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## **Rockhopper Exploration plc**

("Rockhopper" or the "Company")

# 14/15-4 Well Update

Rockhopper Exploration plc (AIM: RKH), the North Falkland Basin oil and gas exploration company, is pleased to provide the following update on Exploration well 14/15-4 (the "Well").

The Well penetrated multiple reservoir targets: Beverley, Casper South, Casper and Sea Lion Main Complex and was drilled on Rockhopper operated licence PL004b. The Company earned a 60% interest through the drilling of the Well.

Wireline logging and formation test data indicate the following:

All four targets are hydrocarbon bearing and no water wet sands were observed in the Well.

# **Highlights**

- Total gross reservoir: 89m (292 ft)
- Total net pay: 57m (187 ft)

# **Beverley: Wet Gas Discovery**

- Gross reservoir: 27.5m (90 ft)
- Net gas pay: 25.8m (85 ft)Net to Gross: 94%
- Reservoir quality:
  - -Porosity: Average 22%, Maximum 27%
  - -Permeability: Average 45mD, Maximum 144mD\*
- No gas water or gas oil contact observed

# Casper South: Oil and Wet Gas Discovery

- Gross reservoir: 24.5m (80 ft)
- Net oil pay: 11.6m (38 ft)
- Net gas pay: 8.5m (28 ft)
- Net to Gross: 83%
- Reservoir quality:
- Casper South Gas:
  - -Porosity: Average 25%, Maximum 30%
  - -Permeability: Average 212mD, Maximum 1327mD\*
- Casper South Oil:
  - -Porosity: Average 27%. Maximum 34%
  - -Permeability: Average 1011mD, Maximum 5872mD\*
- Gas oil contact observed at 2429m mdrkb
- No oil water contact observed

\*NOTE: permeability log data is negatively affected by the presence of gas. The Company believes that the effective permeability in the Beverley and Casper South gas legs will be significantly higher than measured on the log. Permeability in Beverley is likely to be in the region of 500mD, while permeability in the Casper South gas leg will be similar to those in the Casper South oil leg.

# Casper: Successful appraisal well

- Gross reservoir: 12m (39 ft)
- Net oil pay: 2.4m (8 ft)
- Net to Gross: 22%
- Reservoir quality:
  - -Porosity: Average 16%, Maximum 24%



-Permeability: Average 33mD, Maximum 71mD

No oil water contact observed

### Sea Lion Main Complex (SLMC): Successful appraisal well

Gross reservoir: 25m (82 ft)Net oil pay: 8m (26 ft)

Net to Gross: 32%

Reservoir quality:
-Porosity: Average 19%, Maximum 24%

-Permeability: Average 80mD, Maximum 195mD

No oil water contact observed

The Well was located approximately 12.1 km to the south west of the 14/10-2 discovery well and 6.3 km to the south of well 14/10-9 and within the area of licence PL004b, in which Rockhopper has earned a 60% interest by drilling 14/15-4.

### **Beverley**

The Beverley sand was encountered at 2359m mdrkb. The Well penetrated the Beverley prospect near the crest of the structure and the gross reservoir package of 27m was approximately 10m thicker than prognosed, net gas pay was 25.8m. Reservoir quality is good with average porosity of 22% and average permeability of 44 mD. Analysis of mud logs indicate the gas is likely to be a wet gas. PVT analysis will be required to confirm the GCR. From the observed formation pressure gradients the Company believes that the gas/oil contact observed in Casper at well 14/10-9 and Casper South at well 14/15-4 is likely to exist in Beverley. As a result the Company believes Beverley may be oil bearing downdip.

### **Casper South**

The Casper South sand was encountered at 2420m mdrkb. Reservoir quality is good with average porosity of 25% in the gas leg and 27% in the oil leg. Average permeability was 212 mD in the gas leg and 1011 mD in the oil leg. Net gas pay was 8.5m and net oil pay was 11.6m. A gas oil contact was observed at 2429m mdrkb, very close to that observed in well 14/10-9 in Casper. Analysis of mud logs indicate the gas is likely to be a wet gas. PVT analysis will be required to confirm the GCR. Casper South is a separate fan lobe, to the south of and apparently in communication with the Casper fan, which the company currently maps to extend over an area of greater than 100km2 with significant down-dip oil potential.

## Casper

The Well additionally penetrated the Casper sand some 6.3km to the south of the 14/10-9 Casper Discovery well in a relatively down-dip position and at the very feather edge of the mapped fan lobe. The Casper reservoir was encountered at 2450m mdrkb and is entirely below the gas oil contact observed at well 14/10-9. The Casper reservoir sands are all oil bearing at 14/15-4. The Company believes well 14/15-4 defines the southernmost limit of Casper with a thin reservoir section of low net to gross sand. The presence of Casper at this location enables us to confirm mapping of this fan lobe to the maximum extent of its seismic expression and increase the volumes currently carried for that prospect. Analysis of mud logs in well 14/10-9 indicates that the gas at Casper is a wet gas. PVT analysis will be required to confirm the GCR.

