

**Qualified Person's Report  
on the Oil and Gas interests of  
Loyz Energy Limited**



For the financial year  
from 1 July 2015 to 30 June 2016

By

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**30 September 2016**

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## **1. Executive Summary**

This qualified person's report ("QPR") provides an update on the oil and gas interests of Loyz Energy Limited ("Loyz" or the "Company") for the purposes of the Company's annual report for the financial year ended 30 June 2016 ("FY 2016").

Because of the multi-asset nature of the Company's portfolio and the varying interests (often minority, namely, for the assets in the Thailand and the USA) and the roles Loyz has in each of these assets (for example, not being an operator), it is not possible to prepare or refresh or obtain the independent qualified person's reports ("IQPRs") for each asset periodically. Furthermore, there were no major or material development in respect of our assets in Australia and New Zealand since the publish of the RoW IQPR dated 30 September 2013 (as defined in section 1(d) of this QPR), other than the relinquishing of the western and southern portions of the permit in New Zealand, and an increase in the Company's working interest in the Australia assets, from 70% to 100%. Therefore, for this annual reporting purpose, a QPR has been prepared by the Company's in-house qualified person.

For the avoidance of doubt, this QPR is not an independent qualified person's report, but it relies on the latest available IQPRs on the respective assets, which were commissioned by the Company or its partner firms, who are operators of the relevant assets.

This QPR provides an update on the progress of the Company's assets during FY 2016, and, where relevant, material events subsequent to this. This QPR makes reference to the Company's QPR that was produced last year (FY 2015), and the latter is referred to as "Loyz FY2015 QPR" and can be found as Appendix V to this QPR.

The IQPRs which have previously been published in respect of the Company's assets are referred to throughout this report and are either reproduced in their entirety as Appendices I, II and III to this QPR. Or, for the USA assets, an IQPR that is publicly available on the SGX website is referenced.

For each country in which Loyz operates, the following updates are provided:

### **Australia**

The JV has completed a work programme that was set out at the beginning of FY 2016, involving technical studies aimed at de-risking prospects within the Vic/P62 exploration permit. This work built on an earlier study that had yielded positive results with regard to the potential for hydrocarbon maturity in the Torquay Basin.

### **India**

Over the course of FY 2016, all direct interests in the Indian assets have been sold and will not be covered in this QPR.

### **New Zealand**

During FY 2016, work has focussed on the conceptual development/appraisal options for the 2008 Awakino-South discovery. In light of these studies, the Company has decided against near-field appraisal in favour of developing the existing discovery. This was conveyed to the New Zealand authorities and as a result, a four-year extension to the permit has been granted. Work will now begin focussing on the development of the Awakino-South discovery.

## **USA**

As a minority partner, the Company is reliant upon the operator for technical reporting. At this time, work continues to assess how oil recovery can be optimised and no significant events have occurred during FY 2016 regarding exploration or production. Loyz FY2015 QPR thus stands as written, with respect to the USA assets.

## **Thailand**

The Joint Venture, in which Loyz holds a 20% working interest, has completed one drilling campaign, which comprised the drilling of eight new wells within permit boundaries. Two new IQPRs were published on 1 January 2016 (the “Thailand IQPRs”), roughly maintaining gross 2P reserves at 34 MMbbl. One IQPR covers SW1 production area and a second IQPR covers L33/43 and L44/43 production areas, both are by the same authors. As a minority stakeholder, the Company is reliant upon the operator for all technical reporting. The operator intends to continue to explore for, develop and produce hydrocarbons from all three concessions held by the Joint Venture.

### **Summary of Loyz Reserves and Resources as at 30 June 2016**

Updated Reserves and Resources estimates are not within the control of Loyz. Whilst the following summary table is accurate as at 30 June 2016, the effective dates of the Reserves and Resources estimates remain as per their original effective dates which are disclosed in the relevant sections below.

