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# **QUARTERLY ACTIVITY REPORT**

**31 DECEMBER 2013**

## **HIGHLIGHTS FOR THE QUARTER**

### **Operational Matters**

- Matuku-1 exploration well spudded in the offshore Taranaki basin permit PEP 51906
- Retention Lease application lodged over the Cornea Location
- Octanex awarded a fifth offshore Taranaki permit in the latest bidding round
- Farmin to the Canning Basin Derby Block a step closer to completion

### **Corporate Activity**

- Octanex received the third and final tranche payment of US\$6,250,000 of the aggregate US\$12,500,000 for the sale to NZOG of a 12.5% carried interest in PEP 51906
- Octanex agrees to underwrite a Peak Oil & Gas Limited Rights Issue

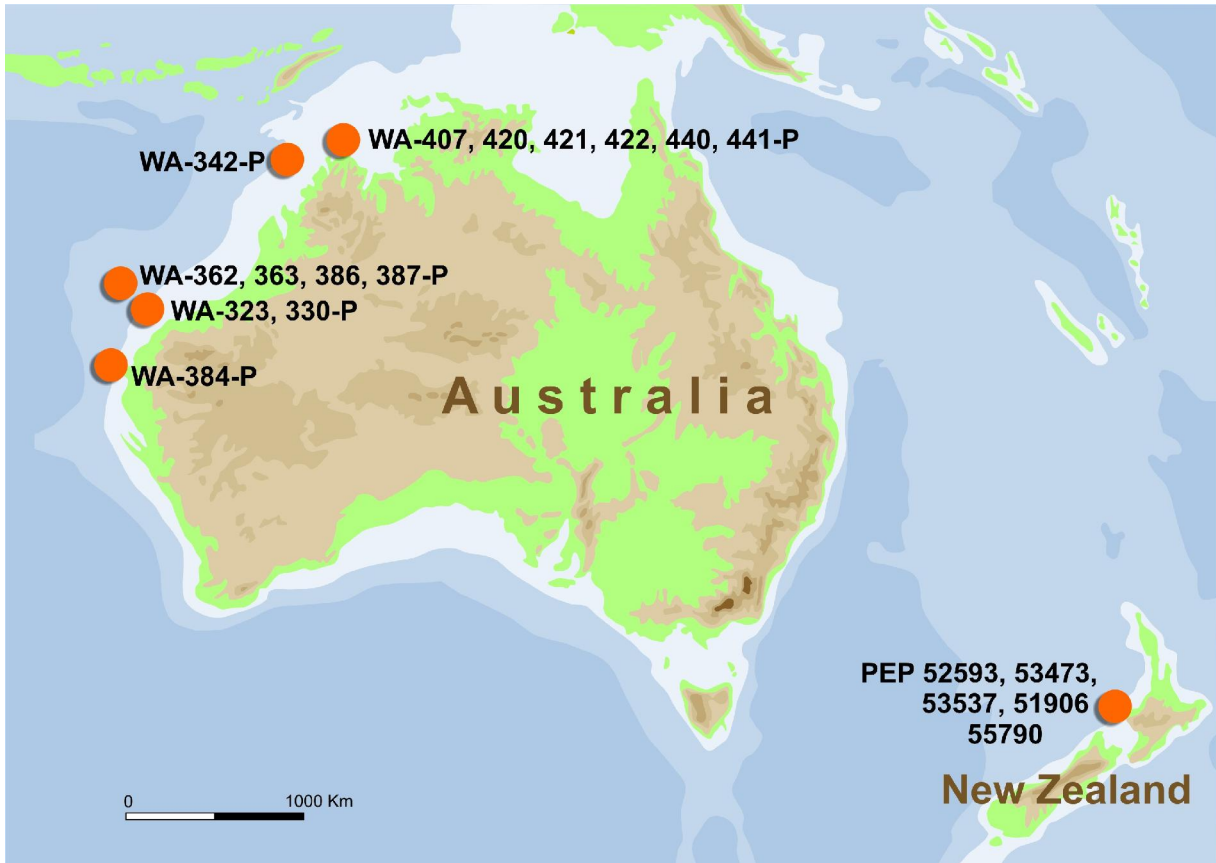
## **PERMIT INTERESTS HELD**

At the end of the quarter under review, Octanex N.L., in its own name and through its wholly-owned subsidiaries, held working interests in 18 petroleum exploration permits and residual and royalty interests in one other such permit that are situated in the offshore basins of Australia and New Zealand – see the Figure 1 *Location Map*.

The Australian permits are concentrated offshore from Western Australia, on the Greater North West Shelf and in the Bonaparte Basin, in regions of moderate to intense exploration activity. In addition to the Australian based permits, Octanex holds interests in five permits that are adjacent to each other and strategically located in the offshore Taranaki Basin of New Zealand, a region of intense exploration activity.

Subsequent to the end of the quarter, renewal of the WA-384-P permit was not pursued by either Shell or the Octanex Group; with the result that related residual and royalty interests in that permit are at an end.

The policy underlying the management of the Octanex Group's permits and related interests is one which, insofar as is practical and both legally and commercially expedient, does not differentiate between whether they are owned by Octanex N.L. directly, or indirectly through one or more of its wholly-owned subsidiaries. These interests and assets are all referred to in this report as being held by **Octanex** or the **Company** or the **Octanex Group**.



**Figure 1: Location Map of the Octanex Group's Portfolio of Permits**

## OPERATIONAL MATTERS

### Carnarvon Basin Interests

#### WA-323-P & WA-330-P – Dampier Sub-Basin

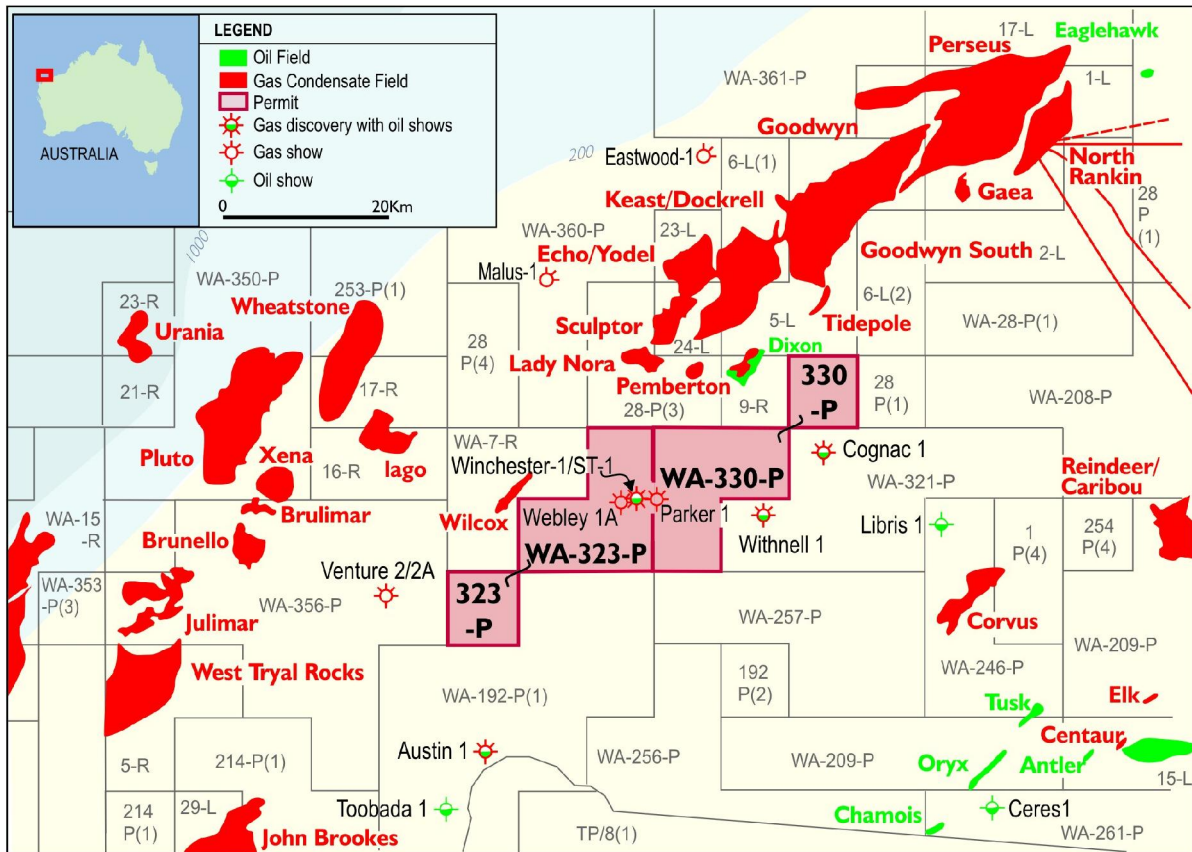
These permits are held by a Joint Venture consisting of:

Santos Offshore Pty Ltd (subsidiary of Santos Limited)	75% and Operator
Octanex Group	25%

WA-323-P and WA-330-P comprise a discrete project area of 640 km<sup>2</sup> on the Parker Terrace – see the Figure 2 *Location Map*. The permits were each granted their first 5-year renewals in April 2011, with the interests in the permits held by the wholly-owned subsidiary, Winchester Resources NL.

As a result of a farin agreement entered into with a subsidiary of Santos Limited (**ASX Code: STO**), Santos Offshore Pty Ltd (**Santos**), the Octanex Group was free carried in respect of its 25% interest in both permits through the first well in one of the permits and all other exploration costs for the two permits, up to the completion of that first well.

Santos initially acquired the Winchester 3D seismic survey, of approximately 720 km<sup>2</sup> of new data within and adjacent to the permits, with the processing, interpretation and mapping of that new data completed in Q4 2012. The specific aim of the original interpretive work was to define the drilling location for the Winchester-1 exploration well.



**Figure 2: WA-323-P & WA-330-P Location Map**

The Winchester-1/ST1 discovery well was a partially deviated well drilled to a total depth (TD) of 4019m MDRT (measured depth below rotary table) from a location within WA-323-P during Q2/Q3 2013 – see Figure 2. The well encountered good gas shows in stacked sands of the Late Jurassic Angel Formation and the Late Triassic Mungaroo Formation. The Santos analysis of the wireline logs, pressure testing and formation sampling of the well confirmed the presence of hydrocarbons and assessed the net gas pay of the discovery as 58m.

Preliminary post-well analysis, completed by Santos during Q3 2013, suggests that the estimated size of the Winchester discovery, by itself, to be insufficient to be developed economically. Further contributions from possible deeper or adjacent hydrocarbon zones to the Winchester location would be required to augment the discovered resource. The Winchester discovery is located near existing pipeline and processing infrastructure and likely future infrastructure extensions.

The discovery of gas bearing porous Tithonian, Angel Formation submarine fan sandstones in Winchester-1/ST1 extends this prospective play from the Dixon-1 oil and gas discovery well, located some 23.5 km to the northeast, onto the Parker Terrace.

Additional prospectivity on the Parker Terrace, within the WA-323-P and WA-330-P permits, exists in the Triassic Mungaroo Formation deeper within the Webley Horst below the TD of the Winchester-1/ST1 well. It also exists on the Wilcox fault block in the northwest of WA-323-P where seismic anomalies, similar to those encountered in the Wilcox-1 gas discovery, have been mapped.

There is further prospectivity in the Parker tilted fault block. The Parker-1/ST1 well in WA-330-P, located 3.2 km to the northeast of Winchester-1/ST1, drilled a separate structure and encountered gas shows in Triassic Mungaroo Formation sandstones over a 211m gross interval. These were not logged or tested before the well was prematurely abandoned. Reprocessing the Winchester 3D seismic data set (acquired by Santos in 2011 as part of the farm-in terms) should enable a better definition of the Parker fault block and may also define additional Triassic targets in the north of WA-330-P, and in the vicinity of the Parker-1 well in particular.



