

**Cairn Energy – ‘wildcat drilling’ at the ends of the earth****Key facts**

- Cairn Energy is an Edinburgh-based oil company founded in 1981 by former Scottish rugby player Sir Bill Gammell. Despite its small size relative to other oil majors, the company is listed on the FTSE 100 with a market value of £6.8bn<sup>1</sup>.
- In December 2009 the publicly owned bank RBS made a \$100m loan to Cairn, meaning that the British taxpayer is now partially underwriting the company.<sup>2</sup>
- Financially strengthened by a major find in Rajasthan, India in 2004, the company is now at what Cairn executives describe as the ‘wildcat stage’ of exploratory drilling in the Arctic.<sup>3</sup>
- Cairn holds two licences in Baffin Bay, Greenland, covering approximately 72,000 square kilometres - just under the size of Scotland as a whole.<sup>4</sup> The company estimates its chances of a significant find this summer at between 7-14%.<sup>5</sup>
- Although other oil majors including Chevron and Exxon Mobil own licences nearby,<sup>6</sup> Cairn is currently the only company drilling in this area. Only six wells have ever been completed in offshore Greenland – the last in 2000.
- The company has completed one exploratory well (which struck gas, but not oil), is still drilling another, and plans to move to two new locations in the near future. The wells are at a sea depth of between 320 and 630 meters.<sup>7</sup>
- The six month moratorium on new drilling introduced by the US government after the Deepwater Horizon disaster applies to wells deeper than 500ft, or 152 meters.<sup>8</sup>
- Drilling is limited to a ‘summer window’ between July and November. After this date, sea-ice becomes too thick to allow vessels to operate and relief wells cannot be drilled effectively.<sup>9</sup> In addition, Cairn’s environmental impact assessment only considers ice conditions during the summer months.<sup>10</sup>
- The Greenlandic government is refusing to release Cairn’s spill response plan<sup>11</sup>, but reports suggest that it now has 14 vessels in the Greenland area capable of dealing with a spill. BP’s response in the Gulf of Mexico involved over 6,500 vessels.<sup>12</sup>
- The company is using ‘ice management’ techniques to tow icebergs out of the rig’s path or use water cannons to divert them.<sup>13</sup> The area in which the rig is situated is known locally as ‘iceberg alley’.
- In August 2010 a section of the Petermann glacier four times size of Manhattan calved into the sea,<sup>14</sup> and is now floating south. An iceberg this size would force the entire rig to be moved at short notice.
- Baffin Bay is home to 80 to 90% of the world’s Narwhals. The region is also home to blue whales, polar bears, seals, sharks, cormorants, kittiwakes and numerous other migratory birds.<sup>15</sup>



(Source: Cairn website)

### Introduction

Cairn Energy is a British exploration company is currently searching for oil in the Arctic, a region that was considered too inaccessible, expensive or risky to exploit until just a few years ago. The Arctic's changing climate is opening up larger ice-free areas to drilling each summer,<sup>16</sup> although Cairn's operation is not thought to be entirely reliant on recent warming.

Cairn is drilling in two blocks entitled 'Sigguk' and 'Eqqua' to the west of Disko Island near Greenland. The company is using a semi-submersible drilling rig (Stena Don), a drill ship (Stena Forth) and a handful of support vessels including supply boats and ice management vessels.<sup>17</sup> According to recent observations the Stena Forth, which the company claims would be used to drill an emergency relief well in the event of a blowout,<sup>18</sup> has left the rig itself and has set out to drill a new well a significant distance from the rig. The company hopes to use the 2010 summer window between July and early October to drill four wells at a cost of around \$100m each.<sup>19</sup> The wells will begin at a depth of between 320 and 630 meters below the sea surface.<sup>20</sup>

Cairn's Greenland project is representative of a new approach to modern oil exploration, where self-styled 'wildcat' companies take on huge financial and technical risks in the hope of hitting a previously undiscovered reservoir of oil. The British taxpayer has a stake in Cairn, after the publicly owned RBS bank made a \$100m loan to the company in December 2009.<sup>21</sup> The company's complete lack of in-house infrastructure and failure to provide a comprehensive spill response plan raises serious questions about Cairn's ability to deal with an accident in one of the most hostile environments on earth.

