lower Golden Beach Sandstone Sequence	Bcf	9	21	40
Golden Beach Basal Sand	Bcf	83	144	231
Total	Bcf	356	622	996
Previous Judith and Longtom Sands (July 2019 Resource Statement)	Bcf	265	1226	2496
Revised Total	Bcf	621	1848	3492



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2. Background

Judith-1 was drilled and operated by Shell Company of Australia in 1989 and is contained within the Vic/P47 Permit held 100% by Emperor Energy and located within close proximity of the Kipper Gas Field operated by Esso (Exxon Mobil).

On 5 July 2019 after extensive technical evaluation studies, 3D-GEO provided Emperor Energy with a Resource Statement relating to the Judith and Longtom Gas Sands within the Judith Gas Field. This statement assessed a P50 Unrisked Prospective Gas Resource of 1.226 Tcf along with a 150 Bcf Contingent Resource (probabilistic assessment) within the Vic/P47 Permit area.

On 30 December 2020 Emperor Energy announced that the National Offshore Petroleum Titles Regulator (NOPTA) has approved the Company's application to extend the primary term of the Vic/P47 Exploration Permit by a period of 30 months requiring the drilling of the Judith-2 Exploration Well by August 2023.

During 2020, global seismic acquisition company CGG acquired a Multi Client 3D seismic volume over a large portion of the Gippsland Basin, including the Judith Gas Field.

Emperor Energy purchased a license to access part of this seismic volume and the final processed data covering the Judith and Kipper gas fields was made available to Emperor Energy in November 2021.

Emperor Energy and 3D-GEO subsequently carried out extensive interpretation and modelling with the new seismic data.

3. New 3D-GEO Resource Assessment

The review of the Judith prospective resources focused on:

- Interpretation of the newly acquired/processed CGG 3D seismic volume
- Remapping and 3D modelling of the Judith and Longtom sands
- AVO/Attribute analysis of the CGG seismic volume for gas sands
- Review of offset well data, particularly Kipper and Golden Beach Sands in the Kipper Gas Field
- Interpretation and mapping of the Kipper and Golden Beach sands over the Greater Judith area
- Volumetric assessment of resources in the Kipper and Golden Beach sands in Vic/P47

The new CGG seismic volume has verified the previous modelling of the Judith and Longtom gas sands and the improved data quality allowed for further AVO and attribute work to be completed, subsequently reducing risks on the extent of the gas filled sands (Figure 2).

The new seismic data has shown that the previous Static and Dynamic modelling has adequately represented the Greater Judith closure and resource assessment.

