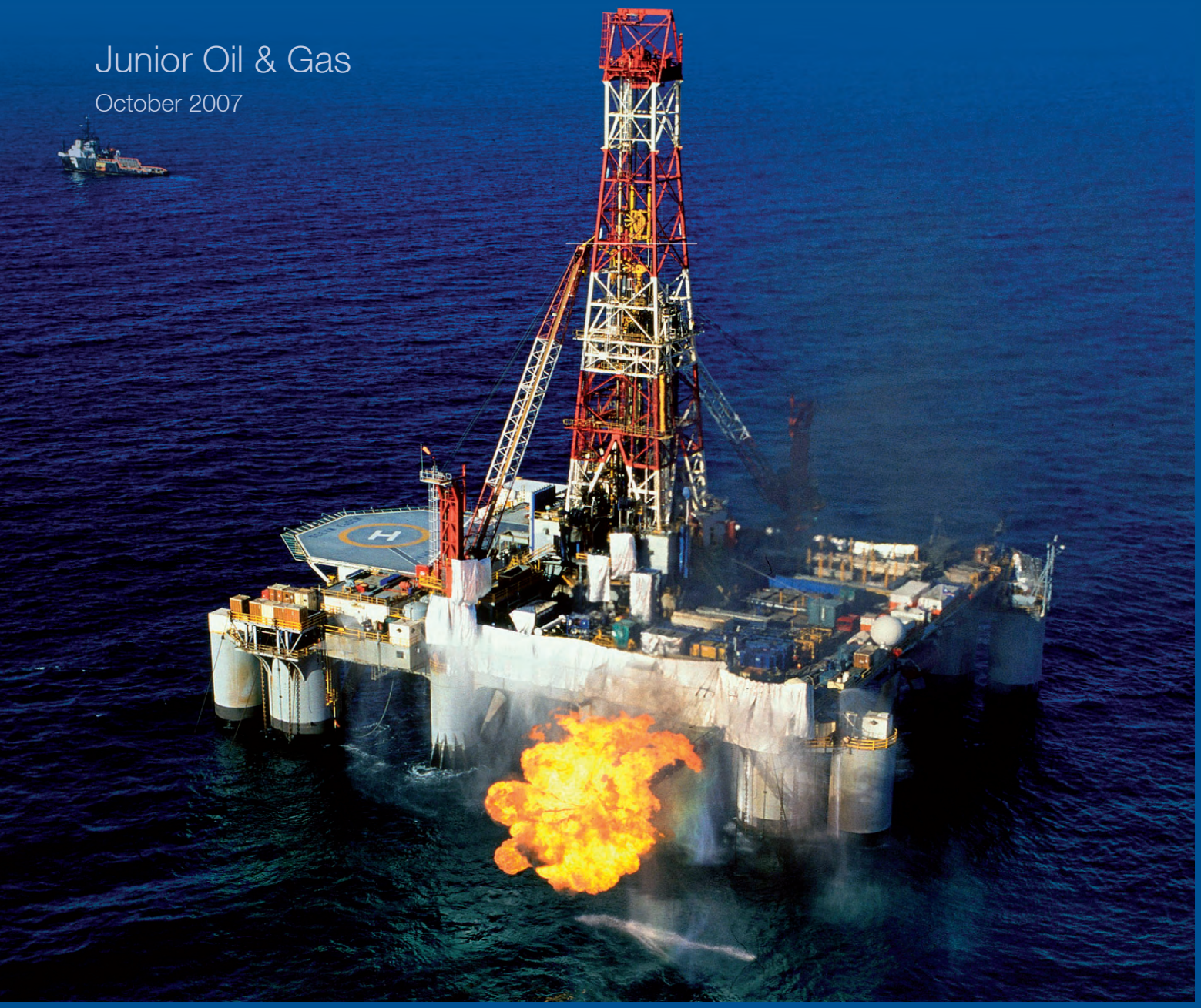
Golden barrels

Junior Oil & Gas

October 2007



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COMPANIES FEATURED

Aminex*	Nautical Petroleum*
EnCore Oil	Northern Petroleum
Falkland Oil & Gas	Providence Resources
Faroe Petroleum	Rockhopper*
Mediterranean Oil & Gas	Serica Energy

Companies denoted with * are a research client of Edison Investment Research Limited

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Junior Oil and Gas

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A change in emphasis

We believe that the current oil price environment has restricted the ability of investors to garner material upside from companies with assets weighted towards production or late-stage development as these assets are near fully priced. Instead we draw investor attention to 10 companies that have a compelling mixture of exploration geared upside with operational qualities that optimise the risk/reward balance. Using Expected Monetary Value (EMV) analysis to build a portfolio of these companies further reduces investor risk, allowing exposure to the potential of high returns from exploration.

