## **Range Resources Limited**

('Range' or 'the Company')



27 September 2016

### **Trinidad Waterflood Projects Update**

The Company is pleased to provide an update on its waterflood projects in Trinidad with the following highlights:

- The Company is making significant progress with implementing the full scheme on its waterflood projects;
- Waterflooding is estimated to increase the total recovery factor to over 30% over the next 8 years;
- The majority of the Company's forecast Trinidad production of 2,500 bopd by the end of 2017 is expected to be achieved from the waterflood projects;
- The environmental approvals for use of the additional water and construction of the new water pipeline on the Morne Diablo project have been granted;
- The Company applied for approvals to conduct injectivity testing on the additional waterflood project in the South Quarry block, planned for early next year; and
- A total capex budget US\$17 million for waterflood projects for 2016 is fully funded by purchase order 2 of US\$50 million with LandOcean with credit terms of 720 days.

Following commencement of the initial water injection on two waterflood projects, Beach Marcelle and Morne Diablo, the Company has been making significant progress with implementing the full waterflood schemes.

Approximately 20% of the original oil in place (OIIP) on the two projects has been recovered by primary depletion. Waterflooding is estimated to recover an extra 10% of OIIP, therefore increasing the total recovery factor to over 30% over the next 8 years.

The majority of the Company's Trinidad production forecast of 2,500 bopd by the end of 2017 is expected to be achieved from the waterflood scheme. Range believes that waterflood is a more cost efficient way to grow its production compared to conventional drilling, which is crucial in the current lower oil price environment.

### **Beach Marcelle waterflood - South East block**

The ongoing work programme on the South East block of the Beach Marcelle waterflood over the last few months has included workovers on the selected waterflood wells using two workover rigs; repair work on these selected wells; installation of injection stations; engineering design of the gathering station; and the installation of a pipeline network. This is summarised in the table below.

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Work programme	Completed to date	To be completed	Expected completion date
Injector wells workovers	5	2	Q4 2016
Producer wells workovers	8	4	Q4 2016
Water source wells workovers	1	3 initially (the number of wells will increase as more surface facilities become available)	Q4 2016
Injection stations installation	3	2	Q4 2016
Power network installation	0%	100%	Q4 2016
Transfer station	0	1	Q4 2016
Gathering station installation	0	1	Q3 2017
Pipeline network installation	7,220 m	530 m	Dependent on the approvals from third party operators



Injection station at Beach Marcelle field



Map showing Beach Marcelle waterflood scheme

Initial water injection on the block has continued since May 2016, at an average combined rate of approximately 600 barrels of water per day ("bwpd"). This is the maximum rate that can be currently achieved based on one water source well being used and power and infrastructure in the area. The water source well can produce higher volumes depending on power availability, which is expected to increase once power network installation has been upgraded.

In order to achieve the expected average production of 1,600 bopd from this block, Range estimates that approximately 11,000 bwpd of water injection rate is required. The Company will initially use water from water source wells, which will be supplemented by produced water as the project progresses. The number of water source wells will be adjusted as the availability of surface facilities is increased, and depending on the response from the aquifer. Water injection volumes will increase accordingly as additional wells are commissioned.

The Company has been working on the installation of a high pressure pipeline network, with the majority of work (7,220 m) already completed. Given that Range's Beach Marcelle field is located on the eastern side of Trinidad where numerous major operators have processing facilities and oil and gas pipelines that pass through the field, Range requires permission in areas where it plans to install its water injection pipelines.

The Company has been working with the relevant operators to obtain the necessary approvals and is focused on securing these approvals as soon as possible. The remaining pipeline network (530 m) is expected to be completed once the agreement is reached with these operators.

To increase injection volumes in the short term Range has requested the use of an additional 700 bwpd from Petrotrin's gathering station in the Beach Marcelle field and is currently awaiting their response.

The first production as a result of waterflooding is anticipated during Q1 2017. The average production from the field over the 8-year period is expected to be approximately 1,600 bopd, subject to approvals in



respect of the remaining pipeline installation and access to higher water injection volumes. Beach Marcelle waterflood production is estimated to be the largest contributor towards the 2,500 bopd production target by the end of 2017.

### Morne Diablo waterflood - expansion project

The initial water injection on the project commenced in December 2015 and is continuing at an average rate of 200 bwpd, which is the maximum volume of water available at present from Range's producer wells.