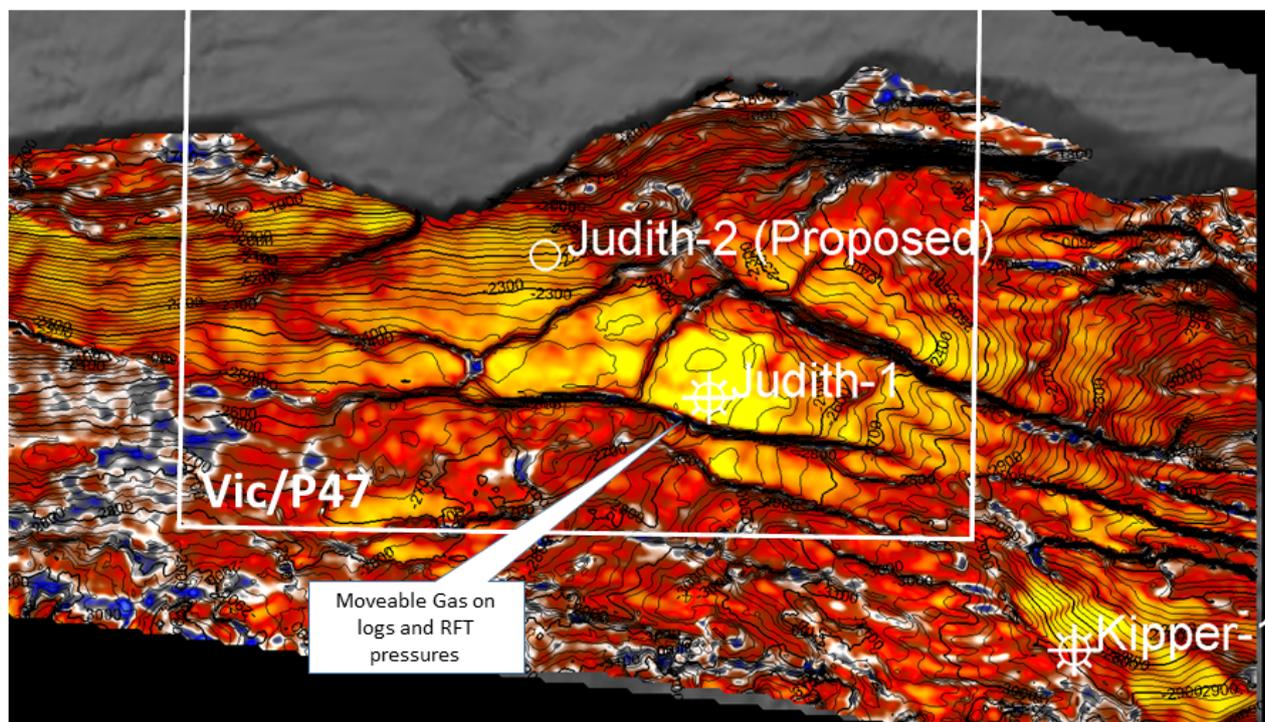


Figure 2: Greater Judith Closure with AVO Shuey Fluid Factor from CGG seismic volume showing extensive gas distribution (Judith Gas Sand 2). (3D-GEO, March 2022)

The CGG 3D seismic volume also significantly improved the data quality in the shallower Kipper and Golden Beach sands that overlie the Judith Gas sand accumulation.