Category	Gross Attributable to licence	Net Attributable to the Company		Remarks	
	(MMbbl / Bcf)	(MMbbl / Bcf)	Change from previous update (%)		
<b>Reserves</b>					
<i>Oil Reserves</i>					
1P	28.7	4.4	10	Thailand and USA*	
2P	54.4	9.1	0		
3P	81.2	13.9	-26		
<i>Natural Gas Reserves</i>					
1P	-	-	-	-	
2P	-	-	-	-	
3P	-	-	-	-	
<i>Natural Gas Liquids Reserves</i>					
1P	-	-	-	-	
2P	-	-	-	-	
3P	-	-	-	-	
<b>Contingent Resources</b>					
Oil					
1C	0.74	0.12	0	USA* and New Zealand	
2C	2.39	0.37	0		
3C	5.34	0.75	0		
<i>Natural Gas</i>					
1C	9.00	0.90	0	New Zealand	
2C	26.00	2.60	0		
3C	57.00	5.70	0		

<b>Natural Gas Liquids</b>				
1C	-	-	-	-
2C	-	-	-	-
3C	-	-	-	-
<b>Prospective Resources</b>				
<i>Oil / Condensate</i>				
Low Estimate	1.4	1.4	-78	New Zealand
Best Estimate	8	8	-78	
High Estimate	17	17	-78	
<i>Natural Gas</i>				
Low Estimate	56	56	-48	Australia and New Zealand
Best Estimate	545	545	-36	
High Estimate	1,227	1,227	-35	

\*Interests in the USA are on a non-participating basis, as detailed below in section 3, c (p12).

## Introduction

### Qualified Person statement

I, Bruce Douglas Morris, confirm that I am Vice President, Sub-surface of Loyz and that I am responsible for this QPR and the information therein.

I hold a Doctor of Philosophy in geology and geochemistry from Victoria University of Wellington, New Zealand (1995).

I have over 25 years of experience in oil and gas exploration and production and have been a member of the American Association of Petroleum Geologists for more than 30 years (AAPG#10075203).

I am a qualified person pursuant to the Listing Manual Rules of Catalyst ("Catalyst Rules") of the Singapore Exchange Securities Trading Limited as a person of appropriate experience in the types of activities undertaken by Loyz, meeting the following requirements:

- 1) I am professionally qualified and a good standing member of a relevant Recognised Professional Association;
  - 2) I have at least five years of professional experience in the estimation, assessment and evaluation of oil and gas exploration and production assets;
  - 3) I have not been found in breach of any relevant rule or law and am not;
    - a) denied or disqualified from membership of;
    - b) subject to any sanction imposed;
    - c) the subject of any disciplinary proceedings; or
    - d) the subject of any investigation which might lead to disciplinary action,
- by any relevant regulatory authority or professional association.

I have read and understood the requirements of the November 2011 Petroleum Resource Management System ("PRMS"). These are to be found in Appendix IV.

I verify that this QPR is based on and fairly and accurately reflects, in the form and context in which it appears, the information in my supporting documentation relating to exploration results and oil resources and reserves. I have reviewed this QPR, to which this consent statement applies, and I consent to the release of this QPR.

a. Aim of this QPR

The aim of this QPR is to satisfy the requirements of Catalyst Rule 1204(23)(a) in connection with the issue of this annual report. This QPR serves no other purpose.

b. Scope of this QPR

Since the Loyz FY2015 QPR, certain changes or developments have occurred regarding the Thailand and New Zealand assets, whilst the Indian assets have been divested. Otherwise, the contents in Loyz FY2015 QPR remain materially accurate. This QPR re-affirms the reserves and resources documented in previously-prepared IQPRs and provides an update for other activities undertaken on the Company's properties in the past year. Because this QPR is being completed 3 months after end FY 2016, and for completeness, significant events that have occurred since the end of FY 2016 are also included. This QPR provides information on each of the Company's interests as follows:

<b>Asset Name/Country</b>	<b>Company's interest</b>	<b>Development status</b>	<b>Most recently published IQPR</b>
Australia	100%	Exploration	- <i>"Loyz Energy Limited qualified person report India, New Zealand, Australia and the Philippines"</i> , dated 30 September 2013, prepared by Rogers Adams Petroleum Consultants (see Appendix I). - Loyz FY2015 QPR.
New Zealand	10% inside Awakino box, 90% outside.	Appraisal	- <i>"Qualified person report on the oil and gas property interests of REX International Holding Pte. Ltd"</i> , dated 31 August 2013, prepared by OPK Resources GmbH (see SGX website). - Loyz FY2015 QPR.
USA	13.75% in both Whitewater and Williston Basin, held through shares in Fram Exploration ASA.	Whitewater: Production Williston Basin: Development	- <i>"Reserve and economic evaluation oil properties Phetchabun Basin Thailand independent qualified person's report"</i> , dated 1 January 2016, prepared by Chapman Petroleum Engineering Ltd. Note that there are two separate IQPRs covering different concessions of the Thailand assets (see Appendices II and III). - Loyz FY2015 QPR.
Thailand	20%	Production	

c. Statement on the use of this QPR

This QPR is intended to be used to meet the Company's disclosure requirements pursuant to the Catalyst Rules on the requirements for annual reports for mineral, oil and gas companies.

