



# Investor Presentation

## 2.2 Tcf P50 Prospective Recoverable Gas Resource Offshore Gippsland Basin - Victoria

9<sup>th</sup> April 2024

## Introducing Emperor Energy Team



A team of experienced E&P and corporate professionals



**Phil McNamara**  
*Director*

- 37 years in the resource industry
- Former CEO and Managing Director of Amour Energy (ASX:AJQ)
- Former Managing Director Waratah Coal



**Carl Dumbrell**  
*Director*

- Chartered Accountant, Australia, England & Wales
- EMP Company Secretary
- Executive Director of Herencia Resources PLC (AIM:HER)



**Nigel Harvey**  
*Director*

- Former investment banker with JP Morgan and Macquarie
- Chairman of mid size not for profit organisation
- AFSL licence holder



**Malcolm King**  
*Project & BD Consultant*

- ~30 years' experience in upstream oil & gas and power with Shell
- Former Head of Commercial and New Ventures for Senex Energy (ASX:SXY)
- Wellsite geologist for Shell Judith-1 Gas Discovery (1989)



**Geoff Geary**  
*Geological Consultant*

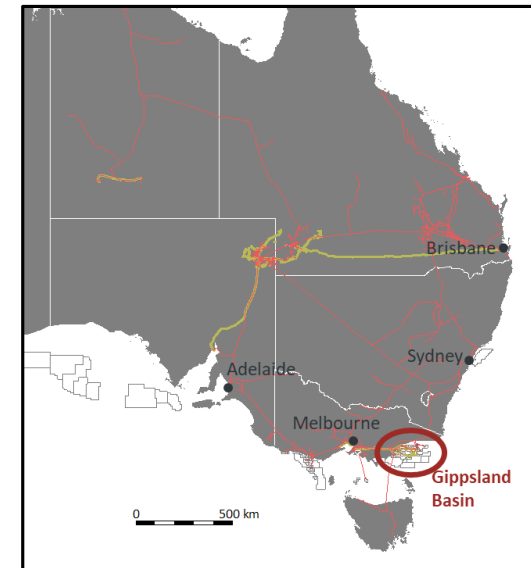
- Over 35 years experience in the petroleum industry
- Extensive experience in the Bass Strait with Exxon



## Judith Gas Field – Key Points



- Judith Gas Field in the 100% Emperor Energy Owned Vic/P47 Exploration Permit – Located in Bass Strait
- Discovered Contingent Resource with much larger Prospective Resource:
  - **198 BCF (P50)** 2C Contingent Resource Recoverable around Judith-1 Well Drilled in 1989
  - **2.2 TCF (P50)** Prospective Recoverable Resource within Vic/ P47 Permit
- Permit Tenure secured with recent extension granted by NOPTA
  - Judith-2 Well to be drilled in 2025
- Gas Sand Permeabilities re-calculated by Steve Adams in 2023 using proven technique for old wells
  - This is new analysis resulting in a 10-Fold permeability increase that is a game changer
  - Flow modelling of Judith-1 Well is currently being carried out. Results expected to be very positive.
- Seismic AVO Quantitative Interpretation completed in 2023 by Jarrod Dunne.
  - Tied back and calibrated against Judith-1 and Kipper Wells
  - Study shows gas extending updip from Judith-1 Well
- High demand and dwindling gas supply on the east coast grid. Offshore Gippsland production in decline
  - Judith Gas Field is perfectly placed to fill the supply gap.
- Emperor Energy in discussion with other parties at both technical and corporate level