The dangers of drilling for oil in the Arctic are immense. Oil spilt into near freezing water takes many times longer to dissipate than in warmer oceans.<sup>22</sup> The freezing temperatures, severe weather and remote location pose unprecedented challenges to any spill response. The completion of a relief well could take over two years to complete due to the impossibility of drilling in winter.<sup>23</sup> Oil pollution in Arctic seas could poison some of the most important and productive marine ecosystems in the world. In short, the industry cannot ensure that a spill would never happen and Cairn itself admits that 'logistics are complex'.<sup>24</sup>

**History of drilling in Greenland**

For most of the 20<sup>th</sup> century, oil companies considered the Arctic too remote or risky to develop. In 1975, however, 6 groups headed by Amoco, Chevron, ARCO, Mobil, Total, and Ultramar were granted licences and drilled 5 exploratory wells off Greenland's coast.<sup>25</sup>

Exploration was discontinued in late 1978 after all wells were declared dry by the operators. An additional well was drilled in 2000 by Statoil, but also came up dry.

In January 2008, Cairn signed a series of licence agreements with Greenland's Bureau of Minerals and Petroleum. In October 2009, Cairn sold a 10% interest in its 6 offshore blocks in the Disko West and Southern Greenland areas to Petronas International Corporation Ltd.

Cairn now holds a 77.5% interest in the Sigguk and Eqqua blocks and an 82% interest in the Kingittoq, Saqqamuit, Salliit and Uummannarsuaq blocks further south.<sup>26</sup>

**Lack of transparency over spill response plans**

Cairn's repeated assurances on safety are undermined by the company's refusal to release a detailed spill response plan.<sup>27</sup> The company's environmental impact assessment<sup>28</sup> for the project states:

"All spill scenarios were simulated during the drilling period, June to November, corresponding to the ice-free period within which operations can be undertaken. Due to the specified drilling window, ice cover or oil and ice interaction were not considered in these simulations."

Failing to consider the impact of ice on a potential Arctic oil spill clearly renders the EIA unfit for purpose. The document goes on to add that "Although oil in ice has not been modelled it is worth briefly considering some of the potential effects". The phrase 'briefly considering' does not indicate a thorough and rigorous consideration of the consequences of a major spill in an area that is covered in ice for much of the year.

The dangers of a spill are not insignificant. The US Minerals Management service has estimated a one in five chance of a spill of 1,000 barrels or more over the lifetime of just one drilling block in the Alaska's Beaufort Sea,<sup>29</sup> which shares many of the same Arctic characteristics as the Sigguk block.

**Ability to deal with a spill**

Despite a Freedom of Information request from Greenpeace, Cairn has refused to make its spill response plan public.<sup>30</sup> It is reported that the company has 14 vessels in the area ready to help with any clean up operation. BP's response in the Gulf of Mexico involved the use of 6,500 vessels and the cost of the disaster led to speculation that one of the world's wealthiest and best resourced companies might collapse entirely.<sup>31</sup>

According to a memo prepared for Canadian regulators,<sup>32</sup> drilling a relief well in the Arctic's Beaufort Sea could take up to two years because of the impossibility of drilling during the harsh Arctic winter. An internal Cairn presentation freely admits that the company is unable to drill a relief well during the winter months.<sup>33</sup> This scenario raises the possibility of oil gushing unchecked into the ocean for up to two years as thick ice forms on the sea's surface.

One possible solution to this problem is to drill a relief well simultaneously with the main drilling operation, but Cairn is refusing to pursue this option, preferring to use both components of its drilling infrastructure to drill two wells in separate locations despite the increased risks.