d. Basis of this QPR

This QPR is based on updates to the Company's assets during FY 2016. These updates have been announced by Loyz through regulatory news releases and quarterly reporting throughout FY 2016. However, this QPR is also based on and makes reference to the IQPRs that have already been published in respect of the Company's assets.

For the Company's assets in Australia and New Zealand, the latest available IQPR was dated 30 September 2013 and was prepared by Rogers Adams Petroleum Consultants, authored by Brett Rogers (the Rest of World; "RoW IQPR"). The RoW IQPR is reproduced in its entirety in Appendix I.

For the Company's assets in the USA, the latest available IQPR was dated 31 August 2013 and was prepared by OPK Resources GmbH, principally authored by Prof. Dr. Reinhard Gast (the "USA IQPR"). The USA IQPR, which was commissioned by Rex International Holding Ltd, is available in its entirety on the SGX website. The report was issued as part of the offer document for Rex International Holding Ltd dated 22 July 2013 ("Rex Offer Document"), pursuant to its initial public offering of shares. The IQPR begins on page 499 of the Rex Offer Document. The web address is quoted in the references section at the end of this document. The Loyz FY2015 QPR also details changes to our USA assets.

For the Company's assets in Thailand, the most recent two IQPRs are dated 1 January 2016 and were both prepared by Chapman Petroleum Engineering Ltd, authored by Charles Chapman (the "Thailand IQPRs"). The Thailand IQPRs are reproduced in their entirety in Appendices II and III.

Because there have not been subsequent IQPRs published, most of the data in the abovementioned IQPRs are deemed current. Where changes have occurred they are detailed either in Loyz FY2015 QPR, where they occurred during FY2015, or in this QPR should they have occurred during the last reporting period. The Company is a minority partner in the Thailand and USA assets and it is therefore dependent on the relevant operators for updated technical reporting as well as resource and reserve estimates.

e. Standard used

This QPR uses the November 2011 Petroleum Resource Management System ("PRMS") as the Standard. This document is reproduced in its entirety in Appendix IV. PRMS is sponsored by the Society of Petroleum Engineers ("SPE"), American Association of Petroleum Geologists ("AAPG"), World Petroleum Council ("WPC"), Society of Petroleum Evaluation Engineers ("SPEE") and Society of Exploration Geophysicists ("SEG") and represents the most widely used Petroleum Reserve and Resource classification system.

f. Site visits

The Company's Australia asset is offshore and no site visit has been deemed necessary for the purpose of this QPR. Loyz personnel, including the author of this QPR, visit the Company's New Zealand office in New Plymouth on a regular basis, however the permit is offshore and so a physical site visit has not been appropriate. The author most recently visited the New Plymouth office in May 2016. The Company's Thailand asset has also been visited on several occasions in FY 2016. The author attends technical committee meetings at the offices of the Company's Thailand JV partner in Bangkok, and several trips into the field were conducted to observe ongoing operations, most recently in February 2016.

## **2. The Company's Assets**

### **3.1 Australia**

The following discussion on the Company's Australia asset should be read in conjunction with the RoW IQPR contained in Appendix I.

#### **I. Property description**

During FY 2016, the only material change that has occurred to the property description contained in the RoW IQPR or the Loyz FY2015 QPR, is the acquisition by the Company of an extra 30% interest. This means that the Company went from having a 70% working interest to now having a 100% interest in the permit.

The Company has conducted economic analysis of various development scenarios and sub-surface studies focussing on modelling seismic data that was acquired in 2013.

<b>Asset name/ country</b>	<b>Loyz interest</b>	<b>Development status</b>	<b>Licence expiry date</b>	<b>Licence area</b>	<b>Type of deposit</b>	<b>Remarks</b>
Vic/P62, Australia	100%	Exploration	10/07/2019	2,480km <sup>2</sup>	Suspected Gas & Condensate	None

**Table 1:** Summary of the Company's Australian assets.

#### **II. History of the property**

The history of the property is summarised in the section 7.2, page 79 of the RoW IQPR and on page 8 of the Loyz FY2015 QPR. In FY 2016, the only work conducted regarding the permit have been desktop studies analysing development scenarios and economic screening exercises.