# Judith Gas Field, Gippsland Basin, 40km offshore



**A New pipeline to shore at Orbost Gas Plant would provide access to East Coast domestic gas market**

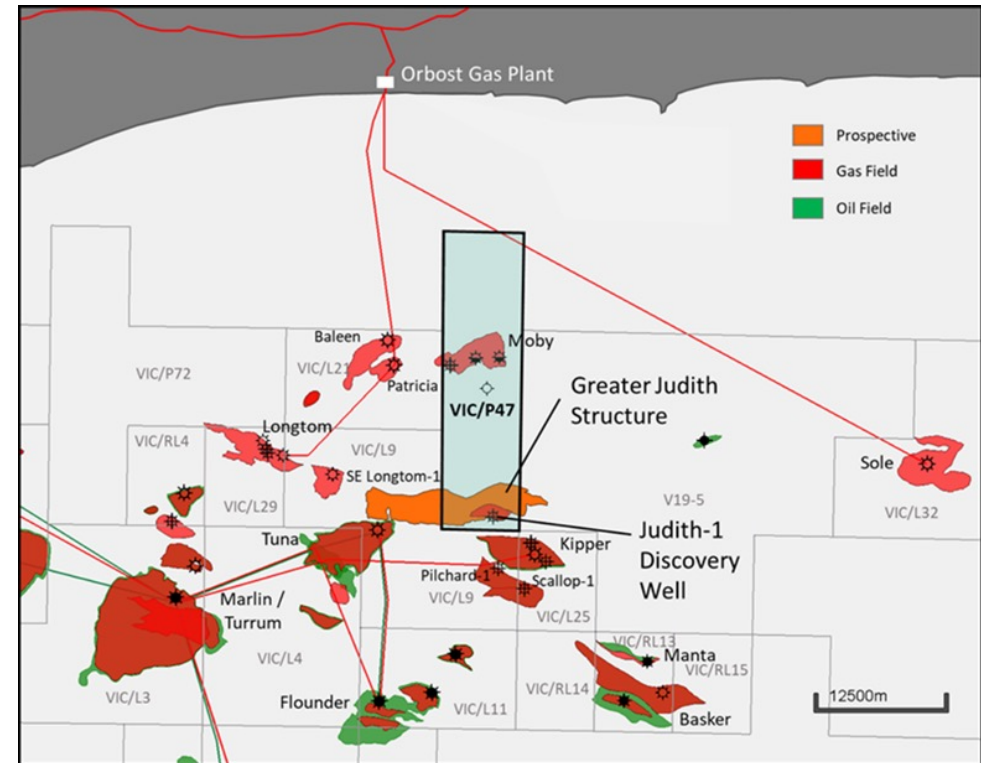
**Detailed Judith Gas Pipeline and Gas Plant Pre-Feed Study was completed in 2020 in conjunction with APA**

