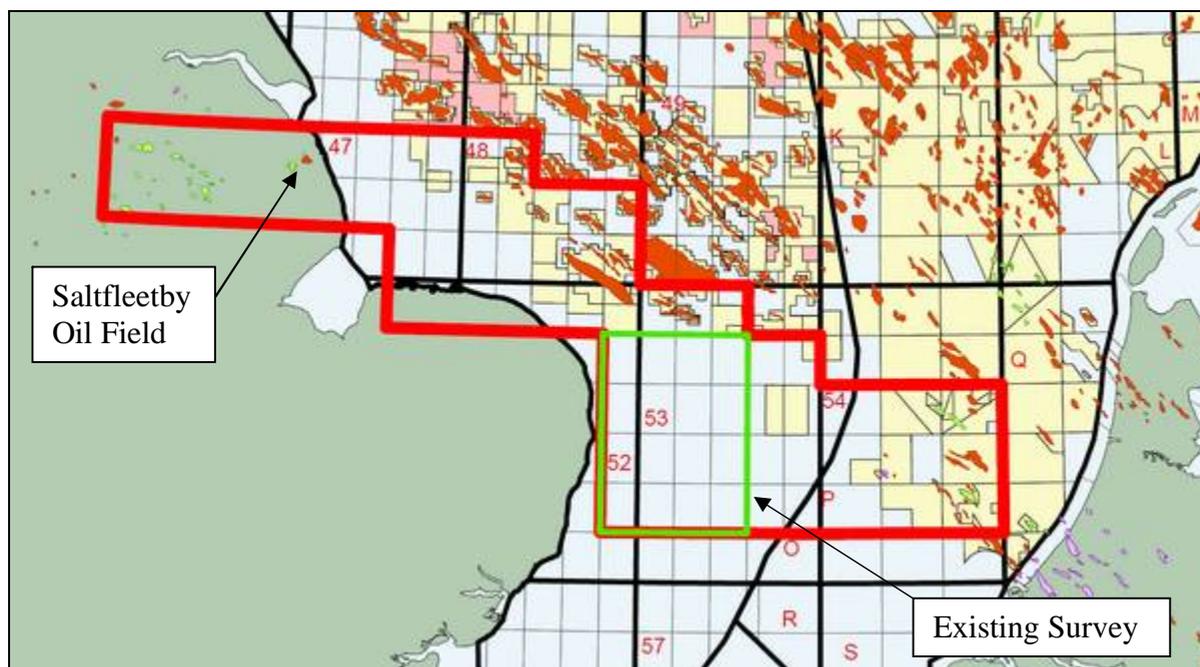


First announcement, November 2010

TGS and Oilsearch Combined Technologies Program

New airborne ultra high resolution gravity, magnetic and seep surveys

Area 1 – East Midlands to West Netherlands Oilfield Survey



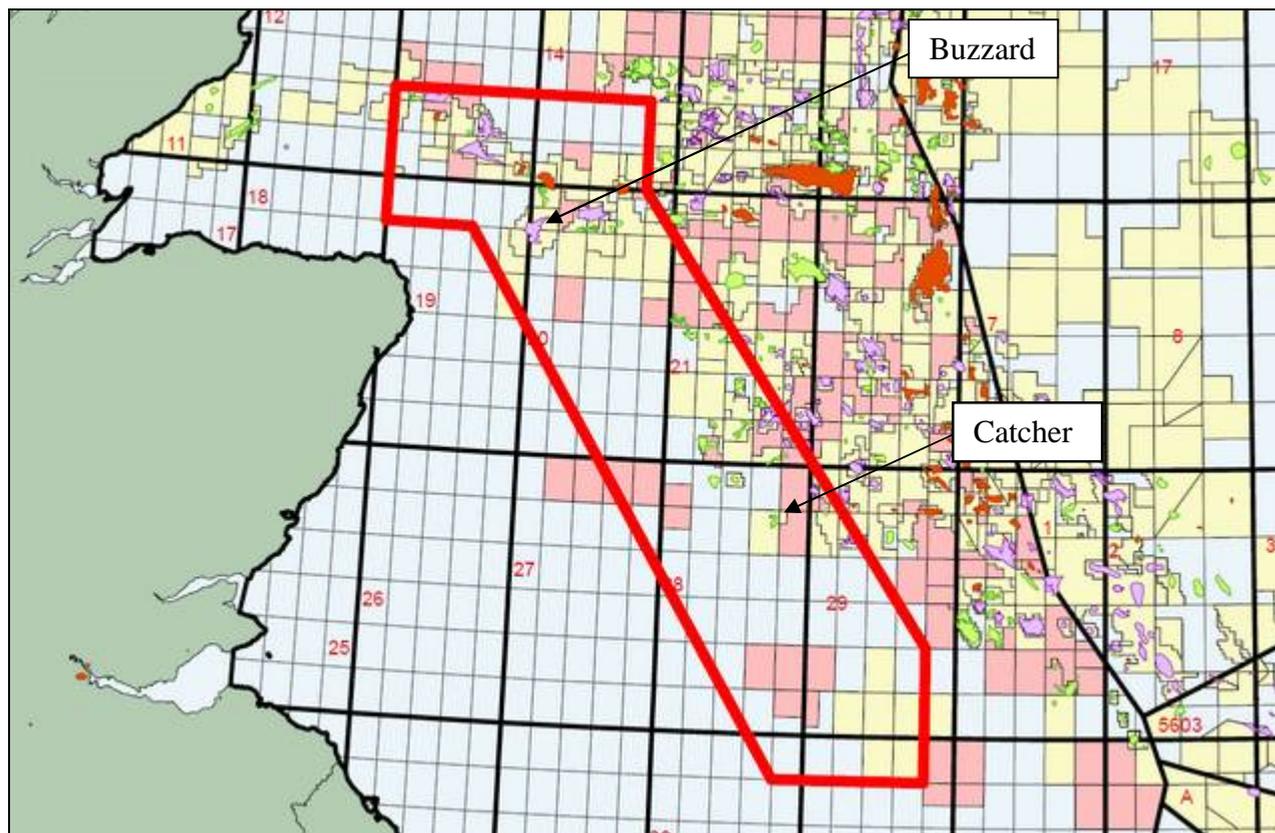
The near shore of central and southern England has remained largely unexplored due in part to lack of data. Since the then British Gas' announcement of the first Rotliegendes gas recorded onshore at Bridlington in 1989, the development of the East Midlands Basin onshore oil fields and the offshore gas fields has been slow.