Figures 3 shows the seismic character of those units from the Kipper-1 well into Vic/P47 while Figure 4 shows the well correlation of the Judith-1 well to the gas sands in the Kipper Field.

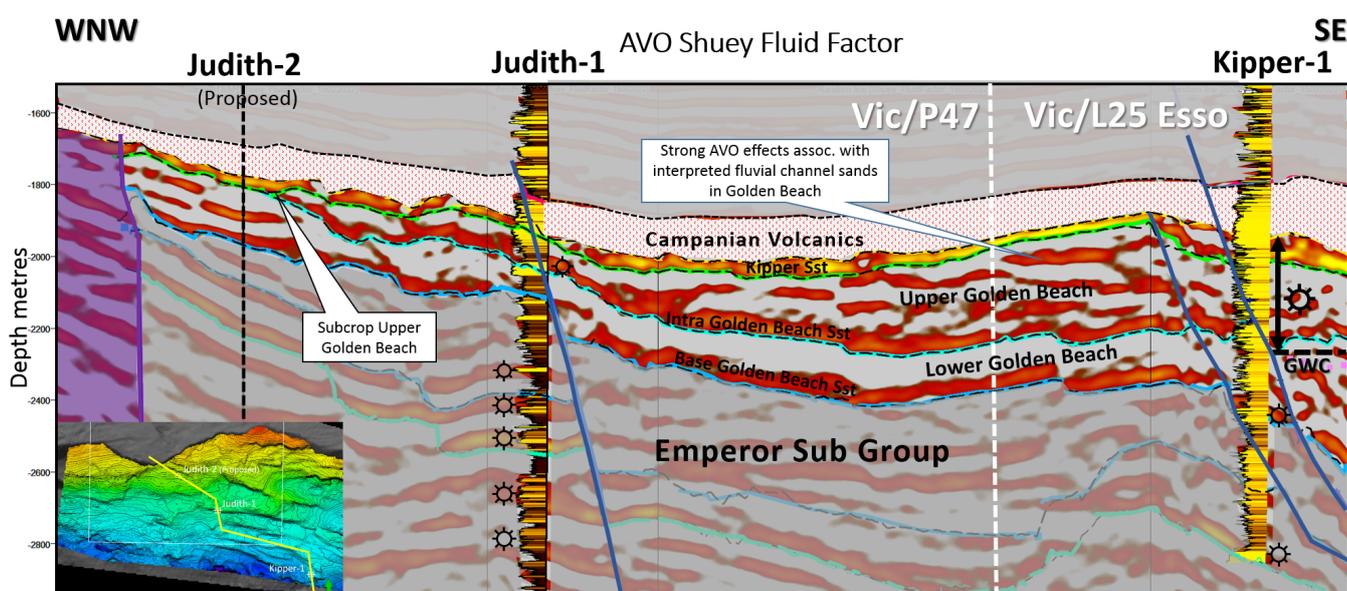


Figure 3: CGG seismic (AVO Shuey Fluid Factor) between Judith-1 and Kipper Gas Field