## Regional Asset Ownership

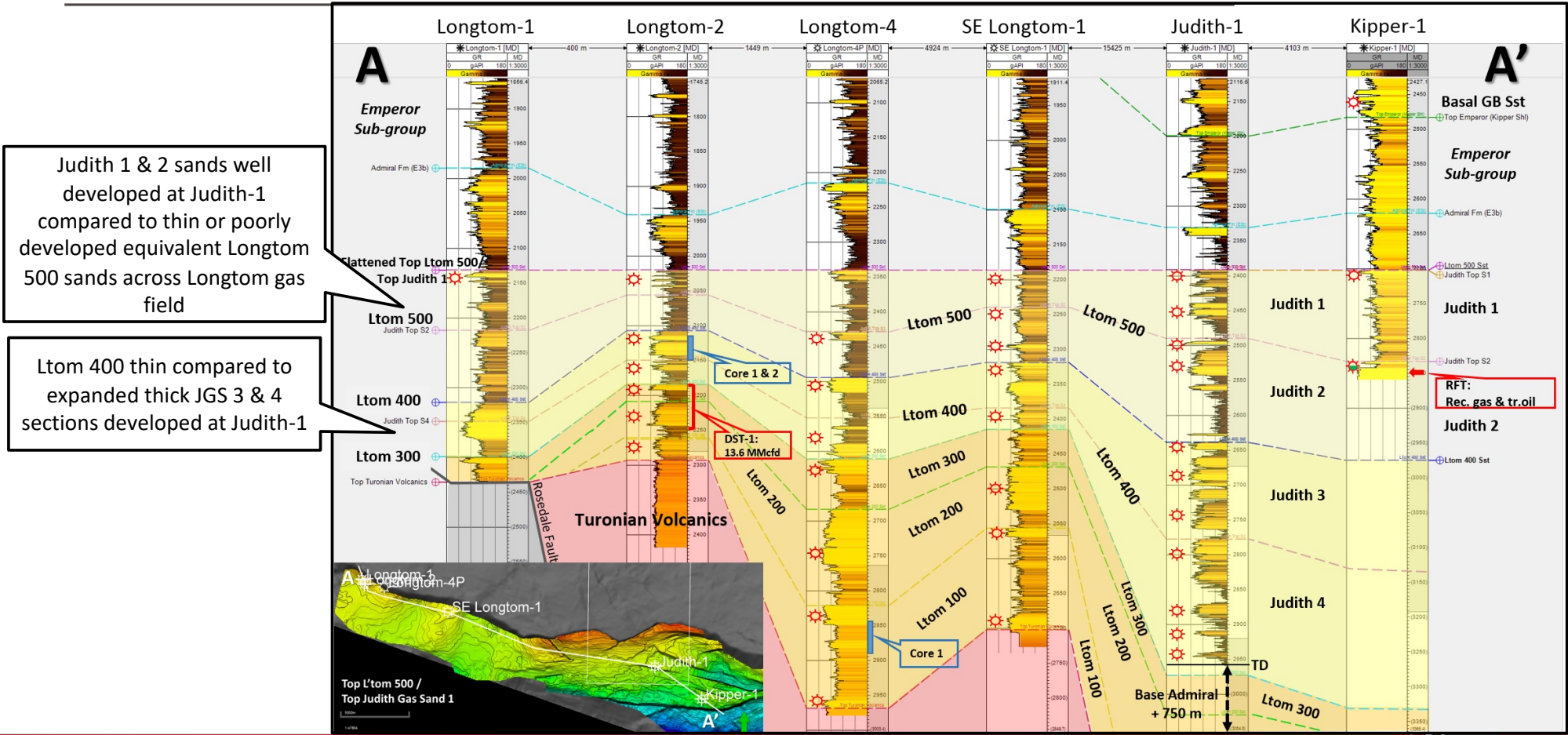
- Exxon / Woodside - Kipper / Tuna / Turrum Gas Fields
  - Currently Producing to Longford Gas Plant
- Cooper Energy – Sole Gas Field
  - Currently producing to Orbost
- Seven Group Holdings – Longtom Gas Field
  - Currently shut in. No access to Orbost Plant

## Emperor Energy – Judith Gas Field

- Project is derisked by Judith-1 Discovery Well drilled 1989
- Judith is on trend and directly analogous to the Longtom gas field - Longtom-3 (Horizontal) flowed 75 mmscf/day
- Pre-Feed completed for pipeline and gas plant at Orbost
- New Seismic Data acquired 2021
- Detailed Seismic interpretation and AVO analysis completed
- Game changing Petrophysics analysis completed
- Preliminary Judith-2 Well Design completed
- Environmental Plan for approval to drill the Judith-2 well is 85% complete