#### **III. Geological and geophysical setting**

Please refer to section 7.1.2, page 76 of the RoW IQPR.

#### **IV. Exploration data**

A listing of the data available and used for evaluation for each of the properties is contained in section 7.2.1.1, page 79 of the RoW IQPR. 3D seismic data acquired in 2013 indicates several complex structures with moderate hydrocarbon response using analysis of Extended Elastic Impedance ("EEI"). Because it was anticipated that the seismic would highlight large simple structures, a higher level of interpretation than was previously envisaged is therefore required. Further work is still required analysing EEI, since this impacts directly on the size of the closures.

## V. Resources estimate

Since the date of the RoW IQPR, there have been no changes in the resource estimate as shown in the following table:-

Category	Gross attributable to licence	Nett attributable to Loyz			Remarks	
	MMbbl/Bcf	MMbbl/Bcf	Change from previous update (%)			
<b>Natural Gas Liquids</b>						
<b>Prospective Resources</b>						
Low estimate	34.0	34.0	43		None	
Best estimate	416.0	416.0	43		None	
High estimate	945.0	945.0	43		None	

**Table 2:** Summary of Oil and Gas Prospective Resources for Vic/P62, Australia, as at 30<sup>th</sup> September 2013 for gross. As extracted from section 7.2.3.2, page 85 of the RoW IQPR, however nett values reflect the recent change to Loyz having a 100% interest, as described above.

## 3.2 New Zealand

The following discussion on the Company's New Zealand asset should be read in conjunction with the RoW IQPR contained in Appendix I.

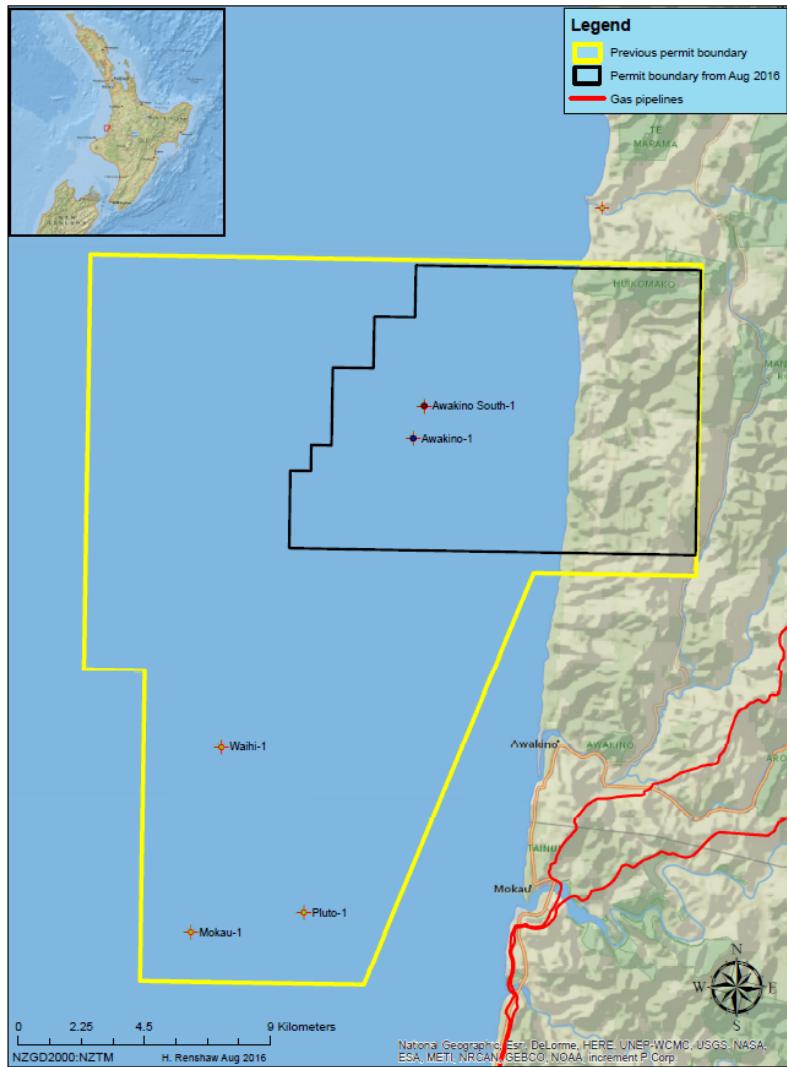
### a. Property description

The property is described in section 6.2, page 54 of the RoW IQPR. The permit was recently extended and part of this involved the relinquishment of approximately 68% of the area. The new permit boundary covers an area of 130 sq km, as outlined in Figure 2 below.