**WA-386-P & WA-387-P – Exmouth Plateau**

The WA-386-P and WA-387-P permits were each granted their first 5-year renewals on 7 February 2013. The two permits now comprise a combined exploration area of approximately 7,630 km<sup>2</sup> – see the Figure 3 *Location Map*. The Octanex Group has a 100% interest in both permits, with those interests held by the wholly-owned subsidiary, Exmouth Exploration Pty Ltd.

The committed work programme in the first three years of the renewed terms of both WA-386-P and WA-387-P call for the acquisition of new 2D seismic surveys, licencing of newly available seismic data and studies. This is then followed by a new 3D seismic survey and an exploration well in the last two years of each permit's term.

Octanex will seek the interest of other exploration companies to join with it in this work.

**WA-384-P – Southern Exmouth Sub-Basin**

As a result of various agreements (first entered into in 2008) for the disposition to Shell Development (Australia) Pty Ltd (**Shell**) of a 100% working interest in WA-384-P, the Octanex Group held residual rights in the permit in the form of discovery payments and royalties, as well as rights of re-conveyance.

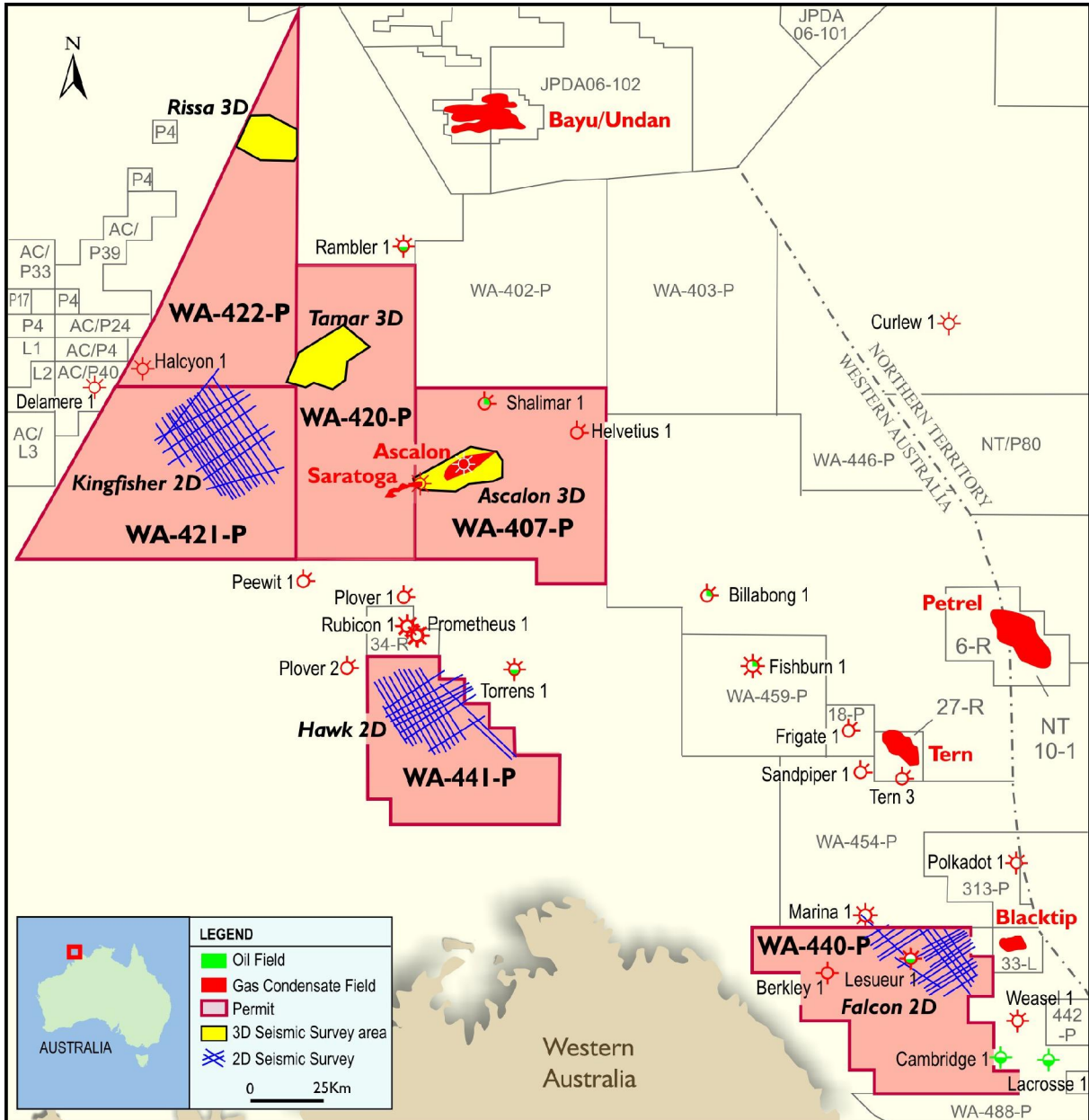
On 1 August 2013, Shell advised Octanex that the Palta-1 exploration well, which had been drilled by Shell in the WA-384-P permit, had reached total depth and logging results confirmed it did not encounter commercial hydrocarbons. The well was plugged and abandoned. The Palta-1 well was the final work programme requirement for the current term of the permit.

Subsequent to the end of the quarter, Shell decided not to pursue an application to renew the WA-384-P permit and the Octanex Group then confirmed to Shell that it would not pursue its rights of re-conveyance; with the result that the related residual and royalty interests held by the Group in that permit are at an end.

## Southern Bonaparte Basin Interests

The Octanex Group holds 100% interests in five petroleum exploration permits in the offshore Southern Bonaparte Basin and a 60% interest in a sixth permit in the Basin. Those permits are WA-407-P, WA-420-P, WA-421-P, WA-422-P, WA-440-P and WA-441-P and they are displayed in the Figure 5 *Location Map*.

All of the Group's interests are held by the wholly-owned subsidiary, Goldsbrough Energy Pty Ltd.



**Figure 5: Location Map of Southern Bonaparte Basin Permits and Completed Seismic Surveys**

Between November 2011 and March 2012, the Octanex Group acquired six new seismic surveys that fulfilled the Year 2 and Year 3 work programme commitments of their respective permits to acquire either new 2D or 3D seismic data. One survey is located within each of the six Southern Bonaparte Basin permits (Figure 5) and they are detailed in the following sections, together with maps displaying the relevant 2D grids and 3D polygons of each survey. Once interpretation and mapping of the new surveys and related reprocessed 3D data has been completed, a campaign to farm out the Octanex Group's Southern Bonaparte Basin permit interests will be launched.

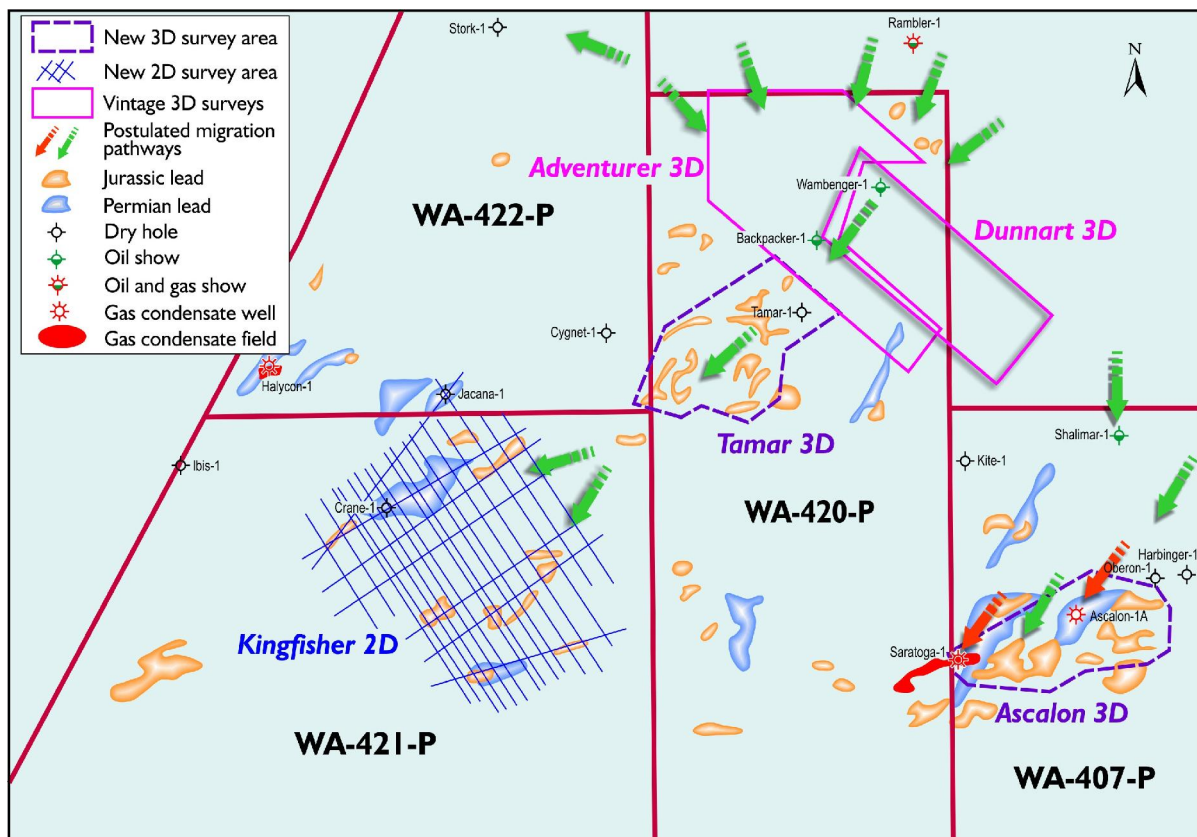
## WA-407-P, WA-420-P, WA-421-P, WA-441-P & WA-440-P – Southern Bonaparte Basin

The Octanex Group holds a 100% interest in these five permits that encompass 232 graticular blocks and comprise approximately 18,950 km<sup>2</sup> in total in the Southern Bonaparte Basin (Figure 5).

### The Tamar Trend Play

The Tamar Nose is a northeast/southwest trending structural high that extends down into the Sahul Syncline source kitchen and is seen as having potential as a natural focus for hydrocarbons migrating towards the southern Londonderry High.

The Tamar 3D seismic survey (see the Figure 6 *Location Map*) was acquired within WA-420-P and is located on the 'Tamar Nose', which was previously only lightly covered by vintage 2D seismic surveying that was insufficient to define trap closures. Three of the four wells drilled on the 'Tamar Nose' have oil shows, while the fourth well, Tamar-1 drilled in 1979, was not located on a valid trap.



**Figure 6: Location Map of Tamar 3D, Kingfisher 2D Seismic Surveys and Postulated Migration Pathways**

To the north and west of the Tamar 3D survey area are two pre-existing 3D seismic surveys; the Adventurer and Dunnart surveys (see Figure 6). These vintage 3D surveys have been reprocessed as an adjunct to the newly acquired Tamar 3D data. Together, the Adventurer and Dunnart (reprocessed) vintage 3D surveys and the new Tamar 3D survey will provide 3D seismic coverage over an exploration area of in excess of 1200 km<sup>2</sup>, most of which is contained within WA-420-P.

When combined with the new Tamar 3D survey (plus the reprocessed Adventurer and Dunnart 3D data and the relevant vintage and recently reprocessed 2D data), the new 2D seismic data acquired in WA-421-P by the Kingfisher survey (Figure 6) will provide coverage of a play concept over an area of some 2,500 km<sup>2</sup> within the WA-420-P and WA-421-P permits.

The processing and integration of the new Tamar 3D and reprocessed Adventurer and Dunnart 3D surveys was completed during Q4 2012, as was the processing of the Kingfisher 2D seismic data. Interpretation and the attendant mapping work are currently scheduled for completion in Q1 2014.

Related amplitude studies, including AVO analysis, inversion and modelling are on-going, as are various of the studies assessing source rock maturity history and hydrocarbon charge, which are both dependent on the mapping work. The reservoir quality review is complete and play mapping is ongoing.

