

Cluff Natural Resources Plc ('CLNR' or 'the Company')

## **Significant Increase in P50 Prospective Resources of Licence P2252 in Southern North Sea & Update on Option over North Sea Oil Licences**

CLNR, the natural resources investing company, is pleased to announce a significant increase in P50 Prospective Resources on its 100% owned Licence P2252 from 162 BCF to 636 BCF following technical work focussing on the Zechstein prospects located in the Southern North Sea. This increase is primarily due to the newly named Pensacola Prospect, which the Company estimates to have P50 Prospective Resources of 424 BCF, providing significant exploration upside potential on the licence.

### **Key Highlights**

- Significant increase from 162 BCF to 636 BCF in P50 Prospective Resources on Licence P2252 following receipt of recently reprocessed 3-D seismic data
- Acquisition of recently reprocessed 3-D has provided an enhanced level of confidence in the mapping of prospects on this licence
- Revised interpretation of the St. Annes lead now believed to form outer edge of a larger circular patch reef complex, the Pensacola Prospect, providing major upside with P50 Prospective Resources of 424BCF
  - The patch reefs are analogous to producing fields in Poland and the US and have the potential to contain significant gas volumes and high quality reservoirs
- Completion of a seismic inversion process on the 3-D dataset in conjunction with Halliburton has indicated the likely presence of a high density North-South oriented fracture network across the Lytham structure which should enhance reservoir properties and production characteristics of the prospect
- This update increases the Company's combined P50 Prospective Resources to 2.37 TCF contained within a small number of low cost, high impact exploration opportunities located in close proximity to new or proposed infrastructure

**Algy Cluff, Chief Executive & Chairman commented:** “We are delighted that our continued technical focus on these core licences continues to de-risk known gas prospects and enhance the exploration upside contained within the portfolio. The Company has a 100% equity position in its highly prospective licences in the Southern North Sea which deserve to be fully appraised. We are confident that the quality and scale of these assets will continue to attract the interest of existing operators and potential new entrants as we progress through the farm-out process.”

## Further Information on Licence P2252

Technical work focussing on the Zechstein prospects located on Licence P2252 has been completed in conjunction with the Company's retained sub-surface consultants, Lyme Bay Consulting. This work, which was based on reprocessed geophysical datasets not available at the time of the Company's initial Competent Person's Report released in December 2015, has resulted in a significant resource upgrade on the Lytham and Fairhaven prospects and highlighted major exploration upside potential in the form of a Zechstein reef build-up ('the Pensacola Prospect'), similar to those indicated at the nearby Crosgan discovery and the Ossian and Aurora prospects. This work has resulted in the P50 Prospective Resources associated with the prospects on this block being increased from 162 BCF to 636 BCF.

Revised volumetrics and risking for the prospects on P2252 are listed in the table below:

Prospect	Type	PRMS Status	Net Prospective Resources (BCF)				GCoS
			P90	P50	Mean	P10	
Lytham	Fractured Hauptdolomite	Prospect	52	123	137	244	49
	Carboniferous	Prospect	12	44	68	149	30
Fairhaven	Fractured Hauptdolomite	Prospect	18	45	53	98	43
Pensacola	Fringing Reef	Prospect	113	270	338	650	20
	Lagoon Fill	Prospect	67	154	186	347	16
<b>TOTALS</b>			262	636	782	1,488	

The acquisition of recently reprocessed 3-D seismic has provided a greater level of confidence in the mapping of the Lytham and Fairhaven Zechstein (Fractured Hauptdolomite) Prospects where previous exploration wells by third parties indicated significantly elevated levels of gas during drilling operations. This revised mapping and comparison with close analogues within the basin, such as the giant Hewett Field, has allowed a revised assessment of the estimated gas volumes associated with these structures which has increased the combined P50 Prospective Resources on this prospect from 94 BCF to 168 BCF.

Additionally, the new 3-D seismic data set has also allowed for a revised interpretation of the St. Annes lead highlighted previously. It is now believed that these leads form the outer edge of a larger circular patch reef complex, now named the Pensacola Prospect, similar to those

seen on adjacent blocks to the east. These patch reefs are analogous to producing fields in Poland and the US and have the potential to contain significant gas volumes and high quality reservoirs. The Company estimates that the Pensacola Prospect has P50 Prospective Resources of 424 BCF between the reef margin which has the potential to contain high quality reservoir facies and the internal lagoon sediments which are potentially more variable in terms of overall reservoir quality.