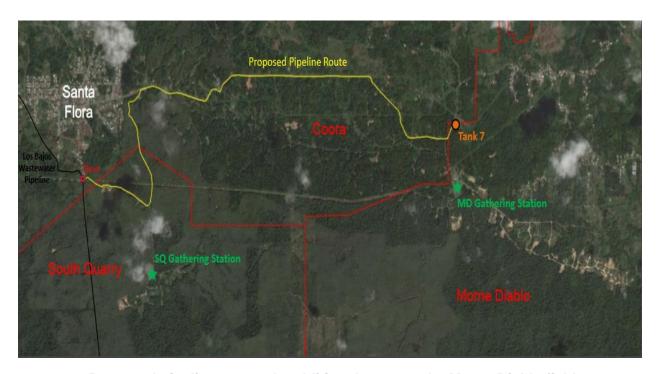
To get access to additional water supply, Range has been negotiating with Petrotrin to use produced water from Petrotrin's existing operations, which will increase water injection by 3,000 bwpd. The agreement with Petrotrin has been reached and Range expects to execute final agreements in the coming months.

The Company will be constructing a new water pipeline to connect the gathering and injection stations at the Morne Diablo field to Petrotrin's water treatment facility. Range is pleased to advise that the environmental approvals for use of the additional water and construction of the new water pipeline have been granted by the regulatory body in Trinidad.

The progress of the work programme to date as well as outstanding work is summarised in the table below.

Work programme	Completed to date	To be completed	Expected completion date
Injector wells workovers	14	0	Completed
Producer wells workovers	14	0	Completed
Injection stations installation	2	0	Completed
Power network installation	100%	100%	Completed
Water source wells workovers	1	3	Under review
Gathering station installation	0	1	Q2 2017

Work programme to increase water injection to 3,000 bwpd (Petrotrin water)	Completed to date	To be completed	Expected completion date
Pipeline network installation	0 m	13,000 m	Dependent on agreement with Petrotrin and materials purchase by LandOcean
Transfer station	0	1	Dependent on agreement with Petrotrin and materials purchase by LandOcean



Proposed pipeline to supply additional water to the Morne Diablo field

The first production from the Morne Diablo field as a result of waterflooding is expected during Q4 2016. The average production from the field over the 8-year period is expected to be approximately 200 bopd and is forecast to be achieved when water injection is increased to approximately 3,000 bwpd, pending access to Petrotrin's produced water and installation of new pipeline network.

### Additional waterflooding areas

The Company has identified additional areas around the previously drilled development wells in the South Quarry and Morne Diablo fields, which could be suitable for waterflooding.

Range has applied for environmental approvals to conduct injectivity testing in the South Quarry block. The Company will be constructing a proposed pipeline of 740 meters as part of the testing programme.

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This will be done at a minimal cost of up to US\$200,000 and will be undertaken to determine waterflooding feasibility in the area and is planned for 2017.



Map showing proposed South Quarry injectivity testing

### **Funding and capex**

Under the Integrated Master Services Agreement entered into in 2014, the waterflood programme (and other oilfield services in Trinidad) are provided by Range's strategic partner and oilfield services provider, LandOcean.

During 2014, Range and LandOcean entered into purchase order 2 for US\$50 million of services from LandOcean, which covers work relating to waterflooding projects. LandOcean provides Range with credit terms of 720 days for all work undertaken as part of this purchase order, subject to interest at 10% per annum.

As announced on 22 February 2016, the Company estimated a total capex budget US\$17 million for waterflood projects for 2016 (calendar year). This capex is covered by LandOcean's credit terms detailed above.



### Competent Person statement

In accordance with AIM Rules, Guidance for Mining and Oil & Gas Companies, the information contained in this announcement has been reviewed and approved by Mr Lijun Xiu. Mr Xiu is a suitably qualified person with over 30 years' experience in assessing hydrocarbon reserves, and holds a Bachelor degree in Geological Prospecting. In addition, he holds a number of professional titles, including Reserves Evaluation Specialist from the Ministry of Land and Resources of the People's Republic of China. Mr Xiu is a member of the SPE (Society of Petroleum Engineers).

The information contained within this announcement is deemed by the Company to constitute inside information as stipulated under the Market Abuse Regulations (EU) No. 596/2014 ("MAR"). Upon the publication of this announcement via Regulatory Information Service ("RIS"), this inside information is now considered to be in the public domain.

### **Contact Details**

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