

# Killanoola Project Petroleum Initially In Place Report Best Estimate Revised Upward to 135.5 mmbbls

## **HIGHLIGHTS**

- Independent Report at Killanoola calculates Best Estimate PIIP now at 135.5 mmbbls
- 45.7% increase in Best Estimate PIIP
- Interpretation of the new 3D seismic data has resulted in changes to the size of the structural compartments

Australian Oil and Gas explorer and developer, Red Sky Energy (ROG: ASX) (Red Sky or the Company) is pleased to release updated results from a new report by Global Resources & Infrastructure Pty Ltd (GRI) that provides an updated <u>Independent Competent Person's Report</u> (CPR) on the discovered Petroleum Initially In Place (PIIP) in the Killanoola Oil Project, PRL-13, Penola Trough, South Australia (the Petroleum Asset), held by Red Sky for an effective date of 19 April 2023.

As <u>previously reported in May 2022</u>, the Killanoola Project discovered PIIP was revised upward from 7 mmbbls to 93 mmbbls Best Estimate, representing a 1228% increase.

Upon the completion of the interpretation of the 3D seismic, which was acquired and processed last year, the Company commissioned a further updated report from GRI on the PIIP.

Killanoola Oil Field	Discovered Petroleum Initially In Place (mmbbls)		
	Low	Best	High
31 March 2022	57.2	93.0	98.6
19 April 2023	28.9	135.5	157.4
% Increase	(49.5)%	45.7%	59.6%

## Table 1: Summary of discovered Petroleum Initially In Place (PIIP) of the PRL-13 Killanoola Oil Field

## Commenting on the upgraded PIIP, Red Sky Managing Director, Andrew Knox, said:

"The new GRI analysis results have helped us identify further potential additional resources and allows us to continue the planning for the eventual comprehensive Killanoola full field development.

This interpretation of the new 3D seismic data has led to another significant increase from the previously best estimated PIIP. Production is expected to start once an offtake agreement and government approvals are in place. Killanoola is on track to become a material oil project for the Company's future cashflow."

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Table 1 above summarises the discovered petroleum initially in place of the Killanoola Oil Field as announced <u>5 May 2022</u> and updated by GRI as at 19 April 2023. This evaluation has been carried out in accordance with the Petroleum Resources Management System (PRMS) approved in 2018 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, and the Society of Petroleum Evaluation Engineers. The report has been prepared and supervised by the Competent Person.

As required, to remain compliant with PRMS (2018) when using the deterministic method, GRI has determined Low/Best/High volumes to represent the discovered PIIP. These estimates were developed using various changes to the size of the structural compartments as interpreted.

Interpretation of the new 3D seismic data appears to indicate the following:

- The trajectory of the SE1 well passed through a fault plane at approximately the target reservoir depth on the low side of the fault. This suggests the high block to the south-east of the existing well remains untested and that the well intersection was on the down thrown side of the main structure.
- The DW1 area of the structure based on the 3D seismic appears to be more gently sloping to the southwest than was originally interpreted from the 2D seismic data with wider spaced depth contours and should accommodate greater volumes than that interpreted using the 2D seismic.
- GRI estimates included changes to the size of the structural compartments as interpreted and has resulted in a further best estimate increase from 93 mmbbls to 135.5 mmbbls. This represents a further increase of 46%



Figure 1: Enhanced view of 3D Seismic line through Killanoola Southeast Well with well trajectory interpreted to have penetrated the Sawpit Sandstone reservoir on the down-thrown side of the fault.

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Figure 2: 2D – 3D Top Sawpit Sandstone Depth Structure Map (Average Velocity Depth Conversion) illustrating structural compartments

## PRL-13

PRL-13 covers an area of 17.5 km<sup>2</sup> and is located near the Haselgrove and Jacaranda Ridge gas fields and approximately 25 km NW of the Katnook gas fields and processing facility. In 1998, the Killanoola oil field was discovered by the Killanoola-1 well at a depth of 850 metres. The side-track, Killanoola-1 DW-1, also encountered oil and is the well with the pump which was tested in December 2021. In 2011 Killanoola Southeast-1 was drilled and discovered oil.

In December 2021, a successful oil sampling operation was carried out at Killanoola-1 DW-1. The collected samples were sent to the Intertek laboratory for assay studies. Results indicated that the Killanoola crude is ideal for producing gasoil. The maximum pour point is 36 degrees Celsius which is indicative of a highly waxy crude, and the API density is 36.7.

