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ASX Markets Announcements Australian Stock Exchange Limited 10<sup>th</sup> Floor, 20 Bond Street Sydney NSW 2000

**Dear Sirs** 

# PERMIT EP487 (DERBY BLOCK) UPDATE PROSPECTIVE POTENTIAL RECOVERABLE RESOURCES & CLARIFICATION UNDER ASX LISTING RULES

The following Oil Basins Limited (ASX code **OBL**, or the **Company**) ASX Release is being released **as a matter of record only** and so as to ensure that the Company's previous ASX Releases dated 15 January 2016 and all subsequent OBL ASX announcements related to the Company's net 50% interest in EP487 (Derby Block) are read as compliant with ASX Listing Rules 5.25.5 / 5.25.6.

# New Mapping of EP487 (Derby Block)



# Figure 1

New OBL Mapping Eastern Onshore Section of Permit EP487 (Derby Block) OBL ASX Release dated 30 November 2015 and updated in recent OBL March Quarterly Activities Report dated 29 April 2016



# Figure 2

Seismic cross-section A-B showing well developed Middle and Lower Laurel prograding foreset clinoforms sequences ("progrades") which are the primary target of Year 2 drilling in this region of Permit EP487

OBL as Operator of WA onshore Permit EP487 (**Derby Block**) has recently completed new mapping and depth conversion of the New Unconventional Wet Laurel Tight Basin Centred Gas (**BCG**) Play earlier presented to shareholders at the OBL AGM on 30 November 2015 – refer to ASX release 30 November 2015 and **Figures 1 and 2**.

Three prospects have been delineated within EP487 (Derby Block) based on identification of the major reservoir play, thickness and depth of burial. Three new, significant and extensively developed Laurel Unconventional reservoir plays are newly defined in EP487 (Derby Block). They are (and relevant discovery analogues) described as the:

- Upper Laurel (Top Laurel) Clastic Marine (Meda-1, Yulleroo-1 to-4, East Yeeda-1, Valhalla/Paradise)
- Middle Laurel Carbonate and Delta (Blina, Backreef-1)
- Lower Laurel Clastic/Carbonate Delta (Wattle-1, Valhalla/Paradise)

Of the three reservoir plays, the Middle and Lower Laurel Delta reservoir plays are most significant "new plays" in addition to the established "well defined Top Laurel BCG play".

All are Laurel plays defined as unconventional, Basin Centred Gas (**BCG**) stratigraphic plays and all have significant potential for condensate production, (ignoring the deeper Basal Laurel tight shale gas unit), namely:

- West Kimberley Wet Laurel BCG and Oil Prospect This prospect is defined by the newly recognized Lower Laurel delta reservoir play, principally possible reservoir sands developed in delta topset and foreset sequences. The Upper and Middle Laurel also has potential.
- Yeeda Wet Laurel BCG Prospect Principally an Upper Laurel reservoir play drilled by East Yeeda-1. Deeper potential in the Middle and Lower Laurel (>3,500m). Similar to the Yulleroo gas discovery and prognosed as an extension of the Valhalla / Paradise Wet Laurel BCG System (Buru Energy / Mitsubishi) contiguous to the east.
- Great Northern Wet Laurel BCG Prospect Similar to and possibly an extension of the Yeeda Laurel BCG Prospect with similarities to the Yulleroo Gas Field to the south west.

# EP487 (Derby Block) Gross (100%) Prospective Potential Recoverable Resources

Based upon this new OBL mapping, and all then available public file data on nearby Tight BCG wells, OBL commissioned a **preliminary independent resources assessment** by 3D-GEO Pty Ltd (**3D-GEO**), using probabilistic methodologies in accordance SPE PRMS (2011), to assess the unconventional and tight resources potential of the newly mapped play (between assessed vertical depths of circa 2,500m down to a 5,000m cut-off depth).

On 15 January 2016, the Company released the independent preliminary assessed gross (100%) potential prospective recoverable resources contained within EP487 (Derby Block) as follows in **Table 1**.

| Source OBL ASX Release | CANNING BASIN |        |  |         |       |  |         |       |  |         |  |  |
|------------------------|---------------|--------|--|---------|-------|--|---------|-------|--|---------|--|--|
| Gross Resources        |               |        | Recoverable Prospective Resources SPE PRMS |         |       |  |         |       |  |         |  |  |
| Prospect               | Permit        | P90    |  | P50     |       |  | P10     |       |  |         |  |  |
| Wet USG                |               | Gas    |  | Liquids | Gas   |  | Liquids | Gas   |  | Liquids |  |  |
| BCG                    |               | (Bcf)  |  | (MMbbl) | (Bcf) |  | (MMbbl) | (Bcf) |  | (MMbbl) |  |  |
| Deep Wet USG           | 100% EP 487   | 8500   |  | 203.7   | 24600 |  | 614     | 71200 |  | 1815    |  |  |
| TOTAL GROSS            | MMBOE         | 1583.0 |  | 4579.0  |       |  | 13268.0 |       |  |         |  |  |

## Table 1

# EP487 (Derby Block) OBL Net 50% Share Prospective Potential Recoverable Resources

On 14 April 2016 the Company released its <u>net overall</u> contingent and potential prospective resources and again on 29 April 2016 in the March 2016 Quarterly Activities Report the independent preliminary assessed net 50% share of the independently assessed potential prospective recoverable resources EP487 (Derby Block) were highlighted.