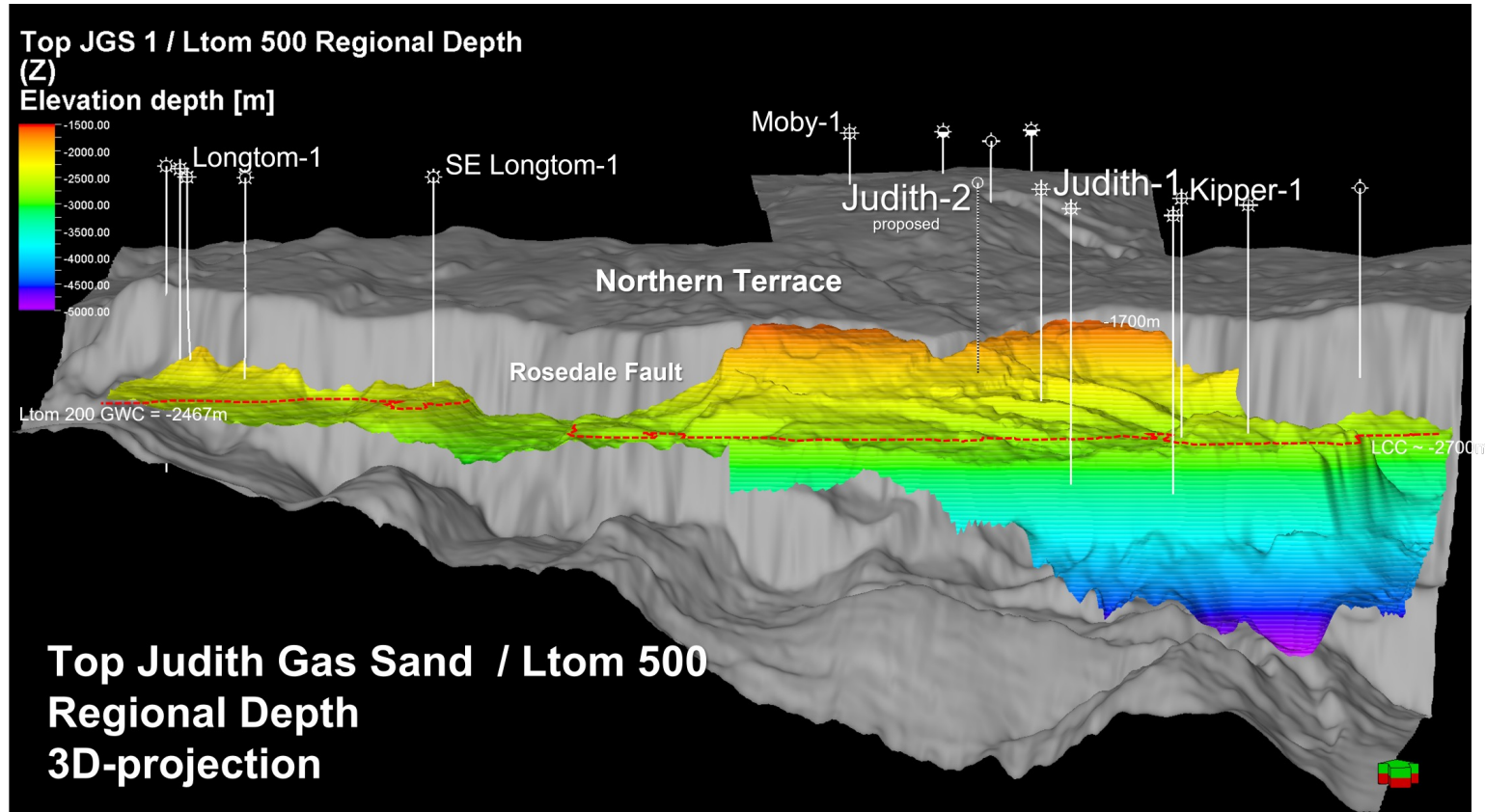


# Longtom-1 to Judith-1 to Kipper-1 Cross-section of Longtom and Judith reservoir sequences

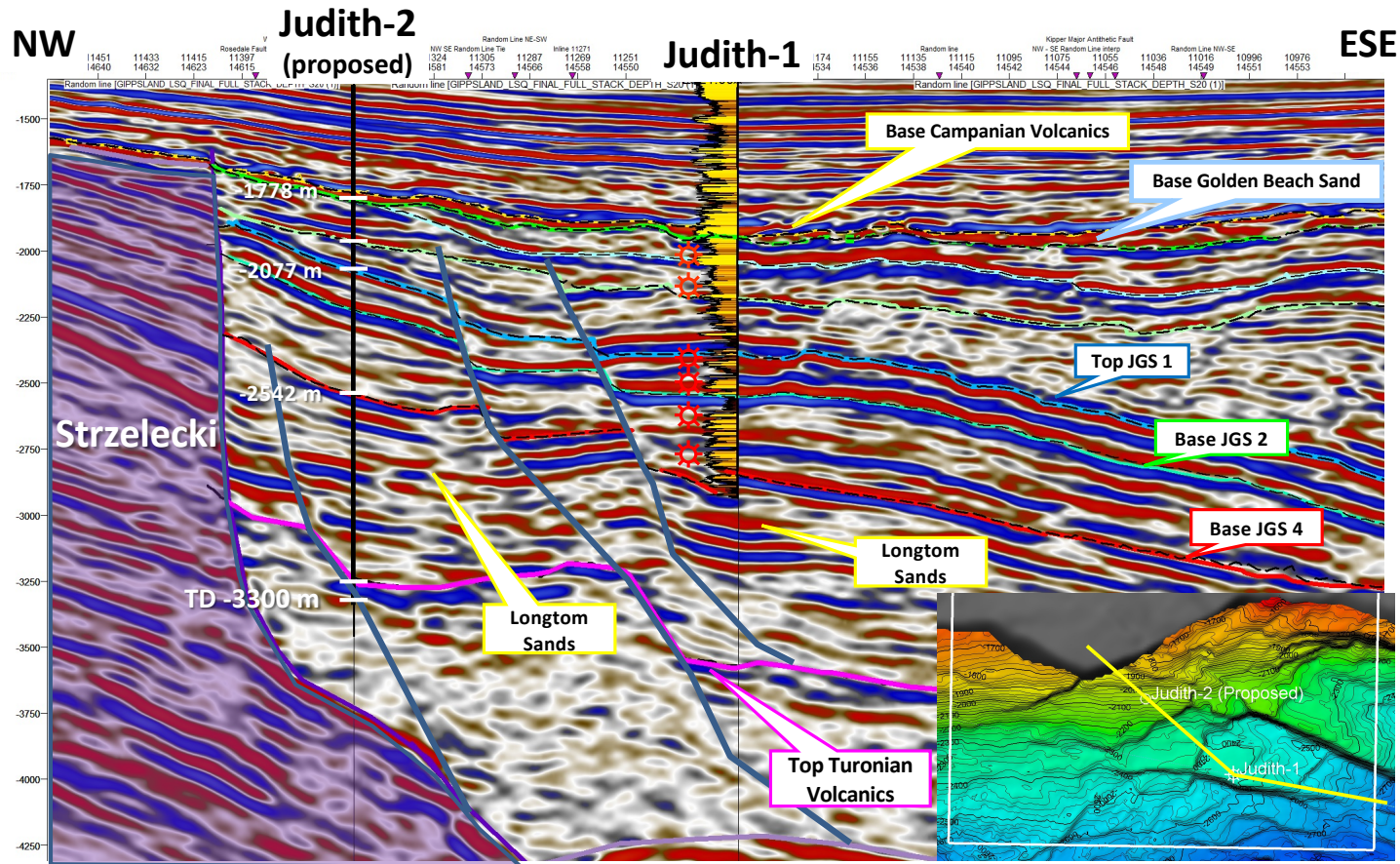


# Judith Gas Field Structural Configuration

The shallowest Judith reservoir (JGS1) was interpreted to Longtom where it correlated with the Longtom 500 Gas Sand



# Judith-1 to Judith-2 Appraisal Well Location



## Recent Game Changing Permeability Analysis

Zone	Depth	Interpretation	Net Thickness	Porosity %	Av. Permeability mD	Av. Gas Saturation %
Gas Sand 1	2370m to 2441m	Mobile Gas	40.5	14.1	12.3	52.2
Gas Sand 2	2489m to 2543m	Mobile Gas	38.8	15.0	24.2	63.8
Gas Sand 3	2626m to 2720m	Mobile Gas	63.1	13.6	5.2	61.1
Gas Sand 4	2778m to 2839m	Mobile Gas	47.1	12.6	1.6	56.4