Four separate reservoir sequences were identified and correlated between Judith-1 and Kipper-1, with the uppermost sequence, the Kipper Sand faulted-out from the Judith-1 penetrated section. The Golden Beach sands penetrated by Judith-1 had significant gas shows while drilling. Re-evaluation of the sequence indicates the possibility that these sands may be gas bearing, and part of a larger Judith/Kipper gas accumulation.

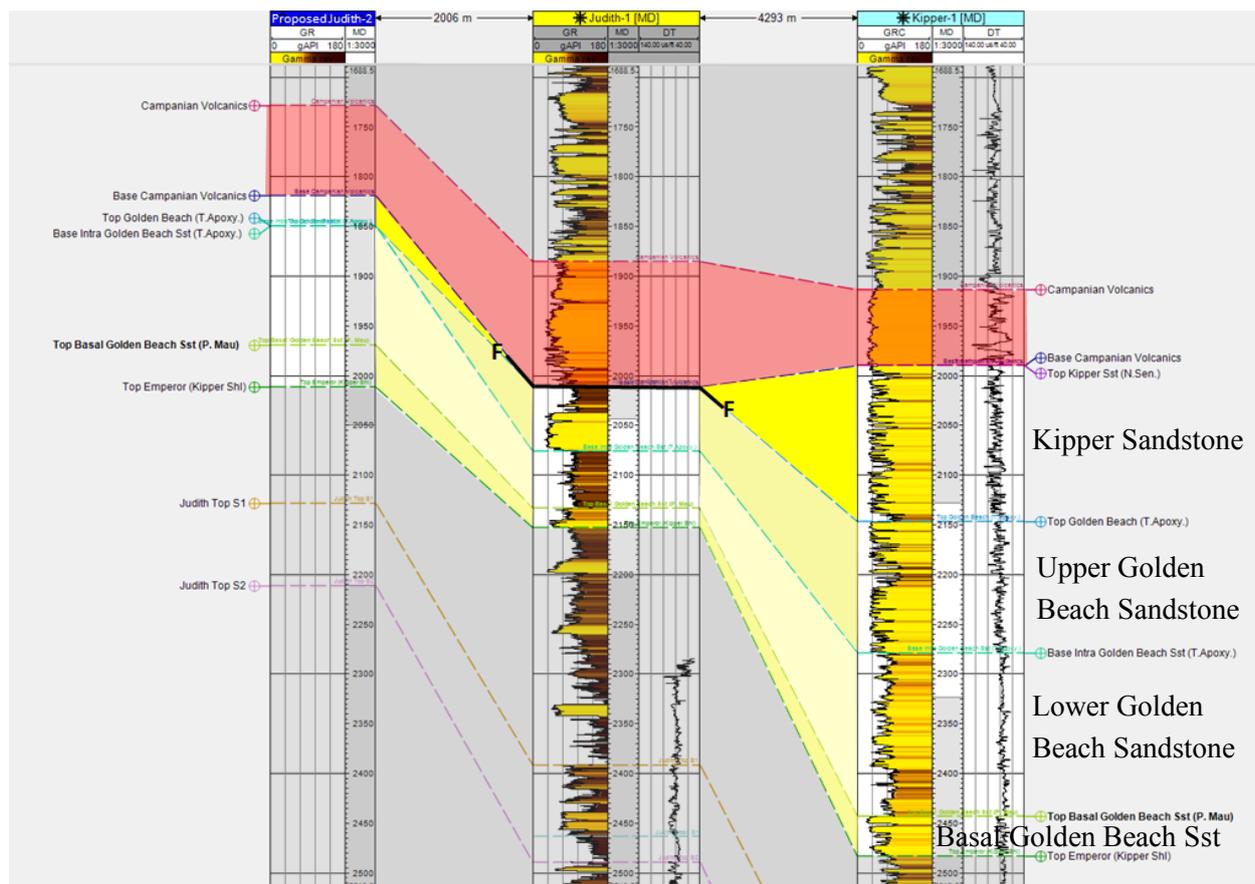


Figure 4: Kipper and Golden Beach Gas Sand Correlation between Judith and Kipper Gas Field

3D-GEO conducted detailed petrophysical analysis of the Kipper and Golden Beach sands in the Judith-1 and Kipper-1 wells. Gas/Water saturations were analysed and porosity vs depth plots were generated and used to generate the range of reservoir parameters across the Greater Judith Structure.