Completion of a seismic inversion process on the 3-D dataset for Licence P2252, in conjunction with Halliburton, has indicated the likely presence of a high density North-South oriented fracture network across the Lytham structure, which should enhance the reservoir properties and production characteristics of the prospect. Work continues on the outline design and likely production characteristics of the appraisal well required to test the commercial viability of this prospect.

### **Update on Option over North Sea Oil Licences**

On 10 May 2016 the Company announced that it had entered into a sale and purchase agreement ('SPA') with Verus Petroleum (SNS) Limited ('Verus') in connection with the purchase of a 5% participating interest in UKCS licences P1944 (Block 14/20e) and P2156 (Block 15/11 & 16f) located in the Outer Moray Firth which contain the Fynn and Penny prospects. The consideration was £1 and completion of the acquisition of that interest was subject to various approvals. In addition, an exclusive option was granted by Verus in favour of the Company over its remaining 20% participating interest in these licences (the 'Option'). As the necessary approvals to allow the acquisition of the 5% participating interest under SPA to be completed have not yet been received, the Company has decided to exercise its right to terminate the SPA in regards to the 5% participating interest and the parties have instead contemporaneously expanded the Option from a 20% to a 25% participating interest in each of the licences, on the same terms as previously disclosed.

### **Qualified Person's Statement:**

Andrew Nunn, CLNR's Chief Operating Officer, has approved the information contained in this announcement. Mr Nunn is a Chartered Geologist.

The GIIP volumes and Prospective Resources have been prepared in accordance with the 2007 Petroleum Resources Management System (PRMS) prepared by the Oil and Gas Reserves Committee of the Society of Petroleum Engineers (SPE), reviewed, and jointly sponsored by the World Petroleum Council (WPC), the American Association of Petroleum Geologists (AAPG) and the Society of Petroleum Evaluation Engineers (SPEE).

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**Glossary of Technical Terms**

PMRS: Petroleum Resources Management System (2007)

BCF: Billion Cubic Feet

Prospective Resources: Are estimated volumes associated with undiscovered accumulations. These represent quantities of petroleum which are estimated, as of a given date, to be potentially recoverable from oil and gas deposits identified on the basis of indirect evidence but which have not yet been drilled.

Risk Factor: For prospective resources, means the chance or probability of discovering hydrocarbons in sufficient quantity for them to be tested to the surface. This, then, is the chance or probability of the prospective resource maturing into a contingent resource. Prospective resources have both an associated chance of discovery (geological chance of success) and a chance of development (economic, regulatory, market and facility, corporate commitment and political risks). The chance of commerciality is the product of these two risk components. These estimates have been risked for chance of discovery but not for chance of development.

TCF: Trillion Cubic Feet

**Definition of Prospective Resources, P90, P10, P50, Pmean**

While there may be a significant risk that sub-commercial or undiscovered accumulations will not achieve commercial production, it is useful to consider the range of potentially recoverable volumes independently of such a risk.

Prospective Resources are those quantities of petroleum which are estimated to be potentially recoverable from undiscovered accumulations. These estimates are derived from volumetric estimates for the reservoir size, estimates of the reservoir characteristics (porosity, permeability, oil saturation). The basis of these estimates would be available geological and geophysical data, and the data from any existing wells in the given area.

Any estimation of resource quantities for an accumulation is subject to both technical and commercial uncertainties and consequently there will be a range of estimates which in general will be substantially greater for undiscovered accumulations than for discovered accumulations. In all cases, however, the actual range will be dependent on the amount and quality of data (both technical and commercial) which is available for that accumulation. As more data become available for a specific accumulation (for example wells and reservoir performance data) the range of uncertainty would be reduced.

Probabilistic methods are normally used to quantify the uncertainty in these estimated quantities and the results of the analysis are typically presented by stating resource quantities at the following levels of confidence:

**P90 resource** reflects a volume estimate that, assuming the accumulation is developed, there is a 90% probability that the quantities actually recovered will equal or exceed the estimate. This is therefore a low estimate of resource.

**P50 resource** reflects a volume estimate that, assuming the accumulation is developed, there is a 50% probability that the quantities actually recovered will equal or exceed the estimate. This is therefore a median or best case estimate of resource.

**P10 resource** reflects a volume estimate that, assuming the accumulation is developed, there is a 10% probability that the quantities actually recovered will equal or exceed the estimate. This is therefore a high estimate of resource.

**Mean** is the mean of the probability distribution for the resource estimates. This is often not the same as P50 as the distribution can be skewed by high resource numbers with relatively low probabilities.