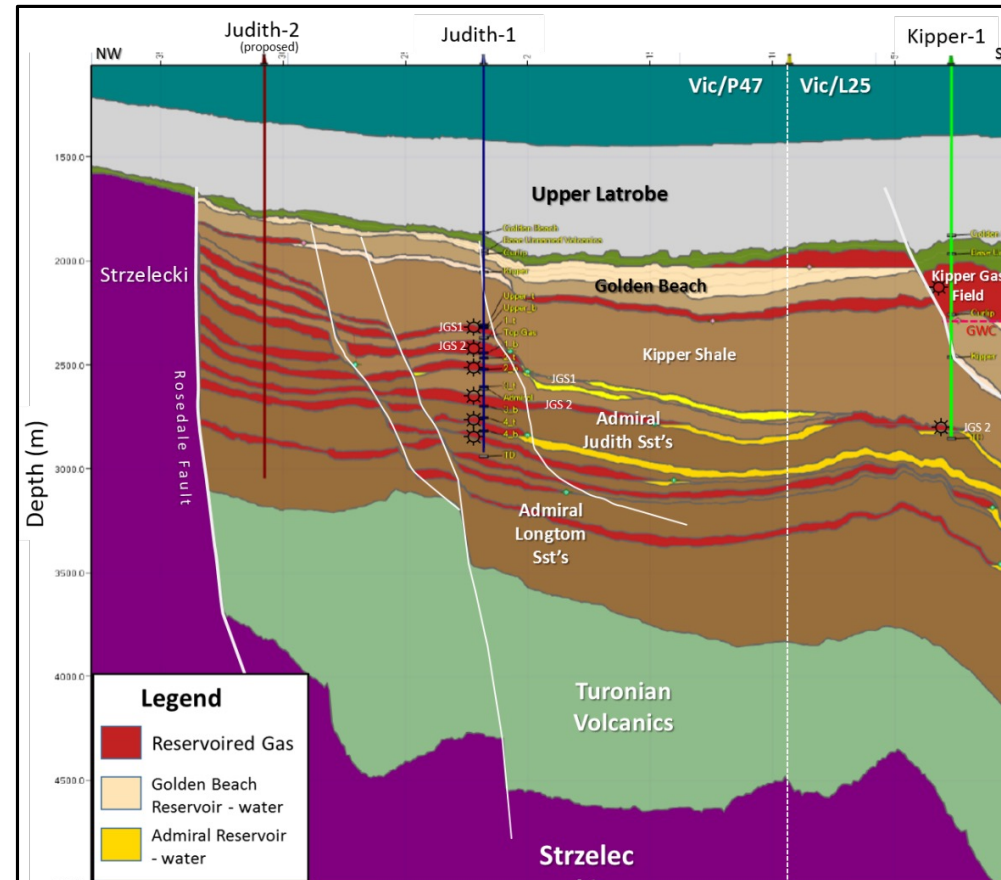
- Analysis by expert Petro Physicist has resulted in 10-Fold Increase in calculated permeability.
- Permeability controls rate of gas flow into production wells along with Gas Saturation and Reservoir Thickness
- Reservoir properties derived at higher permeabilities are now being used for dynamic well production modelling
  - Expectation of significantly higher flow rates from gas production simulation.