Asset name/ country	Loyz interest (%)	Development status	Licence expiry date	Licence area	Type of deposit	Remarks
PEP38479, New Zealand	10% & 90%*	Appraisal	23/09/2019	130 km <sup>2</sup>	Gas & Condensate	None

**Table 6:** Summary of the Company's New Zealand asset

\* A defined area of approximately 13.5 sq km surrounding Awakino South has a nett 10% attributable interest to Loyz. The remainder of the permit is attributed to Loyz at 90%. See RoW IQPR section 6.2.2.1, page 57, Figure 6-5 for further details.



**Figure 1:** Map showing old and new PEP38479 permit boundaries.

b. History of the property

Please refer to section 6.2.1, page 54 of the RoW IQPR. In July 2016, the New Zealand government agreed that rather than conducting nearfield exploration, the Company should instead focus on developing the 2008 Awakino discovery. In light of this, an extension to the permit was granted until 23 September 2019. This also involved the relinquishment of the western and southern portions of the old permit, which is what accounts for the changes in Prospective Resources indicated below in Table 7.

c. Geological and geophysical setting

Please refer to section 6.1.1, page 50 of the RoW IQPR.

d. Exploration data

Please refer to section 6.2.1.1, page 54 of the RoW IQPR. Over the course of FY2016, further modelling work has been conducted by a local New Zealand based consultancy.

e. Resource and reserve estimates

The following tables summarises the oil and gas resources for the asset:

Category	<b>Gross attributable to licence MMbbl/Bcf</b>	<b>Nett attributable to Loyz</b>		<b>Remarks</b>
		MMbbl/Bcf	Change from previous update (%)	
<b>Natural Gas Contingent Resources</b>				
1C	9	0.9	0	None
2C	26	2.6	0	None
3C	57	5.7	0	None
<b>Natural Gas Liquids Contingent Resources</b>				
1C	0.4	0.04	0	None
2C	1.7	0.17	0	None
3C	4.2	0.42	0	None
<b>Natural Gas Prospective Resources</b>				
Low estimate	22	22	-78	None
Best estimate	129	129	-78	None
High estimate	282	282	-78	None
<b>Natural Gas Liquids Prospective Resources</b>				
Low estimate	1.4	1.4	-78	None
Best estimate	8	8	-78	None
High estimate	17	17	-78	None

**Table 7:** Summary of Oil and Gas Contingent and Prospective Resources for the Company's New Zealand asset, as at 30<sup>th</sup> September 2016. This table differs from section 6.2.2.4, page 60 (Contingent Resources) and section 6.2.3.5, pages 69-73 (Prospective Resources) of the RoW IQPR. The reason for this difference is the recent change in permit boundary, as described above. Refer to Loyz FY2015 QPR page 13 for last year's figures prior to the boundary change.

### 3.3 USA

The following discussion on the Company's USA assets should be read in conjunction with the USA IQPR, available on the SGX website and referenced on page 20 of this report.

#### a. Property description

Please refer to section E, page 17 of the USA IQPR. The properties are listed in the following summary table:

Asset name/ country	Loyz interest (%)	Development status	Licence expiry date	Licence area	Type of deposit	Remarks
Whitewater, USA	13.75	Production	Held by production*	204 km <sup>2</sup>	Oil and gas	None
Williston Basin, USA	13.75	Development	Various*	40 km <sup>2</sup>	Oil	None

\*See USA IQPR for further details on expiry conditions for individual permits (Table 1, p7).

**Table 8:** Summary of the company's USA assets.

#### b. History of the properties

Please refer to section E1, page 19 for Colorado and section E2, page 23 for North Dakota, of the USA IQPR. Also please refer to the Loyz FY2015 QPR detailing changes to Loyz interest regarding the USA assets. To clarify, Loyz holds an interest in Fram Exploration ASA ("Fram") via ownership of shares. To that end, Loyz has listed nett reserves and resources in this document on a non-participating (i.e. a non-working interest) basis.