Interpretation of the CGG 3D seismic volume was undertaken by Emperor Energy. This seismic interpretation extends across the Greater Judith closure and south to cover the Kipper Gas Field.

3D-GEO then took the horizon mapping generated from the seismic interpretation and conducted AVO/Attribute analysis which identified gas presence within the sand units.



4. Kipper Sandstone

The Kipper Sandstone as penetrated in the Kipper-1 well is a 157m thick, good quality sandstone that is gas filled. The seismic shows bright yellow AVO response at the well, extending across the bounding fault into Vic/P47.

This sand is not present in the Judith-1 well, however interpretation of the well data and the new 3D seismic volume indicates that the Judith-1 well intersected a fault at this level and the sand was faulted-out.

The seismic line in Figure 3 and the map in Figure 5 illustrate the strong gas effect present over the Greater Judith feature, tied-back to the Kipper Gas Field accumulation.

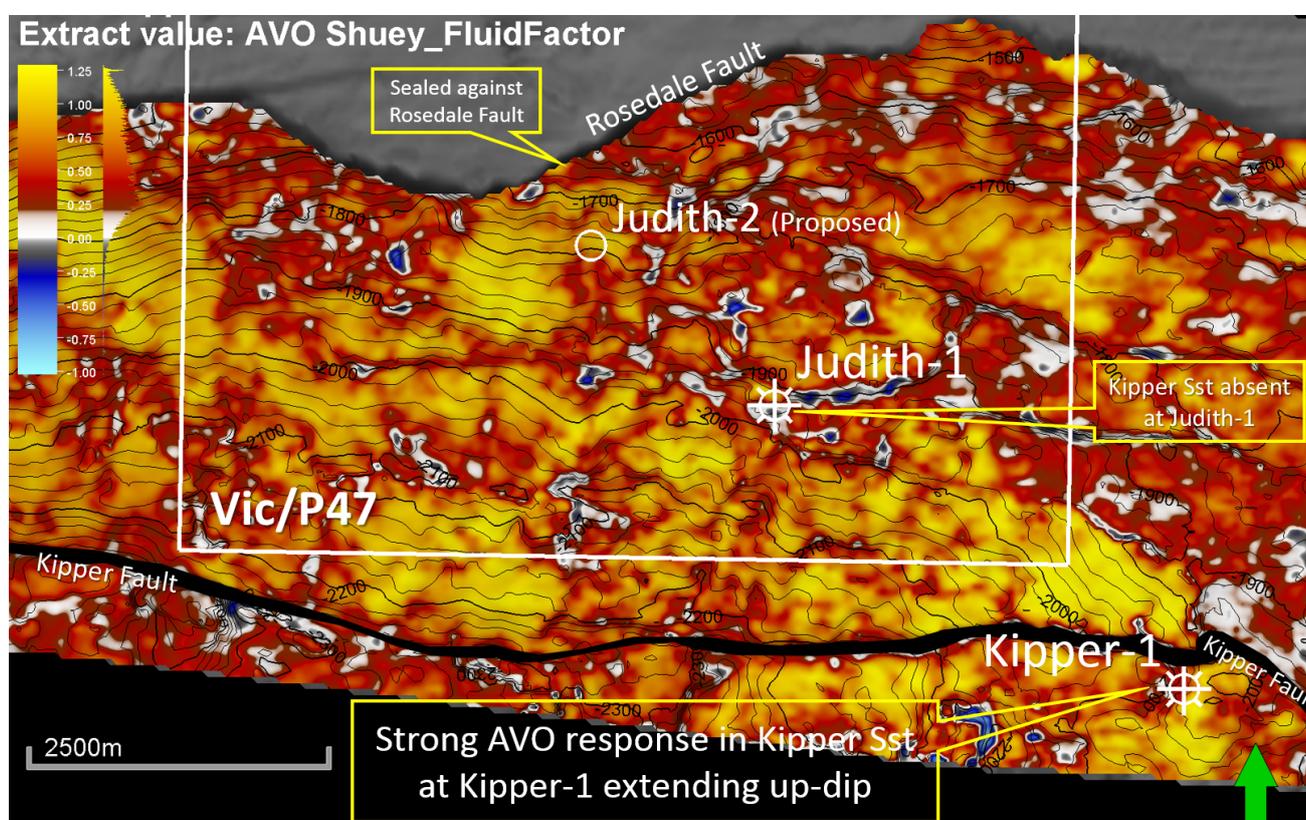


Figure 5: Kipper Sandstone AVO Shuey Fluid Factor

5. Upper, Lower and Basal Golden Beach

The Upper Golden Beach sequence is 132m thick with approximately 50m of net sand at the Kipper-1 well where it is gas filled. The seismic profile in Figure 3 matches the Kipper-1 well with interbedding of gas filled sands (red and yellow AVO response) and silty shales.

There is a sand unit at the base of the Upper Golden Beach that extends across the Vic/P47 permit until it subcrops beneath the Kipper Sandstone. This sand is well developed in the Judith-1 well, with gas shows. The log analysis indicates that overweight drilling mud is likely to have invaded this porous sandstone



thereby affecting log response of the formation properties, and therefore this prospective section may have been previously overlooked.

The Lower Golden Beach sequence is 164m thick, however has only 8% net sand at the Kipper-1 well. The gas/water contact (GWC) for the main Kipper Field gas accumulation (2285m subsea) is located within the upper part of the sequence. On selective seismic lines the Gas-Water Contact (GWC) can be seen as a flat-spot reflector that appears to cross the Kipper bounding fault.

The AVO Shuey Fluid Factor display in Figure 3 indicates very little sand/gas within the Lower Golden Beach sequence, suggesting that this unit may be an effective seal for the underlying Basal Golden Beach Sandstone.

The Basal Golden Beach is 40m thick, with 60% net sand. This zone tested gas in the Kipper-1 well thereby indicating a separate gas accumulation to the main Kipper sandstone gas pool. The seismic line in Figure 3 and the AVO Shuey Fluid Factor map in Figure 6 below indicate extensive distribution of this gas sand across Vic/P47.