Five factors to look for in exploration companies

In compiling this report we met with over 30 quoted companies. We looked for companies which demonstrated the following five criteria that we believe optimises the risk/reward balance for investors: (1) have assets that gain exposure to exploration geared upside, (2) have a strong sub-surface understanding, (3) use capital efficiently and recognise the commercial advantage of derisking through partnerships, (4) have balanced the risk/reward proposition themselves, targeting assets where the risked value of success outweighs the risk of failure, and (5) give investors the maximum chance of upside by drilling wells in the next 24 months.

Expected monetary value approach to reduce risk

Exploration still comes with high risk. The industry average of making a successful find is estimated at c.17% (see Exhibit 10). Picking one prospect therefore exposes investors to an 83% chance of failure. However, building a portfolio of assets, say investing equally in five companies each drilling a single well, means the chance of all five failing to make an economic discovery falls to 39% (see Exhibit 16). Looking at, for example, Edinburgh Oil & Gas, which saw c.1,500% share price appreciation on successful exploration, would have given 300% upside to a portfolio where the value of the other four companies went to zero.

Oil price: Our key assumption

Our view on making the switch from producing assets to exploration assets is predicated on two key assumptions: (1) that producing assets have priced in the increases we have seen between 2004 and today. Our analysis is based on a $55/barrel flat real price, and (2) oil prices will not increase in the manner in which they have over the past three years.

Companies profiled: Ten to pick from

Within this report we profile the following companies which we believe should be included in an exploration portfolio: Aminex, EnCore Oil, Falkland Oil & Gas, Faroe Petroleum, Mediterranean Oil & Gas, Nautical Petroleum, Northern Petroleum, Providence Resources, Rockhopper Exploration and Serica Energy.

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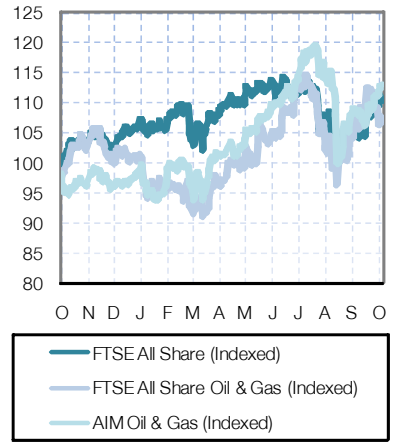
Oil & Gas sector performance



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Investment summary: Golden barrels

Introduction: Turning high risk into high reward

Historically, the small independent E&P success story, particularly in the late 1990s, was built on acquiring small-sized, low-risk assets in mature areas (generally from majors seeking larger discoveries in frontier regions), developing those assets efficiently and subsequently benefiting from the increasing oil price. The uncertain oil price environment of the 1990s allowed for low asset valuations at high discount rates which, in turn, provided the opportunity for significant growth without disproportionate risk. We suggest that the current stable, high oil price environment has made this model difficult to emulate. Furthermore, the current environment warrants a change in strategy towards companies which instead focus on 'organic' growth via capital-efficient, well-informed, high-reward exploration.

Exhibit 1: Summary of companies profiled, how they meet our five key investment criteria together with our EMV analysis (prices at 22 Oct 2007)

Company	Share price (p)	Market cap (£m)	EMV (£m)	EMV analysed assets	Sub-surface team	Farm-in partners	Wells in the next 18 months
Aminex	22.5	54	76	Songo Songo East, Nyuni	Team of geologists, geophysicists and petroleum engineers supplemented with consultants.	Key Petroleum, Hardman, Rakgas	Two-well programme in Songo Songo, Tanzania
EnCore Oil	20.0	54	110	Breagh, Bowstring East and Catcher	Management and technical team credited with 500mmboe Buzzard discovery and subsequent $2.1bn EnCana sale.	Revus Energy 1:1.5 deal on Bowstring East	Involved in 10 wells over the next 18 months
Falkland Oil & Gas	139.0	128	559	Loligo	Strong technical team, complemented by BHP's in-house resources. BHP already working on offshore Nambia and South Africa, which have similar geology.	BHP Billiton	Rig should be ready to drill by end-2008 or early 2009.
Faroe Petroleum	149.5	111	180	Cardhu, Anne-Marie and Tornado	Large sub-surface team, 12 people including nine geologists and geophysicists. Seen as West of Shetland and Faroe pioneers.	Idemitsu Kosan Co one of Japan's leading energy and petrochemical companies	Anne-Marie, Cardhu and Tornado due to be drilled in 2009/2010
Mediterranean Oil & Gas	155.0	52	166	Ombrina Mare, Monte Grosse, Teboursouk	Management has prior technical experience working on key assets for major oil companies. Inherited previous asset team from major BG Group.	Low onshore drilling costs supplemented by significant value in success case	High impact three-well programme beginning in Q407
Nautical Petroleum	12.25	132	107	Kraken, Mermaid, Catcher	Heavy oil speciality focused on North Sea creates opportunities to deliver excellent commercial deals.	Sk Corp and Silverstone Energy £10m in capex	Four-well drilling programme begnning in Q407
Northern Petroleum	177.5	125	389	Savio, CR147 NP	Strong expertise in-house coupled with partnerships including Dyas	Partners include leading European independent, Dyas	One appraisal well planned for 2008
Providence Resources	7.7	190	216	Spanish Point, Dunquin North	Management team has signficnat technical industry experience covering a range of disciplines. Petroleum engineering and geology.	ExxonMobil, CM and Dyas	Hook Head success will be followed by two high impact wells
Rockhopper Exploration	48.5	37	278	Ernest, Dolphin, Weddell	Completed a comprehensive data gathering programme. Pierre Jungles executive chairman is former CEO of Enterprise Oil.	None as yet, but management has a good commercial approach	Expected to commence drilling in 2009/2010
Serica Energy	100.5	152	191	Ismaya and Indra prospects	Strong sub-surface focus, with deidcated project teams developing specialist knowledge.	45% 1:1.5 deal with Nations Petroleum on Indonesian wells	Two-well Indonesian drilling programme

