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3D Oil Limited

ASX Release

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Pavo light oil discovery upgrades analogous Dorado/Apus play in WA-527-P, Bedout Sub-Basin

- Pavo 1 exploration well has made a significant light oil (~52°API) discovery within excellent reservoirs of the Caley Member, with 46m net pay (60m gross), 19% average porosity, 80% average oil saturation with high permeabilities of 100-1000 millidarcies reported.
- Pavo 1 de-risks uncertainties around source presence and hydrocarbon migration away from existing discoveries and towards the basin margin, and supports migration to any erosional truncation leads in WA-527-P.
- Pavo 1 confirms the presence and effectiveness of Hove Member top/lateral seals along trend from WA-527-P, where the top seal is thinning out of the basin.
- The planned Sauropod 3D seismic survey will image potential erosional channel features and support the definition of potential traps within WA-527-P.

3D Oil Limited (ASX: TDO, "3D Oil" or the "Company") is pleased to provide an update on the prospectivity of WA-527-P based on implications from the significant light oil discovery at Pavo 1 exploration well in the Bedout Sub-Basin, Western Australia, announced on 23 March 2022 by Carnarvon Energy (ASX: CVN) and operating partner Santos (ASX: STO).

Pavo 1 has reportedly intersected 46m net pay (60m gross) of light oil (~52° API) within the Caley Member, located at the top of the Middle Triassic Archer Formation. Log analysis indicates excellent reservoir quality with 19% average porosity, 80% average oil saturation and permeabilities ranging from 100-1000 millidarcies. Similar excellent reservoir quality can be anticipated within WA-527-P.

Pavo is the second major discovery within the erosional channel truncation play, following the Dorado discovery in 2018, the largest oil discovery on the NW shelf in 30 years. According to Santos (ASX: STO), the northern Pavo closure tested by Pavo 1 contains 43 MMbbls gross 2C, while the untested southern closure has an additional best estimate prospective resource of 40 MMbbls gross, with a 60% probability of geologic success. The potential areal extent for the development of leads of similar, or larger, size within WA-527-P is significant based on the potential mapped extent of the channel system.

As the most proximal well to WA-527-P, Pavo 1 significantly upgrades the prospectivity of this play in the permit. 3D Oil has previously recognised potential erosional channels associated with the Top Caley Unconformity in the southwest corner of WA-527-P, identified on broadly spaced reprocessed 2D seismic (Figure 1). Pavo's location along trend from WA-527-P has significant implications for de-risking key aspects of the play in the permit, including source presence, hydrocarbon migration and top/lateral seal presence and effectiveness.



Figure 1. Amplitude anomaly (full stack) on reprocessed 2D seismic, truncated by a potential erosional channel system within WA-527-P (red arrows delineate edges of channel).

An early entrant to the Bedout Sub-Basin, 3D Oil has long recognised the potential significance of the Dorado play. The trapping mechanism at Pavo/Dorado involves the erosional truncation of the Archer Formation along the top Caley Member Unconformity, forming large channels backfilled with shales during a subsequent rapid rise in sea level.

These shales belong to the Hove Member and form both the lateral and top seal for these discoveries. The thickness/effectiveness and lithological character of the Hove Member has presented one of the key play risks in WA-527-P, given the unit thins towards the margins of the basin. However, Pavo 1 shows that Hove shales are present and thick enough to form an effective seal along trend to the permit.

Pavo 1 demonstrates the prolific nature of the petroleum system in the Bedout Sub-Basin and proves the presence of a new working source kitchen distinct from the previous discoveries in the basin (Figure 2). Dorado wells identified a "self-sourcing" Caley Member reservoir, where

the generating source rock is interbedded with the reservoir and provides local hydrocarbon direct to the reservoir. This deltaic system steps back through time towards WA-527-P, providing a potential deeper source rock for the Pavo discovery and any leads in WA-527-P.



Figure 2. Base Triassic TWT map showing the location of the new source kitchen, which allows for unimpeded migration to areas in WA-527-P where potential erosional channels have been observed (mapped extent in white dotted line). Inset map: Pavo trapping configuration (ASX: CVN Bedout Basin update, 11 June 2021).

Additional source rock potential for Pavo (and WA-527-P) comes from the underlying Lower Triassic "Hovea equivalent" source rock, a proven source in the Perth Basin to the south. The deeper Permian carbonate system also has source potential, and it is these units that are required to charge the Apus Prospect, given barriers to migration presented by the Dorado erosional channel system.

Both the Pavo 1 and Apus 1 exploration wells being drilled by the Santos – CVN Joint Venture will be intersecting these deeper potential source intervals, the first wells in the basin to do so. This will aid the understanding of the stratigraphy and potential of deeper petroleum systems below the currently known Caley petroleum system. Any new petroleum systems discovered in these wells below the Caley would have profound implications for the WA-527-P permit.

Detailed oil and gas migration modelling completed by 3D Oil shows favourable migration pathways from the new source kitchen area, with the potential to charge any channel truncation leads in WA-527-P. Hydrocarbon migration into WA-527-P is supported by the observation of potential Hydrocarbon Related Diagenetic Zones (HRDZs) within the permit, which form in response to hydrocarbon migration.

With Pavo 1 having de-risked hydrocarbon charge and seal to a significant degree, trap presence is now the largest uncertainty in WA-527-P. The planned Sauropod 3D Marine Seismic Survey (MSS) over the southwest corner of the permit has been designed to image the potential channel system and any associated leads. The Environmental Plan for the Sauropod

3D MSS was accepted by NOPSEMA on 16th February 2022 and the Company is currently in discussions around vessel procurement.

Given the exciting results at Pavo 1, and Apus 1 to follow, the Company is confident there will be renewed interest in the WA-527-P permit and now keenly awaits the results at Apus 1.

This announcement is authorised for release by the Board of Directors of 3D Oil Limited.

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