Please see the separate briefing for more information on the consequences of a spill in this area.

## Cairn's approach

Cairn's business model represents a new approach within the oil sector. Smaller independent exploration companies, like Cairn, normally spread their risks by taking a small stake in fields operated by larger companies and skimming off the profits to reinvest in small 'wildcat' exploration or new ventures.

Since these smaller companies don't have access to massive amounts of capital to finance risky exploration programmes, they often try to minimise that risk by exploring in well-developed or mature provinces such as the North Sea or the Gulf of Mexico. Cairn however, often tries to take majority stakes in blocks and focuses narrowly on a few regions at a time, usually in vastly underexplored and unexplored territories. This is the approach taken in Greenland.

Such operations are considered by investors to be 'high risk' but also potentially 'high reward' as was the case for the company's Rajasthan find - which has been estimated to be well above 1 billion barrels of recoverable oil to date.<sup>34</sup>

The company's focus on Greenland is very much along the same lines. According to Gammell, the company seeks 'big acreage' to give it a wide area for exploration, in contrast to the smaller parcels that are routinely found in the North Sea for example.<sup>35</sup> The dangers of this approach become clear in the event of a spill, where the operation's remote location means there is little infrastructure nearby to assist with any clean up operation.

## Political links

Bill Gammell has enormous political influence with leading political figures such as Tony Blair and the Bush family. In an interview Gammell states that "I learned a lot about the oil business from George W Bush."<sup>36</sup>, and Gammell worked with Bush in Texas during his early career.

Gammell's father, founder of the Scottish fund Ivory & Sime, provided much of the initial investment in Bush Sr.'s oil firm Zapata Petroleum in 1952 and gave crucial backing to George Bush in investor disputes.

Gammell Sr. sat on the board of Zapata (now Pennzoil) for 30 years. Cairn is a founding member of the Greenland Oil Industry Association, which was set up last year together with ExxonMobil, Chevron, Dong Energy, Husky Energy, Nunaoil and PA Resources.<sup>37</sup>

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2 Bloomberg (Electronic Database): Securities Underwritten by RBS Jan. 1, 2008 - August 16, 2010, via Rainforest Action Network, accessed August 16, 2010.

3 <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aloE9ZclTfis>

4 Cairn, 'Media Backgrounder: Cairn and Greenland', Cairn Energy PLC.

5 Cairn, 'Petroleum Exploration Conference Presentation', June 2010

6 [http://www.bmp.gl/petroleum/list\\_of\\_licences\\_20100701.pdf](http://www.bmp.gl/petroleum/list_of_licences_20100701.pdf)

7 Cairn energy Environmental Impact assessment, p. 4-6 Available at

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9 Cairn Energy, Greenland Conference presentation, Copenhagen, June 2010 p.20

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- 18 Cairn energy Environmental Impact assessment, March 2010. p 7-13
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- 20 Cairn energy Environmental Impact assessment, March 2010. p.vi
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- 22 Brandvik, P.J, Sørheim, KR, Singaas, I, and Reed, M (2006). Short State-of-the-Art Report on Oil Spills in Ice-Infested Waters: Oil Behaviour and Response Options. SINTEF. 19 May.
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- 24 <http://www.cairnenergy.com/uploadedFiles/Investors/Downloads/Petroleum%20Exploration%20Greenland%20Conference,%20Copenhagen.pdf> P.21
- 25 [http://www.geoexpro.com/geoscience/offshore\\_w/](http://www.geoexpro.com/geoscience/offshore_w/)
- 26 Cairn Energy, Greenland Interests, <http://www.cairnenergy.com/operations/greenland/>
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- 32 <http://www2.canada.com/story.html?id=3348408>
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- 34 <http://www.cairnenergy.com/india/rajasthan/>
- 35 As quoted in: Richard C Morais, 'A Scottish Vindaloo', Forbes, 1 October 2005.
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