No IQPR has been commissioned due to the fact that Loyz is a minority stakeholder in the operator, Fram, and reliant upon Fram for technical reporting. Fram deems that no events or changes warrant commissioning of a new IQPR.

#### c. Geological and geophysical setting

Please refer to section E1, pages 20-21 for Colorado and section E2, pages 23-24 for North Dakota, of the USA IQPR.

#### d. Exploration data

Please refer to section E1, page 19 for Colorado and section E2 page 23 for North Dakota, of the USA IQPR.

e. Resources and Reserves estimates

The following tables summarise the oil resources for each of the assets:

Category	Gross attributable to licence	Nett attributable to Loyz (non-participatory)		Remarks
	MMbbl/Bcf	MMbbl/Bcf	Change from previous update (%)	
Oil Reserves				
1P	14.9	1.7	0	See below
2P	20.4	2.3	0	See below
3P	26.5	3.0	0	See below

**Table 9:** Summary of Oil and Gas Reserves for Whitewater, CO. Gross figures are as at 31<sup>st</sup> May 2013. As extracted from the section 'resource and reserve estimates', page E36 of the USA IQPR. The nett attributable to Loyz has changed as a result of Loyz interest in Fram reducing from 20% to 13.75%. Details of how the nett is calculated can be found on page 12 of Loyz FY2015 QPR.

Category	Gross attributable to licence	Nett attributable to Loyz (non-participatory)		Remarks
	MMbbl/Bcf	MMbbl/Bcf	Change from previous update (%)	
Oil Contingent Resources				
1C	0.16	0.02	0	See below
2C	0.27	0.03	0	See below
3C	0.38	0.04	0	See below

**Table 10:** Summary of Oil and Gas Contingent Resources for Williston Basin, ND. Refer to Loyz FY2015 QPR for an explanation of figures.

### **3.4 Thailand**

The following discussion on the Company's Thailand assets should be read in conjunction with the Thailand IQPRs dated 1 January 2016 contained in Appendices II and III.

#### **a. Property description**

Please refer to section titled 'Discussion', page 21 (SW1), 23 (L33) and 59 (L44) of the Thailand IQPRs. The properties are listed in the following summary table:

<b>Asset name/ country</b>	<b>Loyz interest (%)</b>	<b>Development status</b>	<b>Licence expiry date</b>	<b>Licence area</b>	<b>Type of deposit</b>	<b>Remarks</b>
SW1, Thailand	20	Producing	July 2026	14.5 km <sup>2</sup>	Oil	None
L33/43, Thailand	20	Producing	July 2032	12.0 km <sup>2</sup>	Oil	None
L44/43, Thailand	20	Producing	July 2032	79.5 km <sup>2</sup>	Oil	None

**Table 11:** Summary of the Company's Thailand assets.

#### **b. History of the properties**

Please refer to section titled 'Discussion', pages 21 (SW1), 23 (L33) and 59 (L44) respectively of the Thailand IQPRs for full details.

On 1 April 2014, the Company acquired a 20% participating interest in concessions SW1, L33/43 and L44/43 in Thailand.

During FY 2016 including since the date of the latest Thailand IQPRs (dated 1 January 2016), several wells have been drilled and are now producing, as summarised in Table 12 below. Reserves estimates are currently being revised by the operator, Eco Orient Resources (Thailand) Ltd. However, no independent verification has yet taken place. As a minority stakeholder, Loyz relies on updates and technical reporting from the asset's operator.

During the reporting period, i.e. between 1<sup>st</sup> July 2015 and 30<sup>th</sup> June 2016, 1.57 MMbbl of oil were produced from the three concessions. This includes 0.74 MMbbl that has been produced between the publishing of the most recent Thailand IQPRs on 31<sup>st</sup> December 2015, and the end of FY 2016 on the 30<sup>th</sup> June 2016.

<b>Well name</b>	<b>Situation</b>
WBEXT-14A	November 2015, igneous section, producing well on ~500 bopd.
L33-7C	December 2015, exploration – oil shows, not commercial.
WBNE-E2	December 2015, exploration – oil shows, not commercial.
WBNE-B1	January 2016, exploration – dry well.
WBEXT-10AST1	January 2016, exploration – dry well.
BRN-5B	February 2016, igneous section in Bo Rang, producing 300 bopd.