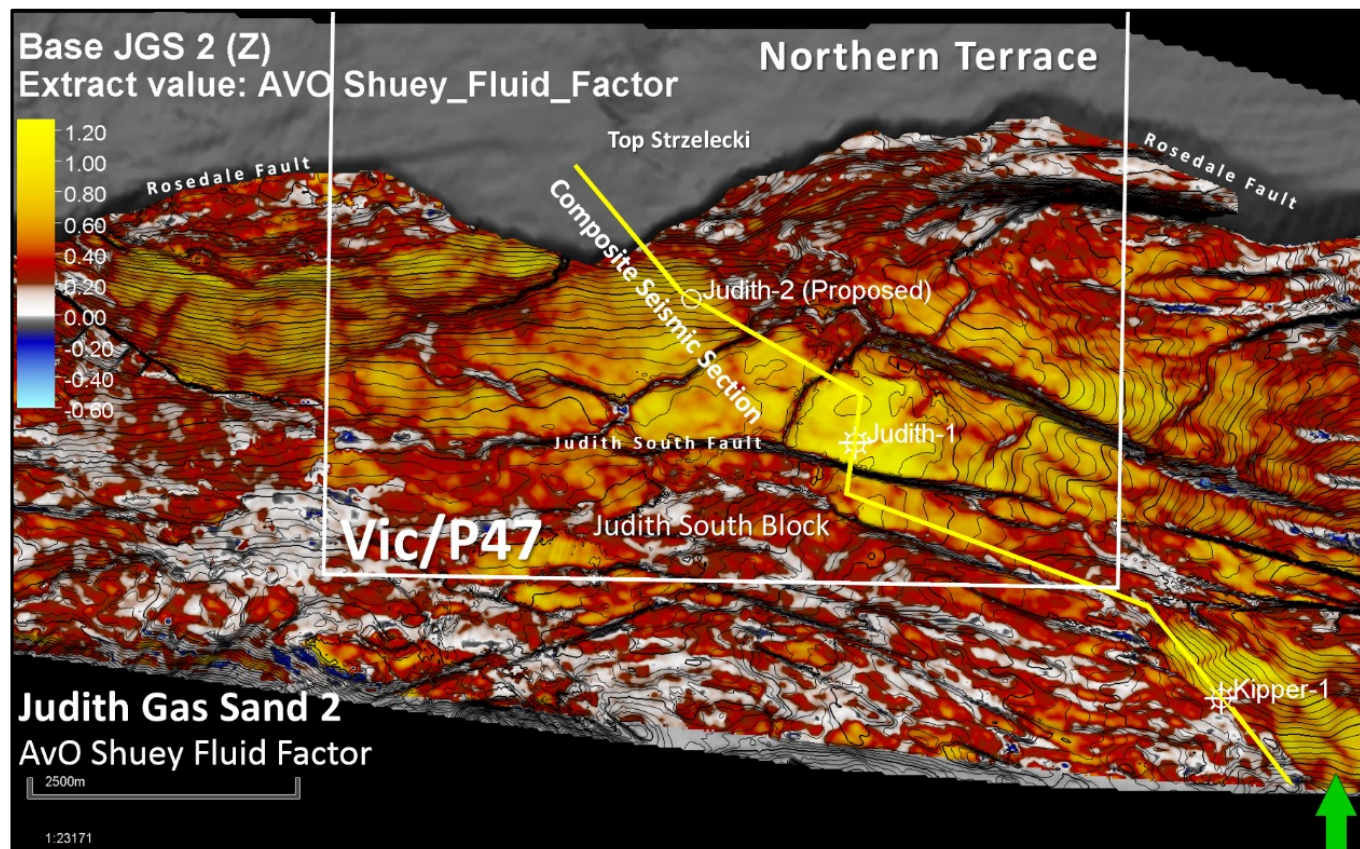
## AvO-Modelled Mobile Gas in stacked Judith and Longtom Gas Sand Reservoirs

- An additional independent AVO analysis has been completed by recognised subject matter expert Jarrod Dunne
- Analysis has been calibrated against the mobile gas columns in the Judith-1 Well as defined by Steve Adams in his Petrophysics analysis
- AVO analysis has been tied back to the Judith-1 and Kipper-1 Wells
- Results Interpret reservoir gas:
  - Below the Judith-1 Well in the Longtom formations
  - Extending up-dip to the proposed Judith-2 Well.