The Kingfisher and Tamar surveys are linked in their endeavour to develop a play concept where the inferred source of the hydrocarbons is the Sahul Syncline. The interpreted migration pathway is along the 'Tamar Nose' structural high in WA-420-P and into the north-eastern corner of the WA-421-P permit. The target sandstone reservoirs of the Tamar Trend play are the Early Cretaceous to Late Jurassic, Sandpiper Sandstone Formation, the Late Jurassic Elang Formation and the Middle Jurassic Plover Formation. Sandstones of the Sandpiper Sandstone Formation and Elang/Plover formations are separated by the Late Jurassic Frigate Shale Formation sealing marine claystones, which in the northern part of WA-420-P are sufficiently thick enough provide for the possibility of stacked oil pools.

Depth mapping in WA-421-P was completed in Q4 2013. Six structural closures have been identified in the Sandpiper Sandstone Formation play and five structural closures have been identified in the Late Permian, Tern and Cape Hay Formations sandstone plays. Seismic interpretation and depth mapping is ongoing in WA-420-P with numerous time leads identified in the Sandpiper Sandstone Formation play on the merged and newly processed Tamar/Adventurer/Dunnart 3D.

### The Saratoga/Ascalon Gas Discovery

The Ascalon 3D seismic survey was acquired within WA-407-P. The area of the survey is located on a northeast structural trend between the Saratoga-1 and Ascalon-1 gas discovery wells in the western sector of the permit – see the Figure 7 Location Map.

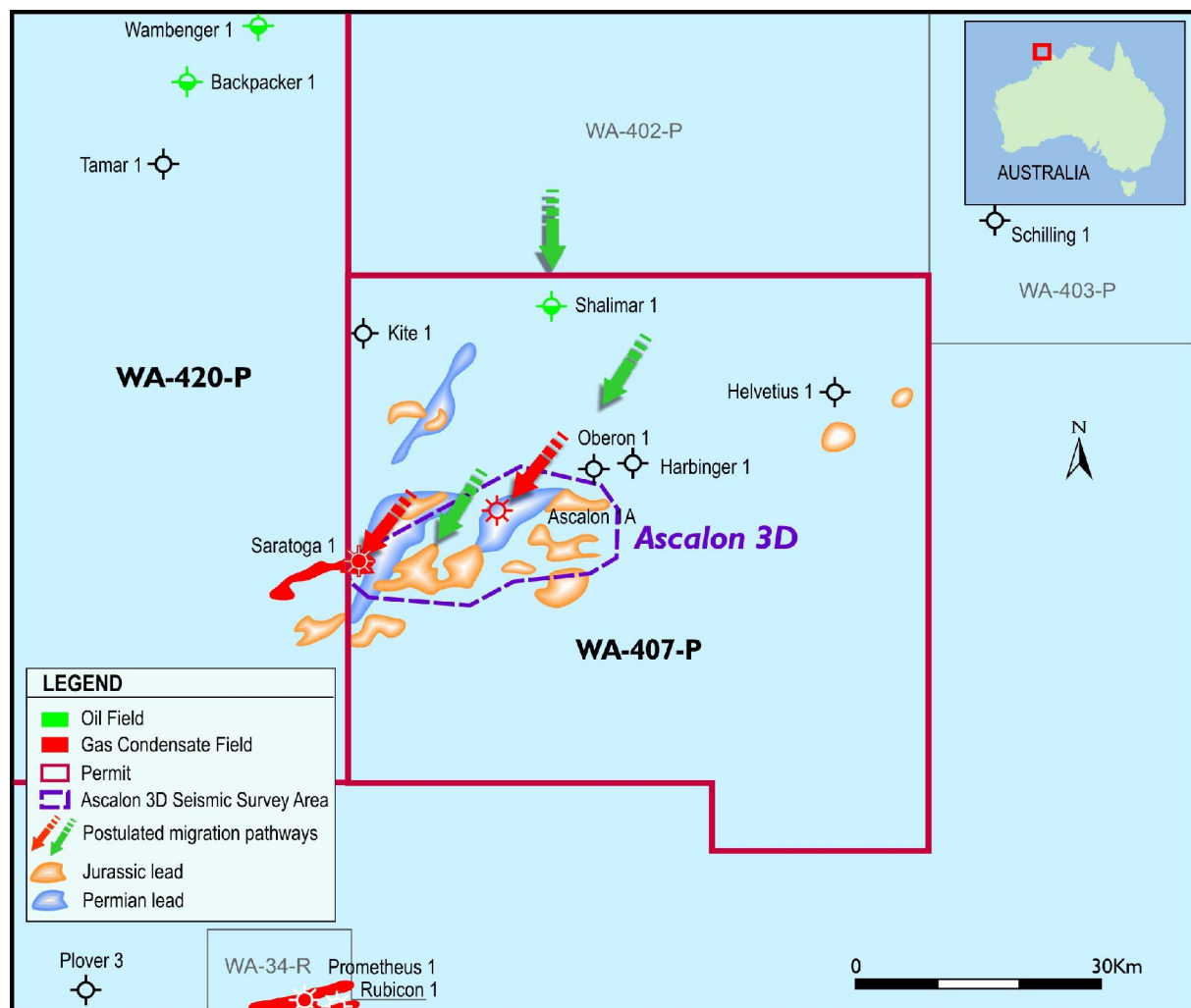


Figure 7: Location Map of the Ascalon 3D Seismic Survey and Postulated Migration Pathways



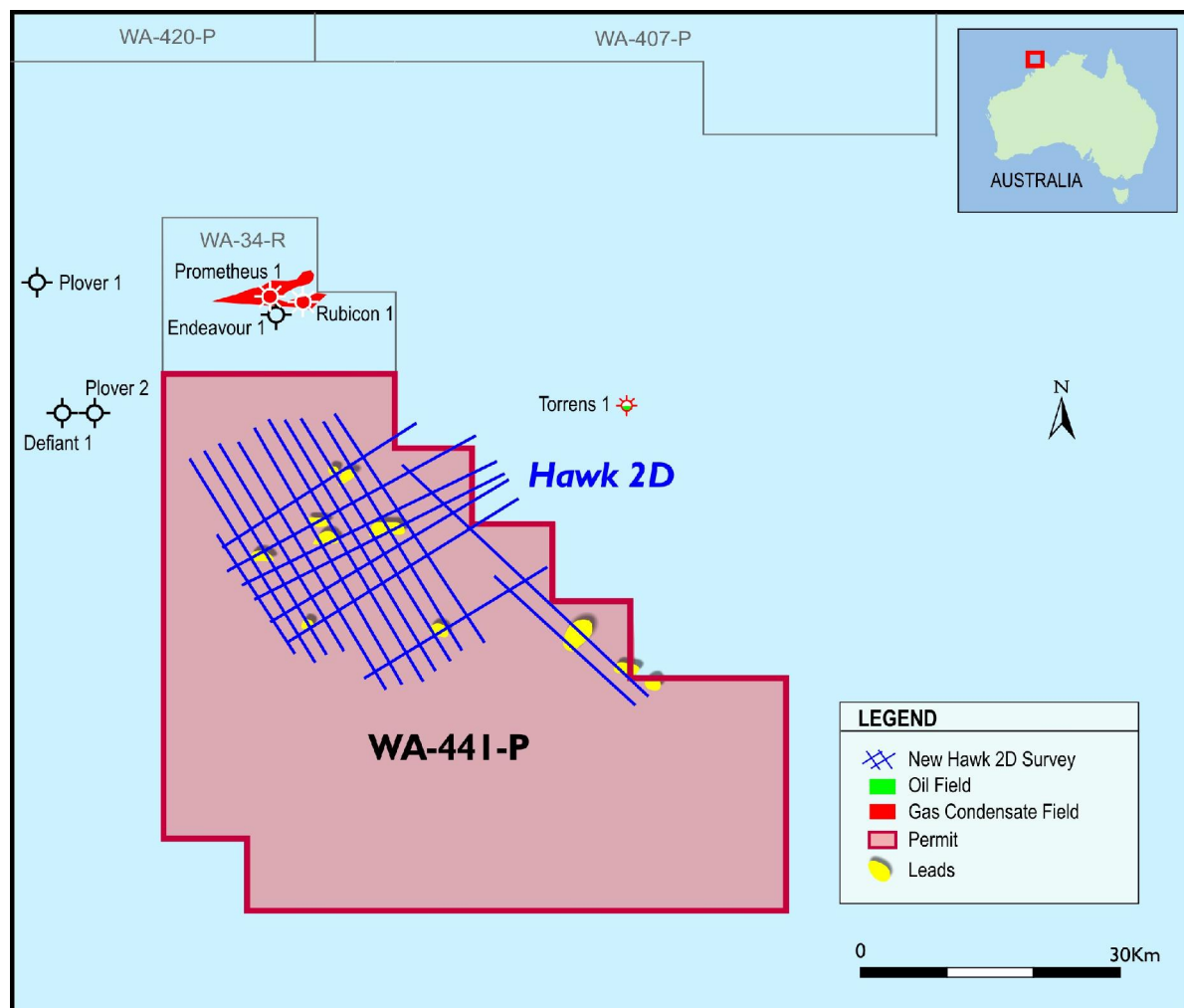
The objective of the Ascalon survey is to enable more precise mapping of the Early Cretaceous Sandpiper Sandstone Formation play and the deeper Late Permian, Tern and Cape Hay Formations sandstone plays of the Hyland Bay Formation.

Although gas was discovered in the Early Cretaceous Sandpiper Sandstone Formation in Saratoga-1, there is the possibility that oil may be present in the leads defined on vintage 2D seismic data that was previously acquired within the Ascalon 3D survey area as, unlike the Saratoga discovery, they are not located directly over the main structural fault that would have provided a conduit for gas to reach the Early Cretaceous Sandpiper Sandstone Formation. The Late Permian Tern and Cape Hay Formations is a gas play with depth mapping indicating two large structural closures at the Saratoga Deep and Ascalon-1A gas discovery locations.

Processing of the Ascalon 3D survey data has been completed and the new data interpreted. The attendant mapping work is currently scheduled for completion in Q1 2014. Related amplitude studies, including AVO analysis, inversion and modelling are on-going, with preliminary results indicating several anomalies that coincide with depth closures in the Sandpiper Sandstone Formation play. Various studies assessing source rock maturity history and hydrocarbon charge, which are both dependent on the mapping work, are ongoing. The reservoir quality review is complete and play mapping is ongoing.

### The Hawk Shallow Oil Play

The Hawk 2D seismic survey was acquired over leads in the north-western and central part of the WA-441-P permit – see the Figure 8 *Location Map*.