**Table 12:** Wells drilled in the Company's Thailand assets since the date of the Thailand IQPR.

Further drilling and also a workover campaign are planned to be completed before the end of FY 2017, the full details of which are yet to be confirmed by the JV.

c. Geological and geophysical setting

Please refer to section 'discussion' on pages 21 (SW1), 23 (L33) and 59 (L44) of the Thailand IQPRs.

d. Exploration data

Please refer to the section titled 'Discussion', page 32 (SW1), 24 (L33) and 60 (L44) of the Thailand IQPRs. Table 12, above, provides details of some wells drilled subsequent to publication of the Thailand IQPRs. The Company has received various amounts of data pertaining to each well, typically including log data, well schematics and well testing/production data.

e. Reserves estimates

The following tables summarise the oil and gas reserves for each concession area of the Company's Thailand assets. Between 1 January 2016 and 30 June 2016 (181 days inclusive), 0.74 MM bbl oil have been produced from the Company's three Thailand concessions.

<b>Category</b>	<b>Gross attributable to licence</b>	<b>Nett attributable to Loyz</b>		<b>Remarks</b>
	MMbbl/Bcf	MMbbl/Bcf	Change from previous update (%)	
Oil Reserves				
1P	0.91	0.18	+12	None
2P	2.30	0.46	- 20	None
3P	3.32	0.66	- 42	None

**Table 13:** Summary of Oil and Gas Reserves for SW1, as at 31 December 2015. As extracted from Table 2, page 39 of the SW1 Thailand IQPR.

Category	Gross attributable to licence	Nett attributable to Loyz		Remarks
		MMbbl/Bcf	MMbbl/Bcf	
Oil Reserves			Change from previous update (%)	
1P	0.36	0.07	- 5	None
2P	1.03	0.21	+ 5	None
3P	1.80	0.36	+ 100	None

**Table 14:** Summary of Oil and Gas Reserves for L33/43, as at 31 December 2015. As extracted from Table 2, page 34 of the L33 & L44 Thailand IQPR.

Category	Gross attributable to licence	Net attributable to Loyz		Remarks
		MMbbl/Bcf	MMbbl/Bcf	
Oil Reserves			Change from previous update (%)	
1P	12.55	2.51	+ 20	None
2P	30.65	6.13	+ 2	None
3P	49.62	9.92	- 33	None

**Table 15:** Summary of Oil and Gas Reserves for L44/43, as at 31 December 2015. As extracted from Table 2, page 84 of the L33 & L44 Thailand IQPR.

Reserves estimates for concessions SW1 and L33/43 have decreased as a result of production over the course of the reporting period and updated decline curve analysis. Reserves estimates for L44/43 have increased as a result of an improved level of understanding with regards to reservoir properties, specifically, regarding a fractured igneous reservoir unit within the Wichian Buri Extension area.

### **3. Summary**

#### Interpretations and conclusions

##### **Australia**

No significant changes have occurred during FY 2016. Work has focused on in-house studies regarding development concepts and economic screening. A consultant did some further modelling work on 3D seismic acquired by the Company in 2013. Otherwise, please refer to Loyz FY2015 QPR.

##### **New Zealand**

RoW IQPR section 6.2.3 page 61 gave its conclusions as follows:

*"The coastal facies of the Mangahewa Sequence forms the reservoir for almost all the major commercial accumulations. It is a sand-rich transgressive system punctuated by a number of transgressive shales, and thus provides for multiple reservoir/seal pairs and stacked pay. The key issue for the more landward of the depositional system, typically heavily channelised lower coastal plain, is likely to have permeability degradation from lithic alteration."*

*The structural styles of the leads and prospects are: thrust belt anticlinal closure (Awakino Deep); inversion anticlinal closure (Kahu, Mokau Updip); and stratigraphic (Kahu Stratigraphic lead, and the stratigraphic component of Awakino Deep)."*

The Company continues to assess leads and prospects in accordance with the work programme set out in section 6.2.5, page 74 of the RoW IQPR.