## Shuey Fluid Factor Judith Gas Sand 2

- AVO map of Judith Gas Sand 2 shows lateral extent of gas effect response across the Judith Gas Field.
- The seismic cross section line used for Jarrod Dunne's analysis is shown in yellow



## Longtom demonstrates high flow rates from Emperor sands



Longtom-H3 (2006) flow tested

- Longtom 400 @ 30 MMscfd
- Longtom 300, 200 & 100 @ 77 MMscfd

Peak Longtom production flow rates of 56-77 MMscfd achieved from two horizontal wells: Longtom-3H and Longtom-4H

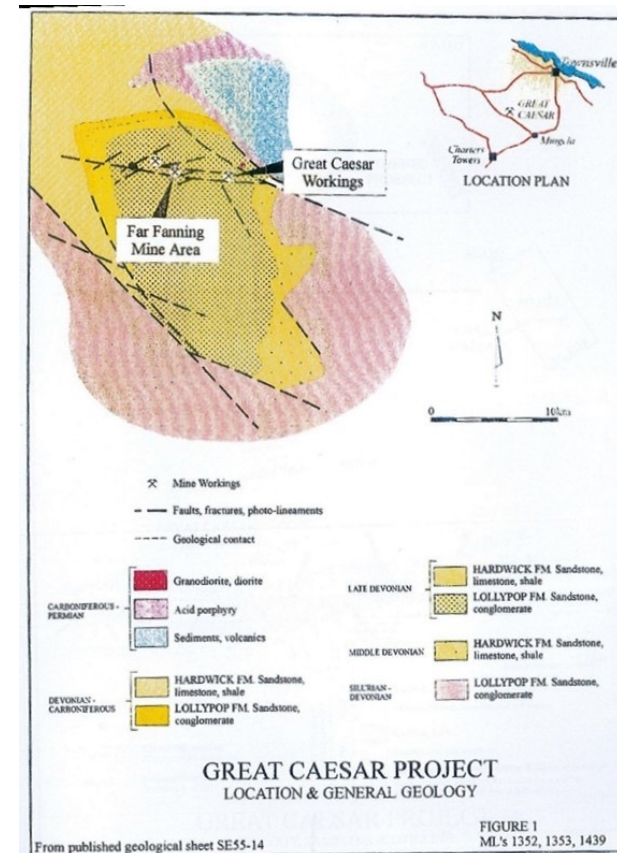


Production Test #2 flowed 77 MMscfd



## Great Caesar Gold Mining Lease – Key Points

- EMP plans future income from the Great Caesar Mining Leases to cover overheads while progressing Judith Gas Field
- Sales and Purchase Agreement in place to purchase 3 Mining Leases
  - Conditional settlement extended till end of May 2024
- Located between Townsville and Charters Towers
- Highly prospective for Gold with historic workings
- Has been held privately for 30 years with no exploration
- EMP's Soil Geochemistry and Rock Sample analysis during due diligence is very positive
- EMP sees opportunity to generate early cash flow
  - Drill out a targeted resource in 2<sup>nd</sup> Half 2024
  - Then move to a contract mining operation 2025
  - Focus on high-grade commencing with Outcrop Reef
  - Potential to truck ore to a plant in Charters Towers district
  - Investigating contract toll milling and processing of ore



## What Makes this a Good Gold Mining Prospect

---



- Mining Lease not an Exploration Permit
  - Fast track to Mining Operations with no Registered Environmentally Sensitive Areas
  - Existing Environmental Approval with Standard Mining Lease Conditions already in place
  - 10 Hectares of disturbance already approved ( 5 Hectares each Mining and Infrastructure)
  - Requires approval of plan of operations by Queensland Mines Department
  - Routine Approvals required from other authorities, Local Council, State Government Departments
- Native Title is extinguished
  - Requires standard Cultural Heritage Clearance
- Located in a Gold mining precinct commutable from Townsville and Chartered Towers
  - Existing local Mining Contractors and Gold Mills
  - Contractors can commute to mining operations from nearby towns
- The Great Caesar Reef Is Outcropping
  - Direct access to gold bearing ore provides opportunity for low start up mining costs
  - Opportunity to scale up operations in multiple phases controlled by overall mine plan
  - Staged approach reduces demand for up front capital
    - Also controls costs of upfront Financial Surety for Rehabilitation Obligations





Contact Details: Phil McNamara 0428409584  
philmcnamara@outlook.com.au

Carl Dumbrell 0402 277 282  
carl@emperorenergy.com.au