**Figure 8: Location Map of the Hawk 2D Seismic Survey**

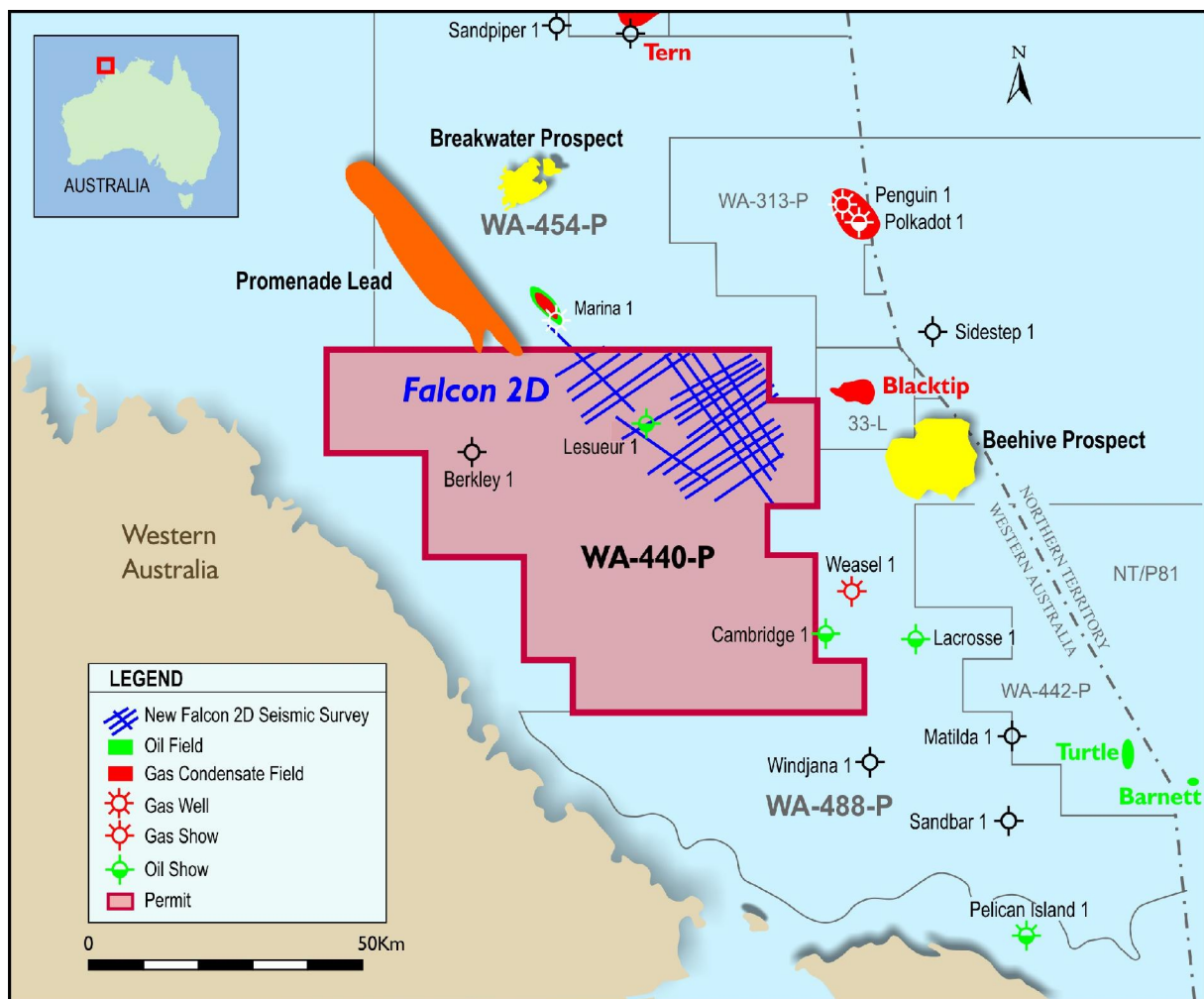
Interpretation of vintage 2D seismic data in the area of the survey indicated the presence of targets draped over basement topography. The Hawk survey was designed to identify whether these leads may form closed traps.

Interpretation of the Hawk 2D seismic data has been completed, with the depth mapping work and related studies scheduled for completion in Q1 2014.

### The Joseph Bonaparte Gulf Oil Play

The Falcon 2D seismic survey was acquired over leads in the north-eastern part of the WA-440-P permit where interpretation of vintage 2D seismic data in the area of the survey has defined several structural leads – see the Figure 9 *Location Map*.

As with the Hawk survey, the Falcon survey was designed to identify whether these leads may form closed traps.



**Figure 9: Location Map of the Falcon 2D Seismic Survey**

Interpretation of the Falcon 2D seismic data has been completed, with the depth mapping work and related studies scheduled for completion in Q1 2014.

WA-440-P is strategically located immediately east of the Blacktip gas development and the Turtle/Barnett oil accumulations (Figure 9). The Blacktip field has been developed by Eni and is the first such development in the Sub-basin. The project comprises a full well stream transfer from an unmanned wellhead platform, via a 107 km submarine pipeline, to an onshore gas plant in the remote location of Wadeye.

Within the WA-440-P permit, the area of main interest is in the trend between the Lesueur-1 and Cambridge-1 wells where oil shows were encountered, with a time closure identified in an anticline structure updip of the Lesueur-1 well. There has also been recent farmout activity in the exploration permits that bound WA-440-P to the north (in WA-454-P) and to the east and south (in WA-488-P) (Figure 9).

Origin Energy Ltd farmed into WA-454-P where MEO Australia Ltd had identified the Breakwater prospect (Figure 9). MEO advised that a Breakwater-1 well is scheduled for drilling by June 2016. A further extensive lead, named Promenade (Figure 9), has been identified by MEO in WA-454-P. Promenade is a potentially substantial stratigraphic trap considered by MEO to be prospective for gas. The WA-488-P permit was recently awarded to MEO. A large prospect called Beehive has been identified within the permit (Figure 9). Beehive is a stacked carbonate oil play in Ordovician and Carboniferous rocks.

The proximity of the WA-440-P permit to the Blacktip and Turtle/Barnett discoveries, as well as the presence of the attractive and large Beehive prospect, provides further encouragement for the farmout of the Octanex Group's permit.

### **WA-422-P – Londonderry High**

The Stirling Joint Venture consists of:

Goldsborough Energy Pty Ltd ( <i>subsidiary of Octanex N.L.</i> )	60.000% and Operator
National Oil Corporation Pty Ltd	22.500%
Ultragas Pty Ltd	9.375%
Nations Natural Gas Pty Ltd	5.000%
Ultragas Resources Pty Ltd	3.125%

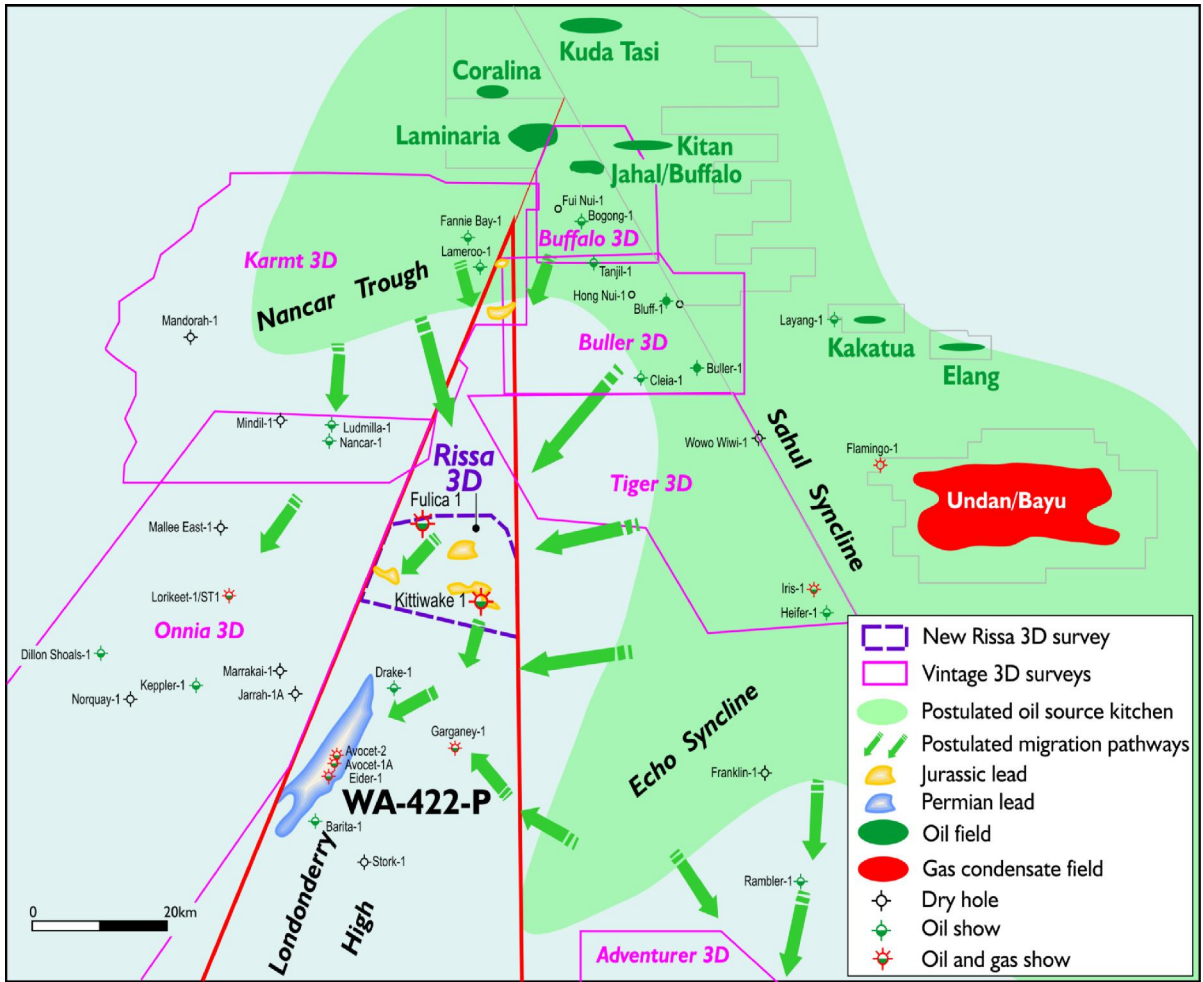
The area of the recently acquired Rissa 3D seismic survey is located on the northern end of the Londonderry High, which is seen as a potential natural focus for oil migration – see the Figure 10 *Location Map*.

To the north of the Rissa survey area there are several oil fields (Kuda Tasi, Coralina, Laminaria, Jahal/Buffalo and Kitan – Figure 10); while the presence of residual oil columns in exploration wells within and to the south of the survey area indicates the existence of an oil migration route through the survey area – see the Figure 10 *Postulated Londonderry Migration Pathways*.

Leads identified on vintage 2D seismic data possess similar west to east oriented horsts and tilted fault blocks to those in the oil discoveries to the north of the Rissa survey area. The poor resolution of the vintage 2D restricts clear definition of trap closure and cross fault seal juxtaposition. Hence there was a need to acquire a modern 3D seismic dataset to better resolve the leads within the Rissa survey area at the target reservoirs of the Early Cretaceous Sandpiper Sandstones and Jurassic Elang and Plover formations.

Interpretation of the Rissa 3D survey data has been completed, with the depth mapping work scheduled for completion in Q1 2014. Related amplitude studies, including AVO analysis, inversion and modelling are on-going, as are various of the studies assessing source rock maturity history and hydrocarbon charge, which are both dependent on the mapping work. The reservoir quality review is complete and play mapping is ongoing.

Reprocessing of vintage 3D data over leads in the northernmost part of WA-422-P and the surrounding area has been undertaken and interpretation completed. Two leads identified on the original vintage 3D in the Elang Formation play have been confirmed on depth mapping of the new reprocessed 3D data, with one situated updip of the oil shows identified in the Lameroo-1 well.



**Figure 10: Location of the Rissa 3D Seismic Survey and Postulated Londonderry Migration Pathways**

## Browse Basin Interest

### WA-342-P – Cornea

The Cornea Joint Venture consists of the following interests:

Cornea Resources Pty Ltd	13.100% and Operator
Cornea Oil & Gas Pty Ltd	17.000%
Energex NL ( <i>ASX Code: ENX</i> ) *	14.875%
Cornea Petroleum Pty Ltd	14.875%
Octanex N.L.	10.250%
Cornea Energy Pty Ltd ( <i>subsidiary of Octanex N.L.</i> )	8.500%
Moby Oil & Gas Limited	7.500%
Coldron Pty Ltd	7.500%
Auralandia N.L.	6.400%

\* *subject to approval and registration by NOPTA.*

The WA-342-P permit is located in the Caswell Sub-basin of the Browse Basin offshore from Western Australia and covers an area of approximately 1,755 km<sup>2</sup> – see the Figure 11 *Location Map*.

The permit is in its first 5-year renewed term, where the committed work programme in the first three years calls for studies and an exploration well; followed by reprocessing of 3D seismic and further studies in the last two years of the term.

During the current renewed term, the Joint Venture has given extensive consideration to the best permit arrangement and work programme under which to evaluate the Cornea structure and its known oil resource. The potential conversion of the current exploration permit into a retention lease has been addressed and, as part of this review work, regular discussions have been held with the regulatory authorities.