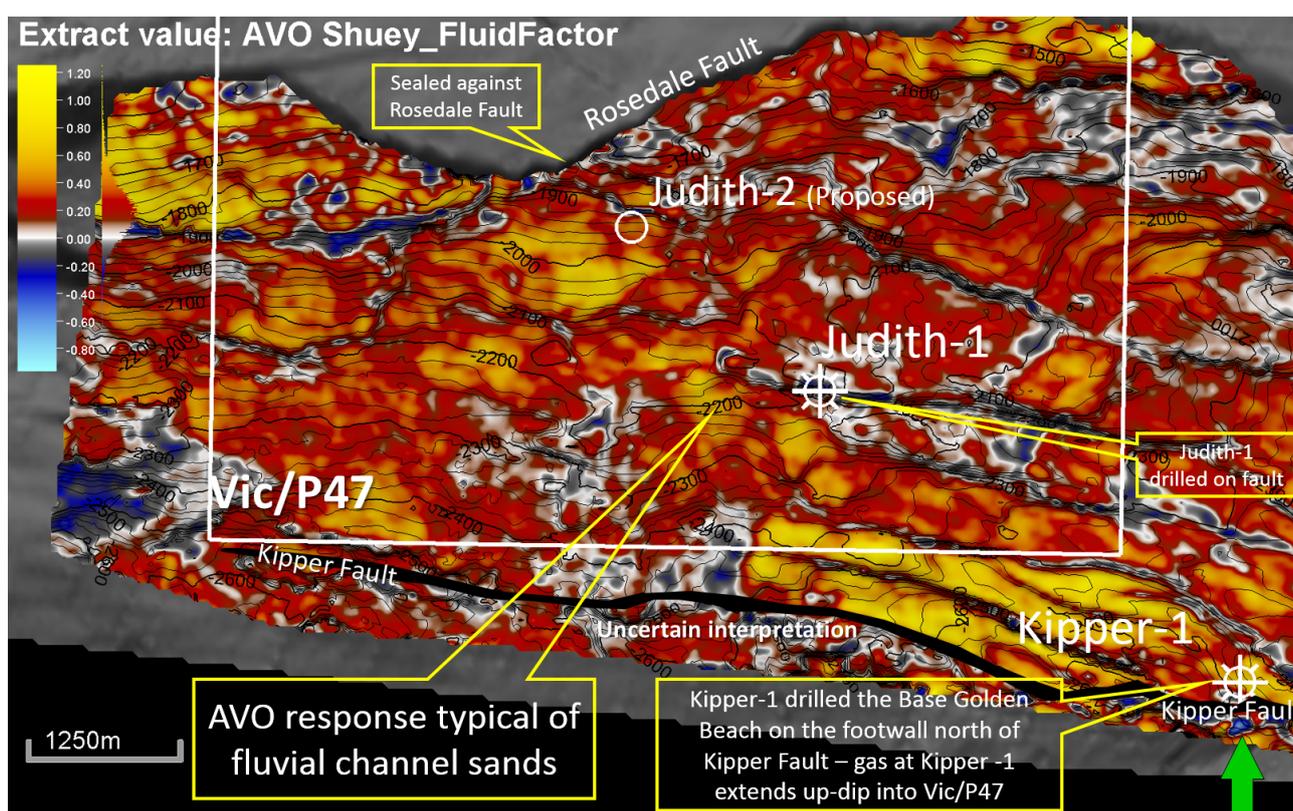


Figure 6: Basal Golden Beach Sandstone AVO Shuey Fluid Factor

6. Reservoir Parameters

Reservoir parameter averages were calculated for each of the four sequences described above, using the Kipper-1 well results. The Gross Rock Volume for each unit was extracted from the seismic mapping package and a 20% variance was utilized for an upside and low side input. These inputs were loaded into a



Monte Carlo statistics package by 3D-GEO from which probabilistic Gas-Initially-In-Place (GIIP) values were calculated.

Limited open file data on the Kipper Gas Field Development infers that the recovery factor is expected to be quite high. The field will be produced through gas depletion with little or no water drive. Recovery Factor estimates for the Kipper sand unit is over 80%. 3D-GEO has taken a conservative approach using a range from 50% (P90) to 85% (P10) for this productive sand unit. The Recovery Factor estimates for the underlying reservoir units are progressively lower based on reservoir parameters and sand continuity/distribution.

7. Judith Prospective Resources (Kipper and Golden Beach Sandstones)

The high quality CGG 3D seismic volume has allowed for detailed mapping and AVO/Attribute analysis of the Kipper and Golden Beach Sandstones overlying the Judith and Longtom reservoir units that were analysed in 2019.

Utilising the 3D structural model for gross rock volumes and reservoir properties from the Kipper-1 Gas well, 3D GEO conducted a **probabilistic assessment** for each of the four prospective sand sequences. The Prospective Resources identified in the Kipper and Golden Beach sandstones over the Greater Judith Structure within Vic/P47 are provided in Table 2.

The cumulative P50 Prospective Resource in the Kipper and Golden Beach sands is estimated as **622 Bcf**.

This is to be added to the **1.226 Tcf** Prospective Resource in the Judith and Longtom sands previously reported in July 2019.

The combined result is a total unrisks P50 Prospective Resource within the Vic/P47 Permit of **1.848 Tcf**.

Table 2: Prospective Resources for Judith area of VIC/P47

	Kipper Sandstone		Upper Golden Beach Sandstone		Lower Golden Beach Sandstone		Basal Golden Beach Sandstone		TOTALS	
	GIP	Recov	GIP	Recov	GIP	Recov	GIP	Recov	GIP	Recov
P90	320	194	120	70	20	9	154	83	614	356
P50	476	314	237	143	45	21	254	144	1012	622
P10	670	478	389	247	82	40	388	231	1529	996
	Mean	328	Mean	152	Mean	23	Mean	152	Mean	655