For absolute clarification under the ASX Listing Rules and as previously stated in the March 2016 Quarterly Highlights, **OBL's net 50% share prospective potential P50 recoverable resources** within the three newly mapped Wet Laurel BCG prospects within Permit EP487 (Derby Block) are independently assessed at 12.3 Tcf and 307 MMbbls of associated condensate (**Table 2**).

| Source OBL ASX Release 1 | CANNING BASIN EP 487 (DERBY BLOCK) |       |  |         |        |  |         |        |  |         |  |  |
|--------------------------|------------------------------------|-------|--|---------|--------|--|---------|--------|--|---------|--|--|
| OBL net interest 50%     |                                    |       | Recoverable Prospective Resources SPE PRMS |         |        |  |         |        |  |         |  |  |
| Prospect                 | Permit                             | P90   |  | P50     |        |  | P10     |        |  |         |  |  |
| Wet Laurel               |                                    | Gas   |  | Liquids | Gas    |  | Liquids | Gas    |  | Liquids |  |  |
| USG BCG                  |                                    | (Bcf) |  | (MMbbl) | (Bcf)  |  | (MMbbl) | (Bcf)  |  | (MMbbl) |  |  |
| Deep Wet USG             | 50% EP 487                         | 4250  |  | 101.85  | 12300  |  | 307.0   | 35600  |  | 907.5   |  |  |
| TOTAL NET MMBOE          |                                    | 791.5 |  |         | 2289.5 |  |         | 6634.0 |  |         |  |  |

## Table 2

Investors are reminded to review all previous referenced OBL ASX Releases in the light of the above and the important Disclaimers contained herein.

Yours sincerely

in F. Lope

Neil F. Doyle SPE Director & CEO

## **DISCLAIMER – GENERAL**

Prospective Resources are those quantities of petroleum which are estimated, on a given date, to be potentially recoverable from undiscovered accumulations. Investors should not infer that because "prospective resources" are referred to that oil and gas necessarily exist within the prospects. An equally valid outcome in relation to each of the Company's prospects is that no oil or gas will be discovered. Technical Reserves in this preliminary assessment are considered similar to the definition of Contingent Resources (i.e. Low Estimate and High Estimate) with the following important caveat - it must be appreciated that the risked volumes as reported in terms of undeveloped Contingent Resources and Prospective Resources are risk assessed only in the context of applying 'Geological Chance of Success'. This degree of risk assessment does not incorporate the considerations of economic uncertainty and commerciality and consequently no future development as such can be assured.

The technical resources information quoted has been complied and/or assessed by Company Director Mr Neil Doyle (from a number of sources) who is a professional engineer (BEng, MEngSc - Geomechanics) with over 34 years standing and a continuous Member of the Society of Petroleum Engineers since 1981 (SPE 30 Year Club Member) and by Mr Geoff Geary who is a professional geologist (BSc – Geology) with over 32 years standing and who is also a Member of the Petroleum Exploration Society of Australia. Both Mr Doyle and Mr Geary have consented to the inclusion in this announcement of the matters based on the information in the form and context in which they appear. Investors should review the ASX materials and independent expert reports previously quoted and the important definitions and disclaimers attached and therein.

#### APPLICABLE RESERVES & RESOURCES REPORTING GUIDELINES & DEFINED TERMS

In the determination and classification of Reserves and Resources, Oil Basins Limited applies the Society of Petroleum Engineers Petroleum Resources Management System (**PRMS Guidelines**). The terms "Contingent Resources" and "Prospective Resources" used in this release are as defined by the PRMS Guidelines (relevant extracts as provided below):

#### PROVED RESERVES

Proved Reserves are those quantities of petroleum, which by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be commercially recoverable, from a given date forward, from known reservoirs and under defined economic conditions, operating methods, and government regulations.

If deterministic methods are used, the term reasonable certainty is intended to express a high degree of confidence that the quantities will be recovered. If probabilistic methods are used, there should be at least a 90% probability that the quantities actually recovered will equal or exceed the estimate. The area of the reservoir considered as Proved includes:

- > the area delineated by drilling and defined by fluid contacts, if any, and
- adjacent undrilled portions of the reservoir that can reasonably be judged as continuous with it and commercially productive on the basis of available geoscience and engineering data.

Often referred to a P1, sometime referred to as "proven" or "Proved".