The first step towards seeking a retention lease was to have a 'location' declared over the Cornea accumulations. The relevant application was lodged and the Commonwealth - Western Australia Offshore Petroleum Joint Authority declared a Location over the Cornea oil and gas accumulations (**Greater Cornea Fields**) on 6 June 2013. The Location covers six graticular blocks within the WA-342-P permit and the accumulations that make up the Greater Cornea Fields include the Cornea (Central and South), Focus and Sparkle Oil Fields and the Cornea North (Tear) Gas Field – see the Figure 12 *Cornea Location within WA-342-P*.

During the quarter, a six month suspension of the Year 2 work programme commitments and commensurate extension of the permit's term was granted by the regulatory authorities; with the effect that the permit has entered Year 3 and that year will now end on 3 July 2014. The suspension and extension was sought in anticipation of lodging a retention lease application, as the form of such a lease and the status of the remainder of the permit area both need to be determined ahead of undertaking any further exploration work.

The application for a Retention Lease over the Cornea Location was lodged during the quarter (on 14 October 2013).

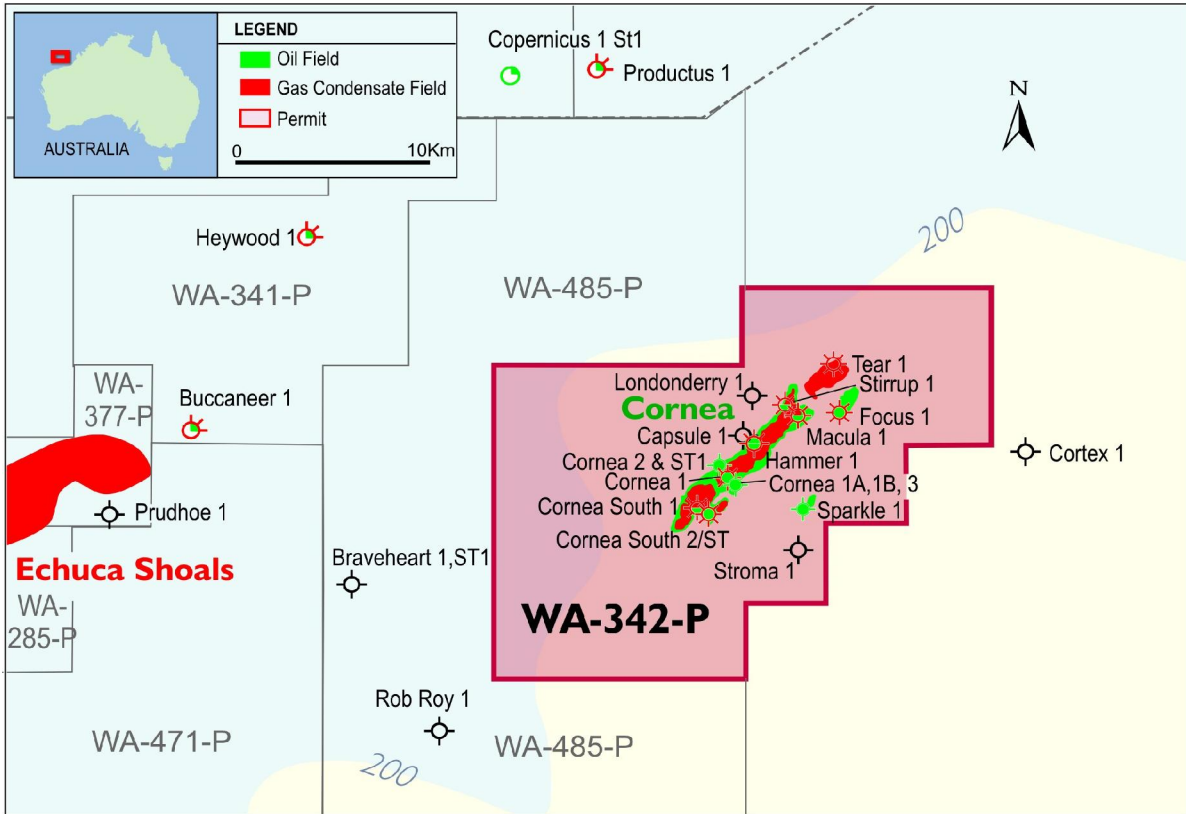


Figure 11: WA-342-P Location Map

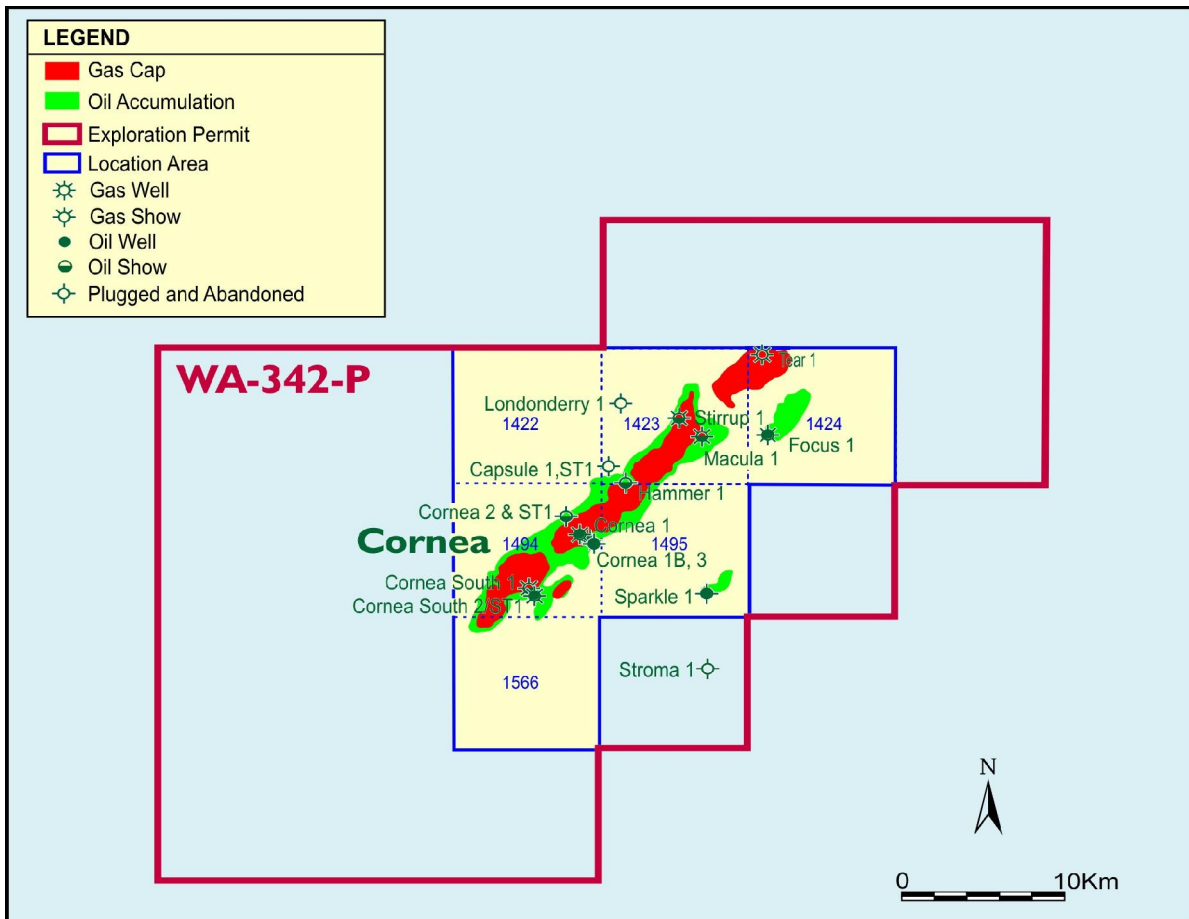


Figure 12: Cornea Location within WA-342-P

### Details of Contingent Oil and Gas Resources

During Q3 2013, the Cornea Joint Venture completed its determination of the Contingent Resources within the oil and gas accumulations of the Cornea South and Cornea Central Oil Fields and the Cornea North Gas Field (collectively the Cornea Field). The determination of the Contingent Resources formed part of the work necessary to complete the Retention Lease application over the Greater Cornea Fields.

The Octanex Group's 'Economic Interest' in the oil and gas Contingent Resources detailed in the following Tables 1 and 2 is 18.75%. That interest is held by Octanex N.L. (as to 10.25%) and its wholly-owned subsidiary, Cornea Energy Pty Ltd (as to 8.50%).

Table 1 presents the probabilistically derived In-place and Contingent Oil Resources for the Cornea Central and South Oil Fields, with no development risk having been applied in deriving these volumes.

<b>Middle Albian B &amp; C Sands</b>	<b>Low Estimate (P90)</b>	<b>Best Estimate (P50)</b>	<b>High Estimate (P10)</b>	<b>Units</b>
<b>Total Oil In-place</b>	<b>298.0</b>	<b>411.7</b>	<b>567.2</b>	<b>mmbbl</b>
Recovery Factor	2	7	25	%
<b>Contingent Oil Resources</b>	<b>7.9</b>	<b>28.8</b>	<b>101.9</b>	<b>mmbbl</b>
<b>Octanex Economic Interest</b>	<b>1.48</b>	<b>5.40</b>	<b>19.11</b>	<b>mmbbl</b>

**Table 1: In-place and Contingent Oil Resources for Cornea Central and South Fields**

Table 2 presents the probabilistically derived In-place and Contingent Gas Resources for the Cornea Central, South and Tear Oil and Gas Fields, with no development risk having been applied in deriving these volumes.

<b>Middle Albian B &amp; C Sands</b>	<b>Low Estimate (P90)</b>	<b>Best Estimate (P50)</b>	<b>High Estimate (P10)</b>	<b>Units</b>
<b>Total Gas In-place</b>	<b>84.90</b>	<b>117.3</b>	<b>161.5</b>	<b>Bcf</b>
Shrinkage	0.94	0.96	0.99	Factor
Recovery Factor	30	38.7	50	%
<b>Contingent Gas Resources</b>	<b>28.9</b>	<b>44.0</b>	<b>66.3</b>	<b>Bcf</b>
<b>Octanex Economic Interest</b>	<b>5.42</b>	<b>8.25</b>	<b>12.43</b>	<b>Bcf</b>

**Table 2: In-place and Contingent Gas Resources for Cornea Central, South and Tear Fields**

### Taranaki Basin Interests

As displayed in the Figure 13 *Location Map*, the Octanex Group holds varying interests in five petroleum exploration permits in the offshore Taranaki Basin of New Zealand; namely PEP 51906, PEP 52593, PEP 53473, PEP 53537 and PEP 55790. The interests in the offshore Taranaki Basin cover approximately 7640 km<sup>2</sup> and are all held by Octanex’s wholly-owned subsidiary, Octanex NZ Limited.

During the quarter, on 5 December 2013, the PEP 55790 permit was awarded 100% to Octanex NZ Limited as a result of a successful bid for the acreage in the New Zealand 2013 Block Offer. Details in relation to the permit and its related work programme are provided later in this section.

The Octanex Group has built a substantial exploration position in New Zealand’s premier oil and gas producing basin, with all of the New Zealand permit interests held being both strategically located and prospective for the discovery of hydrocarbons. The offshore Taranaki Basin of New Zealand is a region of renewed exploration activity.