This is in part due to the data gap corridor that has resulted from the difficulties and expense of transition zone (TZ) and onshore seismic even in this is very intriguing region with respect to untapped oil and gas potential. Oilsearch and TGS propose to conduct an airborne survey to link the westernmost gas fields and the East coast onshore oil fields in the open area from Aldeburgh in the south to Cleethorpes in the north. The survey will also extend through to the oilfields in the West Netherlands Basin, and will link in with existing Oilsearch survey data in the region.

Oilsearch has previously flown magnetic and seep surveys off the Norfolk coast in quads 52/53 (highlighted in green). The survey was flown in August 1999 with 2,600 km of data at 2km spacing being captured. **Data from this survey is available for delivery to early participants now.** Recorded anomalies will be re-surveyed at no additional cost and the data will be included in the 2010 project.

High resolution gravity data, magnetic data and (offshore) seep data will be acquired simultaneously for a survey area covering some 21,000 sq km. In particular, the survey will help link onshore fields such as Saltfleetby to the offshore, and the southern gas basin fields and trends to the onshore.

### Area 2 – Catcher Buzzard and the Western Flanks



Covering 25,000 sq.km from Captain and Buzzard in the north, through the Western Platform/Catcher discovery to the northern part of the Mid North Sea High region, the survey will examine the western flanks of the Central Graben to identify migration pathways and potential oil accumulations.

Weather permitting, the surveys will be flown commencing 5<sup>th</sup> December 2010, subject to industry interest and with fully processed data being made available early in Q1 2011.

### Deliverables

Both surveys will be flown with 2km survey line spacing. Area 1 will deliver 10,500 line km, and Area 2 12,700 line km. Seep data will comprise light end hydrocarbons (condensates and high API oils), mid end hydrocarbons (typical North Sea black oils) and heavy end hydrocarbons (immature and/or degraded hydrocarbon seepage, low API oils) analysis and Composite maps, allowing an estimate of API to be made. Gravity and aeromagnetic data will be Bouger and Base Mag corrected accordingly, with any additional processing on request.



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### **Pricing and pre-commitment**

The cost for the survey will be shared on a multi-client basis with discounts available for early participation and partner groups. Pricing information is available upon request.

To register interest please contact:-

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### **About Seepfinder™**

Seepfinder™ is a computer controlled airborne optical spectrometer capable of detecting fluorescence from minute concentrations of hydrocarbons on the surface of water. The ultra-violet components of sunlight cause the polycyclic aromatic compounds in crude oil to fluoresce, and the composite signature of these emissions in the visible spectrum is detected and mapped by Seepfinder.

Developed in 1990, Seepfinder™ has been proven in most of the world's oil theatres, and is supported by comprehensive computer processing software which compensates the recorded data for changes in environmental and survey conditions. Combined with accurate positional information provided by a GPS satellite receiver, the resulting data provides a high definition map of a surface oil seep.

Acknowledged to be the world's most sensitive airborne oil seep detection system, Seepfinder™ can track the spread of sea surface hydrocarbon films from their emergence points on the sea bed down to the dissolution of the films due to wind and wave action, with a "clean water" sensitivity of 50ppm.

### **Aeromagnetic Data**

Oilsearch survey aircraft are equipped with Geometrics Cesium magnetometers and RMS aircraft compensation systems, delivering data with a noise floor of 7pT rms. A static base magnetometer operated throughout the surveys allows diurnal compensation of the data.

### **Gravity Data**

#### **Low cost. Low weight, highest resolution compact airborne gravity detection system.**

Oilsearch will be flying a new airborne gravity system for the surveys. The combination of all three technologies will provide a rapid prospect screening tool for the oil exploration industry.

Measurement of gravity variation is an important part of any oil or mineral exploration activity. In recent years, advances in steering technology for drill bits rely on drill head gyro systems to provide accurate positional information, especially for slant or horizontal drill paths. Gravity data is needed to calibrate and correctly interpret data from these gyro systems.



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Measurement of gravity, especially from aircraft, is a complex and difficult task. Turbulence, end-of-line turns, aircraft attitude, height variation all contribute to these difficulties. Current gravimeters and gravity gradiometers are complex, bulky systems (typically 200 – 450kg in weight) and must be mounted on complex inertial platforms to minimise the effects of aircraft motion. Gravity measurements can be obtained using satellite altimetry, albeit low resolution, and most seismic boats also record low resolution gravity data using mass-spring-damper gravimeters.

Oilsearch has designed a new, compact airborne gravity system. The Gravex™ system will allow very accurate measurements of absolute gravity to be made with a high spatial resolution. Using Gravex™ in conjunction with Seepfinder™ and aeromagnetic systems, Oilsearch surveys provide the first real indication of oil before the drill bit in frontier offshore exploration, saving millions of dollars from an exploration budget.