##### **USA**

The following is the conclusion from the USA IQPR (being the IQPR prepared by OPK Resources GmbH (principally authored by Prof. Dr. Reinhard Gast) which was commissioned by Rex International Holding Ltd in respect of its initial public offering in 2013), to which there is no significant change at this time. The term 'US Program' is used simply to differentiate these fields from others of the Group's assets:

*"The geology of the Whitewater and Williston areas represents development opportunities in mature areas with exploration and production activities dating back many decades. In particular the Williston is one of the most prolific basins of the US."*

*Exploration activities focus on prospective units, often stretching over large areas with no obvious oil water contact. The challenge is to drill into prospective strata with adequate pore space and oil fill. This is the concept for the Whitewater leases held by Fram where oil production already has commenced from recent drilling.*

*The work program envisaged for Whitewater aims at improving well results and to establish sustainable oil production. This will be achieved by drilling high-angle or horizontal wells into the observed fluvial reservoir sequence, aiming to penetrate multiple channel sands. This will be a major improvement over vertical wells, which seldom encounter more than one or two channels. Extensive field work confirms that this assumption has a high chance of success, i.e. it is expected that in the oil filled Dakota Formation, a horizontal well can penetrate 6-7 times the number of reservoirs encountered in a vertical well. Accordingly, the average initial production per well is estimated by Fram to be in the order of 80 bopd.*

*In a number of previous cases, OPK has experienced production increases from horizontal wells in the order of 3-5 times (confirmed by studies published by BP and Shell respectively). Accordingly, OPK considers the Fram assumptions for Whitewater to be reasonable.*

*The concept of directional drilling is considered a sound approach to the specific geology of the Whitewater, however, further advances could be achieved by acquiring limited 3D-seismic to further pinpoint the productive channels and increase drilling success. It is assumed that the surface conditions in the Rocky Mountains foothills using single geophones should allow for such acquisition.*

*In the Williston leases, the South Greene field will be the starting point for an active development campaign and exploration drilling. In contrast to Whitewater, good seismic data exists and should allow for better definition of the anticipated limestone reservoirs with vuggy and possibly fracture porosity. Facies modelling will benefit from such seismic support and this in turn should increase drilling success. It can be expected that potential resources in the area will increase accordingly.*

*In summary, the Fram leases in the US constitute attractive reserves or contingent resources with good upside potential. The US Program should be based on a continuation of logical sequences already started with detailed subsurface studies, to be followed by seismic work (where feasible) and a flexible drilling campaign which incorporates and learns from the first set of wells to be drilled in 2013.”*

## **Thailand**

There is currently ongoing exploration and development work across all three Thailand concessions. As a minority partner, Loyz is reliant upon the operator for updates and technical assessments. In light of this, no more information can be provided at this time.

## Recommendations

### **Australia**

Following positive results from a basin modelling study, a second phase is planned. This will incorporate 3D seismic that Loyz acquired in 2013 and help evaluate a number leads that have already been identified.

### **New Zealand**

The Company intends to honour work commitments that are currently in the process of being confirmed by the New Zealand department for Petroleum And Minerals (NZPAM).

### **USA**

The Company understands that the Operator, FRAM, intends to divest the assets and is currently marketing them both.

## **Thailand**

The Company is a minority partner and relies upon the operator, Eco Orient Resources (Thailand) Ltd, to provide technical updates. The operator intends to continue to explore for, develop and produce hydrocarbons from all three concessions.

## References

Appendix I: Rogers Adams, September 2013: Qualified Person Report, India, Australia, New Zealand and the Philippines.

Appendix II: Chapman Petroleum Engineering, January 2016: Reserve and Economic Evaluation Oil Properties, SW1 Concession, Petchabun Basin, Thailand.

Appendix III: Chapman Petroleum Engineering, January 2016: Reserve and Economic Evaluation Oil Properties, L33/43 and L44/43 Concessions, Petchabun Basin, Thailand.

Appendix IV: Guidelines for Application of the Petroleum Resources Management System (PRMS). November 2011.

Appendix V: Loyz FY2015 QPR, September 2016.

OPK Resources GmbH August 2013: Qualified Person Report on the oil and gas property interests of Rex International Holdings Ltd. This can be found at:

[http://infopub.sgx.com/FileOpen/\(03\)\\_Rex\\_Offer\\_Document\\_\(Clean\).ashx?App=IPO&FileID=3960](http://infopub.sgx.com/FileOpen/(03)_Rex_Offer_Document_(Clean).ashx?App=IPO&FileID=3960)

This QPR is dated 30 September 2016 and is duly signed by;

A handwritten signature in blue ink, appearing to read "Bruce Morris".

Bruce Douglas Morris  
VP Exploration  
Loyz Energy Limited