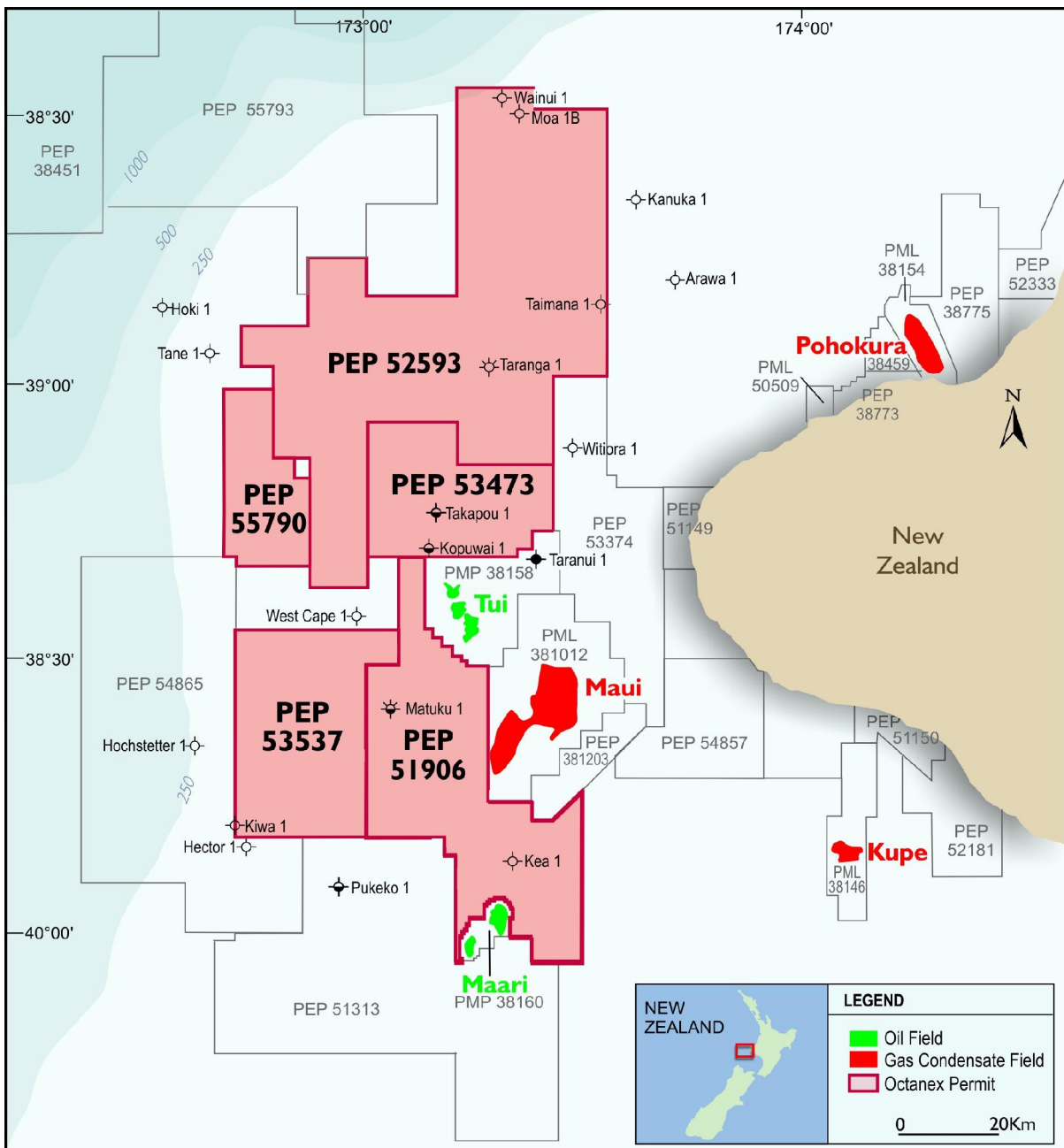


Figure 13: Location Map of the Taranaki Basin Permits



## PEP 51906 – TARANAKI BASIN

The PEP 51906 Joint Venture consists of:

OMV New Zealand Limited ( <b>OMV</b> )	65.0% and Operator
Octanex Group	22.5%
New Zealand Oil & Gas Limited ( <b>NZOG</b> ) ( <b>ASX Code: NZO</b> )	12.5%

The PEP 51906 permit covers an area of 1,613 km<sup>2</sup> and is adjacent to three producing fields; the Maui gas/condensate field to the east (which has been in production since 1979), the Tui oil field to the northeast (which has been producing since 2008) and the Maari/Manaia fields to the south (which commenced production in 2009) – see Figure 13.

In March 2011, Octanex entered into a farmin agreement with OMV in relation to PEP 51906. OMV was assigned a 65% participating interest in the permit, with the Octanex Group retaining a 35% participating interest. As part of the agreement, OMV became the Operator of the permit and the PEP 51906 Joint Venture. The terms of the farmin agreement required OMV to meet all of the cost of a new 3D seismic survey and the first well drilled in the permit. As detailed below, Octanex later entered into an agreement with NZOG in relation to the sale to it of a 12.5% interest in PEP 51906.

OMV acquired the new 3D seismic survey over the Matuku structure within PEP 51906 and completed the interpretation and mapping of the data in Q1 2012. As a result of the work done on the new 3D data and following a variety of detailed studies, in Q4 2012, OMV committed to drill the Matuku-1 exploration well in PEP 51906.

The Matuku-1 well spudded during the quarter (on 30 November 2013) and was in the process of being plugged and abandoned as a dry hole, with oil and gas shows, on 31 January 2014 – see Figure 14. Matuku-1 was drilled as a vertical well by the Kan Tan IV semi-submersible rig in water depths of approximately 130m and to a total depth of 4,846m MDRT. The well did encounter sandstones in the primary and secondary targets (Kapuni Group F-sands and North Cape Formation) as expected but did not confirm the presence of commercial quantities of hydrocarbons.

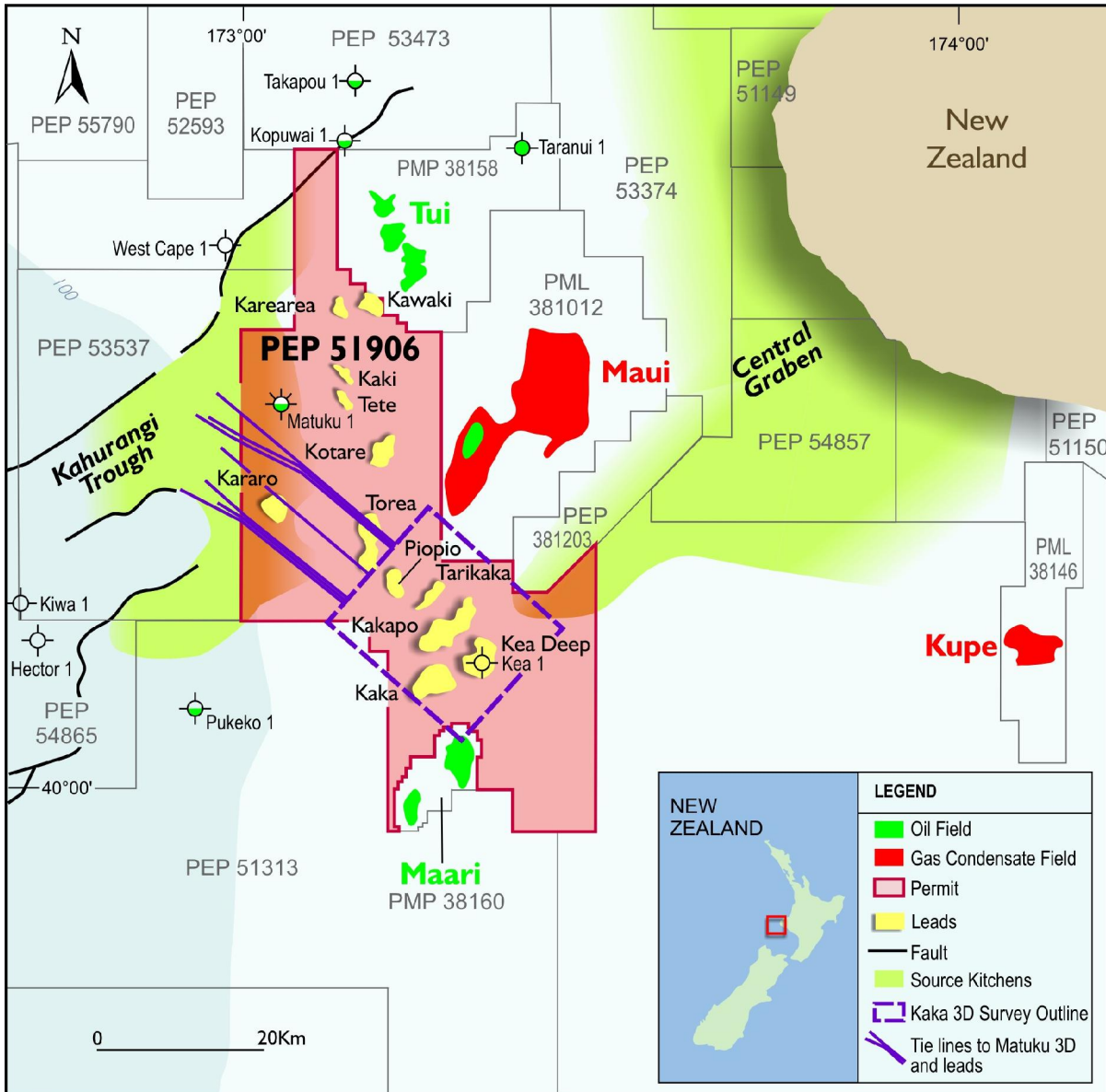
A large amount of logging and drilling data has been gathered which will be used to update geological models of the area. This will help better predict where hydrocarbons may have been generated and trapped.

In Q4 2012, Octanex sold a 12.5% interest in PEP 51906 to NZOG for US\$12,500,000. The sale proceeds were payable to Octanex in three tranches, with the first and second tranches (of US\$3,000,000 and US\$3,250,000 respectively) received progressively (in February and August 2013). The third and final tranche, of US\$6,250,000, was paid to Octanex during the quarter (on 2 December 2013).

The agreement with NZOG includes a call option, exercisable by NZOG, whereby NZOG can earn a further 5% interest in PEP 51906 by meeting all of the Octanex Group's costs associated with the drilling of a second exploration well in PEP 51906.

Additionally, the agreement with NZOG included a farmout of the Octanex Group's interests in the adjoining PEP 52593 and PEP 53473 permits – see Figure 13. Details of the relevant farmout terms are provided in the sections on those permits that follow. All of the agreements with NZOG have received the necessary Ministerial consents.

Subsequent to the end of the quarter, the Kaka 3D seismic survey acquired 403.8 km<sup>2</sup> of new 3D data from within and adjacent to PEP 51906 – see Figure 14. Additional to the new 3D data acquired within the Kaka polygon, a further 67.4 km<sup>2</sup> of 3D tie lines were acquired as part of the overall survey (see Figure 14). These swaths will facilitate the tie of the new data and the Matuku-1 well information to the vintage Hector 3D survey that was previously acquired in the adjoining permit, PEP 53537.



**Figure 14: PEP 51906 and Kaka 3D Location Map**

### PEP 53537 – TARANAKI BASIN

The PEP 53537 Joint Venture consists of:

OMV New Zealand Limited	65% and Operator
Octanex Group	35%

PEP 53537 adjoins the western boundary of PEP 51906 – see Figure 13. It covers an area of 1,146 km<sup>2</sup> and has an extensive grid of 2D seismic data of various vintages covering the southern, western and north-eastern sections of the permit area. Based on previous successful drilling results in areas close to PEP 53537, the Kapuni Group plays are seen to be the most prospective for the permit, although possible targets in the Moki Formation are also being analysed.

The completed work programme commitments for the initial period of PEP 53537 were to undertake geological studies, reprocess 400 km of existing 2D seismic data and acquire 100 km of new 2D seismic data and 18 km<sup>2</sup> of new 3D seismic data.

In conjunction with the Matuku 3D seismic survey acquired in PEP 51906 and PEP 53537, the seismic vessel carried out the 2D seismic survey in PEP 53537 required under the work programme. Processing of all the new and reprocessed data has been completed and detailed interpretation and mapping of the new data is on-going, in conjunction with the newly reprocessed data.

In Q2 2013, the regulatory authority granted a variation to the work programme, such that the Joint Venture will now acquire either a new 200 km 2D or 100 km<sup>2</sup> 3D seismic survey in Year 3 (that commenced on 4 July 2013). The variation also provides a 12 month deferral of the well commitment, which is now due by 4 July 2013.

As noted in the previous section, the Kaka seismic survey acquired a number of 3D tie lines that extended into the area of PEP 53537 and these swaths will facilitate the tie of the new data and the Matuku-1 well information to the vintage Hector 3D survey that was previously acquired in PEP 53537 – see Figure 14.