	Judith Central		Judith Northeast		Judith North		Judith South		Judith West		Judith Northwest		Judith Deep		TOTALS	
	GIP	Recov	GIP	Recov	GIP	Recov	GIP	Recov	GIP	Recov	GIP	Recov	GIP	Recov	GIP	Recov
P90	60	37	90	49	54	29	29	14	153	83	26	15	69	38	480	264
P50	607	333	511	279	303	166	286	157	232	127	186	102	112	62	2236	1226
P10	1137	628	895	494	572	315	1026	565	317	176	411	226	167	92	4525	2496
	Mean	334	Mean	279	Mean	171	Mean	233	Mean	129	Mean	113	Mean	64	Mean	1323



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8. Competent Persons Statement

Consents

The Resources information in this ASX release is based on, and fairly represents, data and supporting documentation supplied in an Independent Technical Specialist's Report (ITSR) prepared by 3D-GEO Pty Ltd. The preparation of this report has been managed by Mr Keven Asquith who is Chairman and Director of 3D-GEO Pty Ltd.

Mr Asquith holds an Honours BSc. Geological Sciences – University of Western Ontario, Canada, 1978, and a Diploma in Project Management from the University of New England, Australia - 2000. Mr Asquith has over 35 years' experience in the sector and is a long-time member of the American Association of Petroleum Geologists (AAPG).

Mr Asquith is a qualified Petroleum Reserves and Resources Evaluator as defined by ASX listing rules. The Resources information in this ASX announcement was issued with the prior written consent of Mr Asquith in the form and context in which it appears.

3D-GEO Pty Ltd is an independent oil and gas consultancy firm. All the 3D-GEO staff engaged in this assignment are professionally qualified engineers, geoscientists or analysts, each with many years of relevant experience and most have in excess of 25 years of industry experience.

3D-GEO was founded in 2001 to provide geotechnical evaluations to companies associated with the oil and gas industry. 3D-GEO services domestic and international clients with offices in Melbourne and Madrid, Spain.

Reserves and resources are reported in accordance with the definitions of reserves, contingent resources and prospective resources and guidelines set out in the Petroleum Resources Management System (PRMS) approved by the Board of the Society of Petroleum Engineers in 2018.

The Independent Technical Specialist's Report (ITSR) has been prepared in accordance with the Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports 2005 Edition ("The VALMIN Code") as well as the Australian Securities and Investment Commission (ASIC) Regulatory Guides 111 and 112.

SPE-PRMS Society of Petroleum Engineer's Petroleum Resource Management System - Petroleum resources are the estimated quantities of hydrocarbons naturally occurring on or within the Earth's crust. Resource assessments estimate total quantities in known and yet-to-be discovered accumulations, resources evaluations are focused on those quantities that can potentially be recovered and marketed by commercial projects. A petroleum resources management system provides a consistent approach to estimating petroleum quantities, evaluating development projects, and presenting results within a comprehensive classification framework. PRMS provides guidelines for the evaluation and reporting of petroleum reserves and resources.



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Under PRMS “**Reserves**” are those quantities of petroleum which are anticipated to be commercially recoverable from known accumulations from a given date forward. All reserve estimates involve some degree of uncertainty. The uncertainty depends chiefly on the amount of reliable geologic and engineering data available at the time of the estimate and the interpretation of these data. The relative degree of uncertainty may be conveyed by placing reserves into one of two principal classifications, either proved or unproved. Unproved reserves are less certain to be recovered than proved reserves and may be further sub-classified as probable and possible reserves to denote progressively increasing uncertainty in their recoverability.

“**Contingent Resources**” are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations, but the applied project(s) are not yet considered mature enough for commercial development due to one or more contingencies. Contingent Resources may include, for example, projects for which there are currently no viable markets, or where commercial recovery is dependent on technology under development or gaining access to existing infrastructure or where evaluation of the accumulation is insufficient to clearly assess commerciality. Contingent Resources are further categorized in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by their economic status.

“**Prospective Resources**” are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects. Prospective Resources have both a chance of discovery and a chance of development. Prospective Resources are further subdivided in accordance with the level of certainty associated with recoverable estimates assuming their discovery and development and may be sub-classified based on project maturity.

The estimated quantities of petroleum that may potentially be recovered by the application of future development project(s) relate 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 moveable hydrocarbons.

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

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