This waxy crude would require heating up throughout the production process: flowlines, separator, storage tank and possibly trucking. It is intended to use an additive to mitigate the need for this and for flow assurance. Eight insulated ISO tanks have been purchased to hold and potentially deliver crude.

#### **Next Steps**

The Company is currently focused on starting DW-1 production from existing pay zones. Any new perforations or drilling operations require mobilising a rig. Topside equipment has also been purchased.

Production is expected to start once an offtake agreement and government approvals are in place. Killanoola can potentially become a material oil project for the Company's future cashflow.

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Figure 3: Killanoola Oil Field (PRL-13) location map

## -ENDS-

Released with the authority of the board.

For further information on the Company and our projects, please visit:

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Various statements in this report constitute statements relating to intentions, future acts and events. Such statements are generally classified as forward-looking statements and involve unknown risks, expectations, uncertainties and other important factors that could cause those future acts, events and circumstances to differ from the way or manner in which they are expressly or impliedly portrayed herein.

Some of the more important of these risks, expectations and uncertainties are pricing and production levels from the properties in which the Company has interests and the extent of the recoverable reserves at those properties. In addition, the Company has a number of exploration permits. Exploration for oil and gas is expensive, speculative and subject to a wide range of risks. Individual investors should consider these matters in light of the personal circumstances (including financial and taxation affairs) and seek professional advice from their accountant, lawyer or other professional advisor as to the suitability for them of an investment in the Company.

#### Notes

#### Methodology for Calculating discovered Petroleum Initially In Place

At its current stage of development, the Killanoola Oil project, in accordance with definitions established by the PRMS (2018), contains oil in the discovered Petroleum Initially In Place (PIIP) category. No greater levels of certainty have yet been established.

The discovered Petroleum Initially In Place is estimated deterministically by:

1. Extrapolating and analysing the estimated area and thickness of the structure. The boundaries to defining this volume are determined by the interpretation of the physical parameters of the top of the Sawpit Sandstone utilising seismic data,

2. Identifying the oil-water contact (OWC) identified in the wells drilled on the structure,

- 3. Estimating the net thickness of the oil column
- 4. Applying a porosity factor to obtain the potential total void space contained in that rock volume
- 5. Applying a generalised water saturation to the rock void volume.

6. The remaining porosity volume is then assumed to contain oil, which is then converted to barrels for ease of understanding.

Finally, to remain compliant with PRMS (2018) requirements and as a result of using the deterministic method, GRI used the Low/Best/High nomenclature to represent the discovered PIIP. These estimates were developed using various changes to the size of the structural compartments as interpreted.

#### Formula for Calculating PIIP

For undersaturated crude, the reservoir contains only connate water and oil with their respective solution gas contents. The initial or original oil in place can be estimated from the volumetric equation:

#### **N**=7,758VbφSoiBoi=7,758Ahφ1–SwiBoi

- The constant 7,758 is the number of barrels in each acre-ft,
- Vb is bulk volume in acre-ft,
- φ is the porosity (φVb is pore volume),
- Soi is the initial oil saturation,
- Boi is the initial oil formation volume factor in reservoir barrels per stock tank barrel,

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- A is area in Acres,
- h is reservoir thickness in ft, and
- Swi is the initial water saturation.

In addition to the uncertainty in determining the initial water saturation, the primary difficulty encountered in using the volumetric equation is assigning the appropriate porosity-feet, particularly in thick reservoirs with numerous non-productive intervals. One method is to prepare contour maps of porosity-feet that are then used to obtain areal extent. Another method is to prepare isopach maps of thickness and porosity from which average values of each can be obtained. Since recovery of the initial oil can only occur from permeable zones, a permeability cut-off determined by ResEval was used to obtain the net reservoir thickness. Intervals with permeabilities lower than the cut-off value are assumed to be non-productive. The absolute value of the cut-off will depend on the average or maximum permeability and can depend on the relationship between permeability and water saturation.

A correlation between porosity and permeability is often used to determine a porosity cut-off. In cases in which reservoir cores have been analysed, the net pay can be obtained directly from the permeability data. This was not the case at any of the Killanoola wells as no cores were cut. When only logs are available, permeability will not be known; therefore, a porosity cut-off is used to select net pay. These procedures can be acceptable when a definite relationship exists between porosity and permeability.

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