### **PEP 52593 – TARANAKI BASIN**

The PEP 52593 Joint Venture consists of:

New Zealand Oil & Gas Limited	50% and Operator
Octanex Group	50%

PEP 52593 covers an area of over 3,500 km<sup>2</sup> and is located in the offshore Taranaki Basin, north of PEP 51906 and adjoining the boundaries of both PEP 53537 and PEP 55790 – see Figure 13.

In Q4 2012, the Octanex Group and NZOG entered into a farmin agreement relating to PEP 52593 under which the Group agreed to assign a 50% interest in the permit to NZOG in consideration of NZOG agreeing to fund 60% of all ongoing exploration costs in the permit, until such time as the permit is either surrendered or a commitment is made to drill a well in the permit. NZOG also became the Operator of the permit and the PEP 52593 Joint Venture.

Leads had previously been identified within PEP 52593 and studies are on-going in relation to them – see the Figure 15 *PEP 52593 Leads Map*.

Interpretation and mapping of reprocessed and other vintage seismic data in the permit led to a Joint Venture decision to acquire a new 3D seismic survey over the Karoro Lead. The Karoro 3D seismic survey was shot by the “*MV Western Monarch*” in Q2 2012, with approximately 294 km<sup>2</sup> of new 3D data acquired. A single 27 km 2D swath, from the Karoro area across the Tane-1 well, was also acquired as part of the survey to strengthen the ability to establish continuity of the target reservoir unit – see Figure 15 for the *Karoro 3D Polygon*.

The main focus of the Karoro 3D seismic survey is the attractive Karoro lead, a compressional anticline situated updip and immediately adjacent to the Tane Trough hydrocarbon source kitchen and located entirely within the northwest part of the permit – see Figure 15. The target reservoir for the Karoro lead are Late Cretaceous sandstones of the North Cape Formation which are well developed with good porosity and permeability in the nearest well, Tane-1, situated to the east.

The new 3D seismic data will be used to map the structural closure at the top reservoir of the North Cape Formation and to evaluate its reservoir properties with the aim of elevating this lead to the status of a drillable prospect.

Processing, interpretation and mapping of the new Karoro 3D data is to be completed by the end of March 2014, at which time the Joint Venture must either commit to drill a well or surrender the permit.

During the quarter, the Joint Venture lodged an application with the regulatory authority seeking the ‘drill or surrender’ date be extended for six months to 30 September 2014 – the application is pending.

In Q3 2013, the Joint Venture commenced a farmout campaign for both PEP 52593 and PEP 53473. The permits are being marketed globally in an effort to attract international oil and gas exploration companies. The PEP 52593 farmout brochure included details, based on the then available information, that described the Karoro lead as an area of approximately 19 km<sup>2</sup> with up to 140mmbbls in the high case.

### **PEP 53473 – TARANAKI BASIN**

The PEP 53473 Joint Venture consists of:

New Zealand Oil & Gas Limited	50% and Operator
Octanex Group	50%

The permit covers an area of 853 km<sup>2</sup> and is located in the offshore Taranaki Basin, lying between the PEP 51906 and PEP 52593 permits and immediately adjacent to the north of the Tui oil field – see Figure 13.

The permit is covered by an extensive grid of 2D seismic data of various vintages. However, despite its location adjacent to the producing Tui oil field, there has been little modern 3D seismic data acquired within the permit area to date; apart from approximately 40 km<sup>2</sup> of Tui 3D ingress seismic in the south of the permit. There have been two wells drilled within the permit area, Takapou-1 and Kopuwai-1, both of which encountered oil shows.

PEP 53473 is being explored as a combined area with PEP 52593 and reprocessing of more than 2000 km of existing 2D data from within and adjacent to both permits has been completed. Detailed interpretation and mapping of the newly reprocessed data was then completed during 2012, together with various geotechnical studies. All of that work fulfilled the permit work programme requirements for reprocessing and geotechnical studies to be completed by March 2013.

The Octanex Group and NZOG entered into a farmin agreement relating to PEP 53473 under which the Group agreed to assign a 50% interest in PEP 53473 to NZOG in consideration of NZOG agreeing to fund 75% of all ongoing exploration costs in the permit, until such time as the permit is either surrendered or a commitment is made to drill a well in the permit. NZOG also became the Operator of the permit and the PEP 53473 Joint Venture.

The “*MV Western Monarch*” shot the new 595km<sup>2</sup> Kokako 3D seismic survey in April 2013 – see Figure 15 for the *PEP 53473 Leads Map and Kokako 3D Polygon*. The main focus of the Kokako 3D seismic survey was two attractive leads within the permit. The first lead, Kokako, is located in the southeast corner of the permit while the second, Toutouwai, is located in the north. There is a third less developed lead, Riroriro, in the northeast corner of the permit that also falls within the area of the Kokako survey – see Figure 15. The Kokako 3D seismic survey was acquired to enable geotechnical studies to potentially elevate the leads to the status of drillable prospects.

The new 3D seismic data is planned to assist in determining whether the Kokako lead has a robust depth closure within the extent of the prospective Palaeocene Farewell Formation (F Sand) reservoir of the Kapuni Group. This lead is interpreted to be located updip from the Taranui-1 well which sampled oil in the overlying Kaimiro Formation (D Sand) and had oil shows in the Farewell Formation (F Sand). The Toutouwai lead, located to the north of the Takapou-1 well, possesses a good structural closure at the top of the North Cape Formation, sandstones of which are the target reservoir for this lead. The new 3D seismic data will be used to evaluate the reservoir properties of the North Cape Formation in the Toutouwai lead.

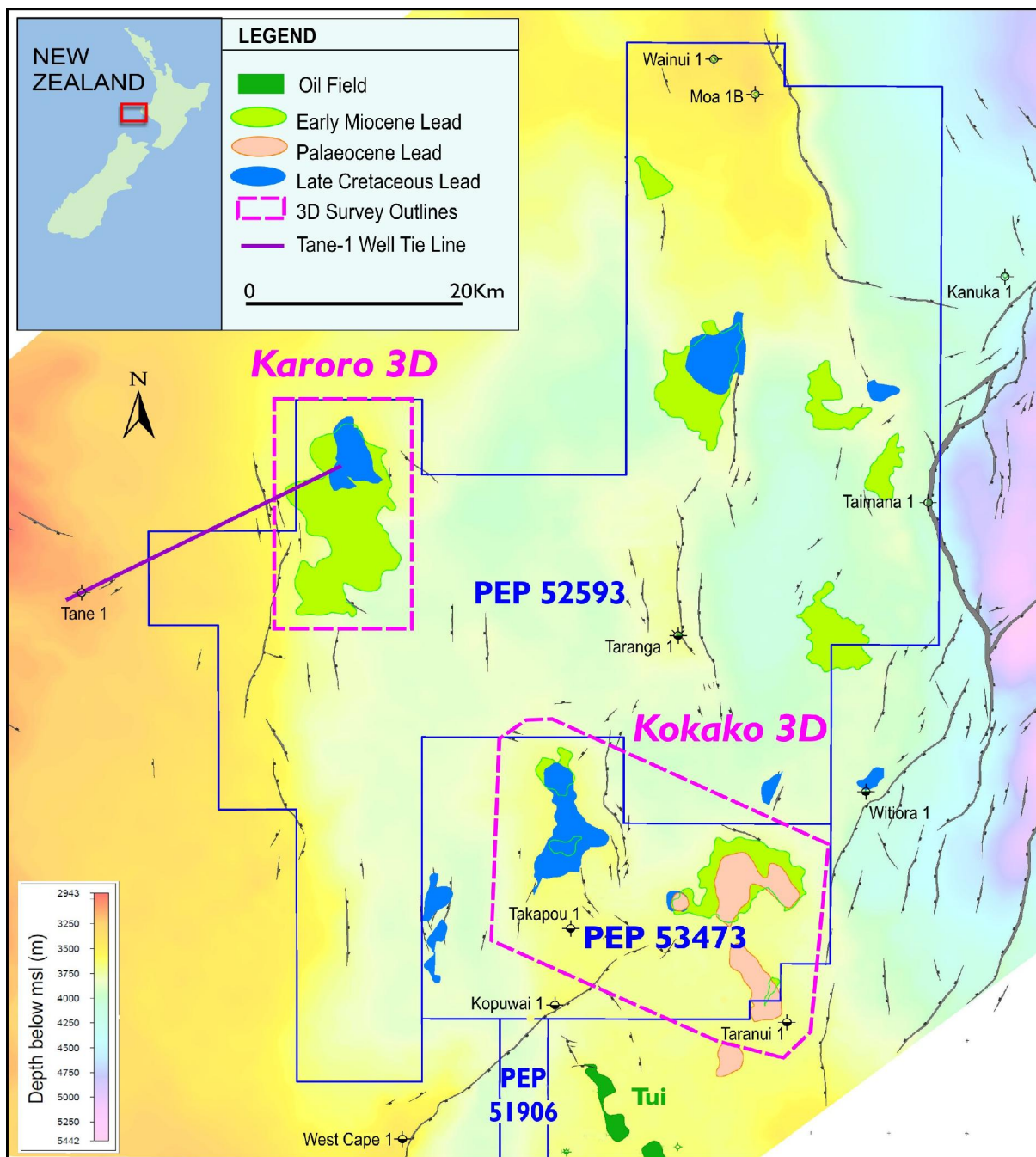
The locations of the Taranui-1 and Takapou-1 wells are shown in Figure 15, with Taranui-1 located just outside of the PEP 53473 permit's boundary.

The Riroriro lead is located to the north of the Kokako lead. The Farewell Formation (F Sand) reservoir is the main target, with a secondary target in the overlying Miocene Moki Formation submarine fan play. The Kokako 3D seismic data will be used to delineate closures over the sparsely surveyed Riroriro lead and in determining whether the Farewell Formation (F Sand) reservoir is prospective.

Processing, interpretation and mapping of the new Kokako 3D data is to be completed by mid March 2014, at which time the Joint Venture must either commit to drill a well or surrender the permit.

During the quarter, the Joint Venture lodged an application with the regulatory authority seeking the 'drill or surrender' date be extended for six months to 19 September 2014 – the application is pending.

As noted in the previous section, the Joint Venture commenced a farmout campaign for both PEP 53473 and PEP 52593 during the previous quarter. The PEP 53473 farmout brochure includes details, based on the then available information, that describes the Kokako lead as the main potential drilling opportunity in PEP 53473 and that mapping to date indicated a high case of up to 81mmbbls in the Kapuni F-Sand only.



**Figure 15: PEP 52593 & PEP 53473 Leads (at top Kapuni F Sand horizon) and outlines of Karoro and Kokako 3D Polygons**

## PEP 55790 – TARANAKI BASIN

As noted above, the PEP 55790 permit was awarded 100% to Octanex NZ Limited during the quarter (on 5 December 2013) as a result of a successful bid for the acreage in the New Zealand 2013 Block Offer. As part of the new permit award system in New Zealand, the term of PEP 55790 will commence on 1 April 2014.

The permit covers an area of approximately 518 km<sup>2</sup> and it is located adjacent to the Octanex Group's existing offshore Taranaki Basin permits – see Figure 13. PEP 55790 offers similar prospectivity to the Octanex Group's other Taranaki Basin interests and is a 'strategic fit' with Octanex's exploration activities and its portfolio of interests.

Under the terms of the permit, Octanex must reprocess, interpret and map a minimum of 2100 km of existing 2D seismic data from within and immediately adjacent to the permit and carry out various geotechnical studies. This work is to be completed within 24 months of the permit commencement date. In completing these work requirements, the Company will carry out extensive reprocessing of the vintage 2D seismic data acquired by earlier operators of the permit and surrounding area.

Following the reprocessing and studies, Octanex can either surrender the permit or commit to acquire and process a minimum of 300 km<sup>2</sup> of new 3D seismic data and commence its interpretation within 48 months of the commencement date. There has been no modern 3D seismic data acquired within the permit area to date. Should the Company carry out the new 3D seismic survey and complete the interpretation and mapping of the new data it must then, within 60 months of the commencement date, have either farmed out the permit to a party able to commit to drill a well in the permit area or surrender the permit.