#### **PROBABLE RESERVES**

Probable Reserves are those additional Reserves which analysis of geoscience and engineering data indicate are less likely to be recovered than Proved Reserves but more certain to be recovered than Possible Reserves.

It is equally likely that actual remaining quantities recovered will be greater than or less than the sum of the estimated Proved plus Probable Reserves (2P). In this context, when probabilistic methods are used, there should be at least a 50% probability that the actual quantities recovered will equal or exceed the 2P estimate. Probable Reserves may be assigned to areas of a reservoir adjacent to Proved where data control or interpretations of available data are less certain. The interpreted reservoir continuity may not meet the reasonable certainty criteria. Probable estimates also include incremental recoveries associated with project recovery efficiencies beyond that assumed for Proved.

#### **POSSIBLE RESOURCES**

Possible Reserves are those additional Reserves which analysis of geoscience and engineering data indicate are less likely to be recoverable than Probable Reserves

The total quantities ultimately recovered from the project have a low probability to exceed the sum of Proved plus Probable plus Possible (3P), which is equivalent to the high estimate scenario. When probabilistic methods are used, there should be at least a 10% probability that the actual quantities recovered will equal or exceed the 3P estimate. Possible Reserves may be assigned to areas of a reservoir adjacent to Probable where data control and interpretations of available data are progressively less certain. Frequently, this may be in areas where geoscience and engineering data are unable to clearly define the area and vertical reservoir limits of commercial production from the reservoir by a defined project. Possible estimates also include incremental quantities associated with project recovery efficiencies beyond that assumed for Probable.

## **CONTINGENT RESOURCES**

Those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations by application of development projects, but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingent Resources are a class of discovered recoverable resources.

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 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**

Those quantities of petroleum which are estimated, as of a given date, to be potentially recoverable from undiscovered accumulations.

Potential accumulations are evaluated according to their chance of discovery and, assuming a discovery, the estimated quantities that would be recoverable under defined development projects. It is recognized that the development programs will be of significantly less detail and depend more heavily on analogue developments in the earlier phases of exploration.

**Prospect** – A project associated with a potential accumulation that is sufficiently well defined to represent a viable drilling target. Project activities are focused on assessing the chance of discovery and, assuming discovery, the range of potential recoverable quantities under a commercial development program.

Lead – A project associated with a potential accumulation that is currently poorly defined and requires more data acquisition and/or evaluation in order to be classified as a prospect. Project activities are focused on acquiring additional data and/or undertaking further evaluation designed to confirm whether or not the lead can be matured into a prospect. Such evaluation includes the assessment of the chance of discovery and, assuming discovery, the range of potential recovery under feasible development scenarios.

**Play** – A project associated with a prospective trend of potential prospects, but which requires more data acquisition and/or evaluation in order to define specific leads or prospects. Project activities are focused on acquiring additional data and/or undertaking further evaluation designed to define specific leads or prospects for more detailed analysis of their chance of discovery and, assuming discovery, the range of potential recovery under hypothetical development scenarios.



## **GLOSSARY & PETROLEUM UNITS**

| М       | Thousand  |
|---------|---|
| MM      | Million   |
| В       | Billion   |
| bbl     | Barrel of crude oil (ie 159 litres) and a barrel of condensate equals one barrel of oil (was assumed by 3D-GEO in the preparation of <b>Tables 1</b> and <b>2</b> )   |
| stb     | Stock tank barrel – barrel of stabilised crude oil at atmospheric pressure  |
| PJ      | Peta Joule (1,000 Tera Joules (TJ))   |
| Bcf     | Billion cubic feet  |
| Tcf     | Trillion cubic feet (i.e. 1,000 Bcf)  |
| BCG     | Basin Centred Gas   |
| Bscf    | Billion standard cubic feet (raw gas)   |
| BOE6    | Barrel of crude oil equivalent – commonly defined as 1 TJ equates to circa 158 BOE – approximately equivalent to 1 barrel of crude equating to 6,000 Bcf dry methane on an energy equivalent basis) – with the recent 3D-GEO Pty Ltd independent assessment of EP487 (Derby Block) where a more conservative ratio of 6.22 Bcf of gas per MMstb of crude was assumed in the preparation of <b>Tables 1</b> and <b>2</b> (refer to OBL ASX release dated 14 April 2016). |
| PSTM    | Pre-stack time migration – reprocessing method used with seismic.   |
| PSDM    | Pre-stack depth migration – reprocessing method used with seismic converting time into depth.   |
| AVO     | Amplitude versus Offset, enhancing statistical processing method used with 3D seismic.  |
| Tight   | Low permeability conventional reservoir that may require reservoir stimulation to produce commercial flow rates.  |
| тwт     | Two-way time  |
| USG     | Unconventional Shale Gas  |
| STOIIP  | Stock Tank Oil Initially In Place – stabilised crude at atmospheric pressure  |
| Wet Gas | Defined as Natural Gas Liquids rich gas, ie containing condensate and LPG's.  |