#### SLMC

The Well penetrated the SLMC in licence PL004b approximately 12.1km from the 14/10-2 discovery well, 6.3km to the south of well 14/10-9 and 13.8km from the northern most successful appraisal well 14/10-7. The SLMC was encountered at 2474m mdrkb. The Company believes the Well is close to the southernmost limit of the Sea Lion field and at the outer edge of its former maximum case area. The Well penetrated a section which established the gross thickness of reservoir as mapped. The quality of the reservoir at this outer edge of the fan system was as prognosed with a lesser net to gross and slightly lower porosities than in the main core area of the field. Formation pressure testing established that the oil lies on the same pressure gradient as observed over the rest of the field, and oil samples have been recovered for subsequent PVT analysis.

The Company will now complete a short offset sidetrack (10m from main well bore) to obtain core in the Beverley, Casper South and SLMC formations. These operations are expected to take 12 days following which the Well will be plugged and abandoned as planned. A further announcement will be issued once coring operations have been completed.

### Seismic data



The Company has received the final processed volume of 3D seismic data over its northern operated acreage (PL032, PL033 and PL004b). Once interpretation of these data is completed the Company will provide updated guidance on the potential volumes within the Sea Lion, Beverley, Casper South and Casper features. The Company anticipates this work will be completed during Q1 2012.

The Company anticipates receiving the final processed volume of 3D seismic data over licences PL023 and PL024 during January 2012.

### Samuel Moody, Chief Executive, commented:

"This fantastic result from our most aggressive well of the campaign will further increase our minimum estimates of oil in place for Sea Lion and Casper, in addition to proving two new discoveries in Beverley and Casper South, which is our third oil discovery in the Basin."

## **Enquiries:**

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### Glossary

DST= drill stem test

mD = millidarcy

mdrkb = measured depth below the rotary kelly bushing on the drilling rig

PVT= Pressure Volume Temperature

GCR = Gas Condensate Ratio

NB: This statement has been approved by the Company's geological staff who include David Bodecott (Exploration Director), who is a Member of Petroleum Exploration Society of Great Britain (PESGB) and the American Association of Petroleum Geologists (AAPG) with over 30 years of experience in petroleum exploration and management, for the purpose of the Guidance Note for Mining, Oil and Gas Companies issued by the London Stock Exchange in respect of AIM companies, which outline standards of disclosure for mineral projects.

### **Notes to Editors**

Rockhopper was established in February 2004 with a strategy to invest in and carry out an offshore oil exploration programme to the north of the Falkland Islands. The Company floated on AIM in August 2005 and holds a 100 per cent. interest in four offshore production licences: PL023, PL024, PL032 and PL033 which cover approximately 3,800 sq. km. Rockhopper has also farmed in (7.5% working interest) to licences PL003 and PL004, which are operated by Desire Petroleum. In addition to the original farm-in, and in consideration for drilling one well on the north-western acreage of licence PL004, known as Area 1, which contains the extension to the Sea Lion field as well as the Beverley, Casper and Casper South features, Rockhopper has farmed-in with operatorship and an aggregate 60% interest in Area 1. Rockhopper has further farmed into the north-eastern part of licence PL004 known as Area 2, which the Company believes contains the "Jayne" prospect and the eastern part of the "Beverley" prospect, with an aggregate 25% interest. Rockhopper has received the necessary regulatory approvals including consent for change of operatorship on licence PL004b (Area 1) which it now operates. These licences have been granted by the Falkland Islands government.



An extensive work programme has been carried out over a number of years on the licences operated by Rockhopper. This has included 2D and 3D Seismic and Controlled Source Electromagnetic Mapping (CSEM). In February 2010, the Ocean Guardian drilling rig arrived in Falkland waters to carry out a multi-well drilling campaign. Rockhopper drilled an exploration well on its Sea Lion prospect during April and May 2010, the result of which was the first oil discovery and Contingent Oil Resource in the North Falkland Basin. The Sea Lion discovery was successfully tested during September 2010 and June 2011 and was the first oil to flow to surface in Falkland Islands waters. Rockhopper contracted seismic vessels MV Polarcus Asima and Nadia to carry out a 3D seismic survey over areas of licences PL024, PL032 and PL033 which were not previously defined by 3D, as well as adjacent areas. Data over the southern portion of licences PL032 and PL033 has been fast track processed and an initial interpretation has now been completed. The balance of the newly acquired 3D seismic data is still being processed and the Company expects it will be available for interpretation during January 2012.

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