No wells have been drilled within the area of PEP 55790 but several wells have been drilled in the area surrounding the permit. Those wells provide useful reference and interpretation tie points for the evaluation of the seismic database for the determination of structure, reservoir distribution and quality, seal capacity, source rock maturity and likely charge routes.

Several anticlinal closures have been identified on the existing 2D seismic database within the area of PEP 55790. These formed during the closing stage of the Late Cretaceous in response to strike slip fault movement reactivation of earlier Cretaceous rift related faults.

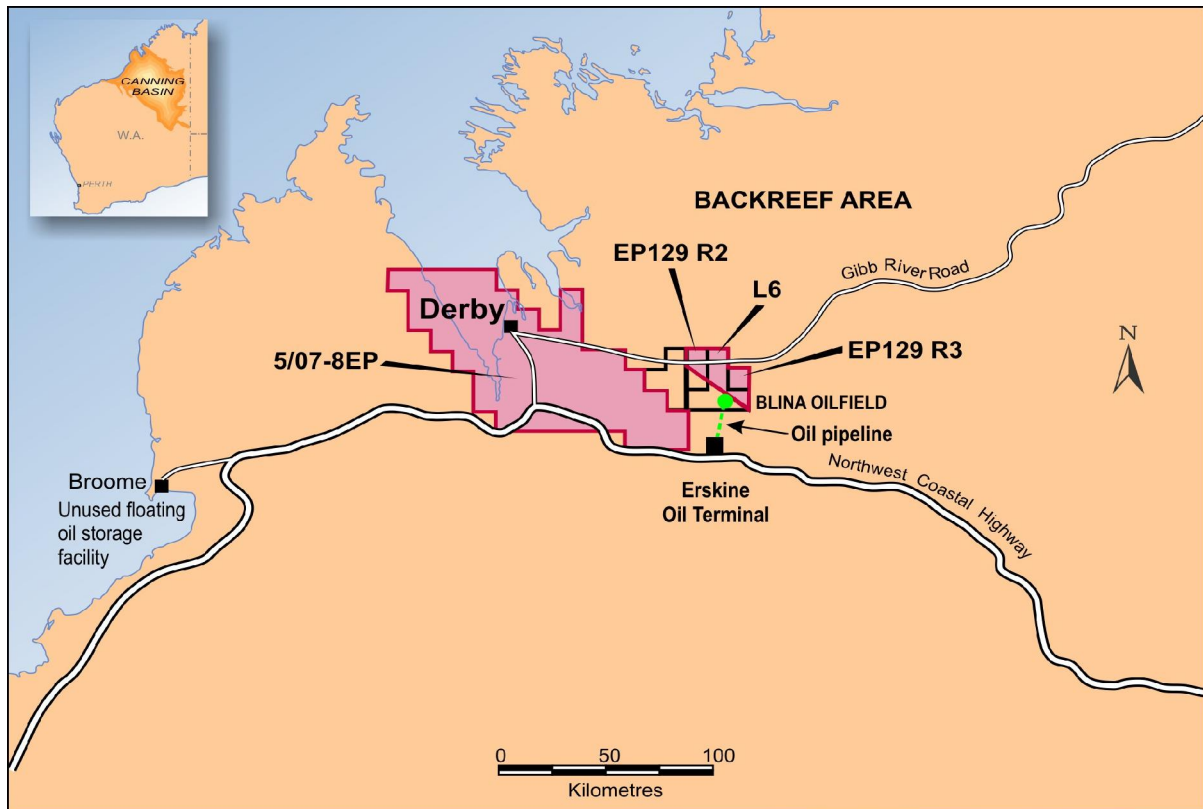
Shallow marine sandstones in the Lower North Cape Formation, penetrated in the nearby Tane-1 and Hoki-1 wells where they possess excellent porosity and permeability, are the primary reservoir target in the PEP 55790 permit. The deposition of these sandstones was concomitant with the formation of the anticlines and, although they thin over the crest of the structure, they are expected to be present on the flanks and as clean winnowed sandstones on the crest.

Top seal to the Lower North Cape Formation sandstone play is provided by transgressive marine claystones of the Upper North Cape Formation, as well as the overlying distal offshore siltstones and claystones of the Tane Member and Turi Formation.

PEP 55790 is situated adjacent to the Late Cretaceous Tane Trough rift which contains coal measures belonging to the Wainui Member and Rakopi Formation of the Pakawau Group. These deposits are proven source rocks for oil and gas generation in the Taranaki Basin and the permit lies on a potential oil migration pathway from the Tane Trough.

## Canning Basin Farmin Interest

In January 2013, Octanex announced it had agreed to acquire a 25% interest from Oil Basins Limited (**OBL**) in a permit to be issued in respect of the Western Australia petroleum exploration permit application area 5/07-8 EP (**Derby Block**). The Derby Block comprises an area of approximately 5,063 km<sup>2</sup> in the onshore Canning Basin, southeast of Derby – see the Figure 16 *Location Map*.



**Figure 16: Derby Block Location Map**

The grant of the permit for the Derby Block is subject to determination of Native Title. On 1 February 2013, the National Native Title Tribunal (**NNTT**) made a determination permitting the grant of a permit for the Derby Block, subject to various conditions. However, an appeal was lodged by the Kimberley Regional Economic Development Corporation against the NNTT determination. The appeal was heard on 30 July 2013 and the decision of the Court was handed down on 23 December 2013. The Court rejected the appeal, thus opening the way for the regulatory authority to grant the permit for the Derby Block.

The purchase price for the 25% interest is A\$1.75 million, payable to OBL after all conditions precedent to the acquisition have been satisfied or waived.

Octanex considers that the Derby Block is potentially prospective for unconventional oil and gas from shales, as well as gas from coal seams, and there is particular attraction in the potential of the shale formation known as the Laurel Formation. In addition, there are a number of other formations which have potential for the discovery of conventional and unconventional hydrocarbons.

## CORPORATE MATTERS

### Peak Rights Issue Underwritten

To provide Peak Oil & Gas Limited (*ASX code: PKO*) with working capital, Octanex underwrote the recent Rights Issue (**Issue**) made by PKO on agreed commercial terms and conditions. The Issue closed subsequent to the end of the quarter and, pursuant to the Underwriting Agreement, Octanex will contribute approximately \$1.326 million to the Issue, net of underwriting fees of \$97,179.

### Proposed Merger with Peak Oil & Gas Limited

On 15 November 2013, the Company announced a proposal to merge with PKO. The merger is proposed to be implemented by a Scheme of Arrangement (**Scheme**), the terms of which are yet to be agreed between the Octanex and PKO Boards. Once agreed, the terms of the proposed merger will then be subject to the requisite approvals, including by the members of PKO and the Supreme Court.

### By Order of the Board



**J G Tuohy**  
Company Secretary

31 January 2014

#### **Risk Factors**

*Various statements in this release constitute statements relating to intentions, future acts and events. Such statements are generally classified as forward looking statements and involve known and 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 in this report.*

*Furthermore, exploration for oil and gas is speculative, expensive and subject to a wide range of risks. Summaries of some of the risks inherent in an investment in Octanex N.L. are set out in the Company's latest disclosure document (being the prospectus dated 24 September 2010 in support of the Company's one for four rights issue as lodged with the Australian Securities and Investments Commission). Individual investors should consider these matters in light of their personal circumstances (including financial and taxation affairs) and seek professional advice from their accountant, lawyer or other professional adviser as to the suitability for them of an investment in the Company.*



## Appendix 5B

### Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001, 01/06/10, 17/12/10, 01/05/2013

Name of entity

**OCTANEX N.L.**

ABN

61 005 632 315

Quarter ended ("current quarter")

31 December 2013

#### Consolidated statement of cash flows

Cash flows related to operating activities	Current quarter \$A'000	Year to date (6 months) \$A'000
1.1 Receipts from product sale and related debtors		
1.2 Payments for (a) exploration and evaluation (b) development (c) production (d) administration	(690)	(969)
1.3 Dividends received		
1.4 Interest and other items of a similar nature received	121	235
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Other including permit sale proceeds	7,996	11,333
<b>Net Operating Cash Flows</b>	<b>6,556</b>	<b>9,308</b>
<b>Cash flows related to investing activities</b>		
1.8 Payment for purchases of: (a)prospects (b)equity investments (c) other fixed assets		
1.9 Proceeds from sale of: (a)prospects (b)equity investments (c)other fixed assets		
1.10 Loans to other entities		
1.11 Loans repaid by other entities		
1.12 Other		
<b>Net investing cash flows</b>		
1.13 Total operating and investing cash flows (carried forward)	6,556	9,308

+ See chapter 19 for defined terms.

**Appendix 5B**  
**Mining exploration entity and oil and gas exploration entity quarterly report**

1.13	Total operating and investing cash flows (brought forward)	6,556	9,308
<b>Cash flows related to financing activities</b>			
1.14	Proceeds from issues of shares, options, etc.		
1.15	Proceeds from sale of forfeited shares		
1.16	Proceeds from borrowings		
1.17	Repayment of borrowings		
1.18	Dividends paid		
1.19	Share issue costs		
<b>Net financing cash flows</b>			
<b>Net increase in cash held</b>		6,556	9,308
1.20	Cash at beginning of quarter/year to date	14,466	11,696
1.21	Exchange rate adjustments to item 1.20	12	30
1.22	<b>Cash at end of quarter</b>	21,034	21,034

**Payments to directors of the entity, associates of the directors, related entities of the entity and associates of the related entities**

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	474
1.24	Aggregate amount of loans to the parties included in item 1.10	

1.25 Explanation necessary for an understanding of the transactions

**Non-cash financing and investing activities**

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

+ See chapter 19 for defined terms.

### Financing facilities available

Add notes as necessary for an understanding of the position.

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities		
3.2 Credit standby arrangements		

### Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	6,400
4.2 Development	
4.3 Production	
4.4 Administration	500
<b>Total</b>	<b>6,900</b>

### Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	12,071	4,354
5.2 Deposits at call	8,963	10,112
5.3 Bank overdraft	-	-
5.4 Other (provide details)		-
<b>Total: cash at end of quarter</b> (item 1.22)	<b>21,034</b>	<b>14,466</b>

### Changes in interests in mining tenements and petroleum tenements

	Tenement reference and location	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1	Interests in mining tenements and petroleum tenements relinquished, reduced or lapsed	See Activity Report Section		
6.2	Interests in mining tenements and petroleum tenements acquired or increased	See Activity Report Section		

+ See chapter 19 for defined terms.

**Appendix 5B**  
**Mining exploration entity and oil and gas exploration entity quarterly report**

**Issued and quoted securities at end of current quarter**

*Description includes rate of interest and any redemption or conversion rights together with prices and dates.*

	Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1 <b>Preference + securities</b> <i>(description)</i>				
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 <b>+Ordinary securities</b>	152,127,398 74,278,910 33,000,000	152,127,398 74,278,910 -	- 25 cents -	- 15 cents -
7.4 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs				
7.5 <b>+Convertible debt securities</b> <i>(description)</i>				
7.6 Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7 <b>Options</b> <i>(description and conversion factor)</i>	500,000 3,850,000	- -	<i>Exercise price</i> 45 cents 32 cents	<i>Expiry date</i> 31/03/2014 30/06/2015
7.8 Issued during quarter	500,000	-	45 cents	31/03/2014
7.9 Exercised during quarter				
7.10 Expired during quarter	500,000	-	45 cents	30/09/2013
7.11 <b>Debentures</b> <i>(totals only)</i>				
7.12 <b>Unsecured notes</b> <i>(totals only)</i>				

+ See chapter 19 for defined terms.

## Compliance statement

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 5).
- 2 This statement does give a true and fair view of the matters disclosed.



Sign here: ..... Date: 31/01/14  
(Company Secretary)

Print name: J.G. TUOHY

## Notes

- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- 2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements and petroleum tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement or petroleum tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities.** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4 The definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Financial Reporting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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+ See chapter 19 for defined terms.