Source: Company websites and corporate information, Hemscott, Edison Investment Research

Oil: Price to stay high, unlikely to repeat increase seen since 2004

In January 2004 the Brent spot price was trading at $30/bbl (barrels), by January 2006 the price had nearly doubled to $59/bbl. At the time of writing oil is trading at $80/bbl, a 36% increase on 2006 and a 167% increase on January 2004. Investors seeking to acquire fully valued producing assets today and achieve a similar return to that achieved between 2004 and today will require a

2010 oil price of $213/bbl. We feel that a long-term $213/bbl oil price assumption comes with much greater risk than a 17% exploration chance of success.

In summary we believe that the tight margins between supply, demand and refining capacity are likely to remain in place over the next four to five years:

- **Supply:** Production quota limits set by OPEC suggest an increase in capacity of one million bbl/day (excluding Iraq) in the next 18 months.
- **Demand:** Forecasts from the US Government's Energy Information Administration (EIA) suggest that demand will continue to rise in line with growth in the global economy, with consumption demand growth coming in particular from the OECD and BRIC regions.
- **Refining capacity:** This has proven to be a bottleneck in recent years and with new refining capacity taking up to five years and $2bn to install, this seems unlikely to change dramatically in the near term, particularly in OECD countries.

Consequently, the analysis within this report assumes the following:

- A long-term global spot price for oil of $55/bbl.
- A UK average yearly NBP (National Balancing Point) gas spot price of 30p/therm.
- A Henry Hub gas price of $4.50/mmbtu.
- A US$/£ conversion rate of 1.8.

These assumptions, whilst conservative against the current oil price, are more bullish than conventional M&A analysis of oil companies, which has tended to use oil prices of $30/bbl.

Exploration: Where the upside is today

Whilst the opportunities for building growth through production have become more limited, we instead see three types of play for investors looking for exposure to the oil sector:

- **Niche players targeting specific oil price related plays**. These include companies such as Nighthawk Petroleum which focuses on restarting production in previously abandoned fields in the US.
- **High impact and wildcat frontier exploration** is where we believe the greatest potential for value creation and high returns exist. Our case study on Hardman Resources and its entry into Mauritania is an example of the benefits that 'first movers' can gain in frontier areas. From the companies profiled we highlight Aminex, Falkland Oil and Gas, Faroe Petroleum, Providence Resources, Rockhopper Petroleum and Serica Energy as this type of play.
- **High impact opportunities in mature areas**, which also often attract super major interest, is another area of focus. Our case study on Edinburgh Oil & Gas demonstrates how having a strong understanding of a mature area, with farm-in partners, can lead to significant shareholder returns. Within this report we highlight Mediterranean Oil & Gas, EnCore Oil, Nautical Petroleum and Northern Petroleum as this type of play.

Five investment criteria to look for

Our strategy is to look at companies which optimise the risk-to-reward balance for shareholders through meeting the following five criteria:

1. Exploration geared upside: We look for companies which have assets which provide investors exposure to exploration upside, e.g. we feel Aminex's share price does not reflect the value of its Tanzanian exploration acreage.
2. Strong sub-surface understanding: Those companies which invest in good sub-surface understanding are more likely to identify and reject the high risk/low reward opportunities which can cripple companies and seep value. Taking this into consideration, we have defined sub-surface competency as the number of geologists, geophysicists and petroleum engineers that are employed on a full-time basis, combined with the technical background and the industry experience of a company's management team, e.g. Faroe Petroleum's dedicated team in Stavanger allowed it to qualify for a 78% Norwegian tax subsidy on exploration costs, significantly reducing the dry hole cost.
3. Efficient use of capital — a strategy for derisking via partnerships: In the world of exploration, spending capital efficiently can be more important in determining success than the quality of a company's asset portfolio. Companies that have identified high reward prospects with a smaller range of outcomes are also more likely to attract partners, therefore reducing their own risk whilst retaining their exposure to high-reward. For example, Falkland Oil & Gas after three years of seismic work eventually attracted BHP Petroleum as a farm-in partner, with a deal which could reduce Falkland Oil & Gas' capital contribution and dry hole risk for a two well programme to zero.
4. Ability to balance risk and reward: High impact oil and gas exploration usually comes with significant technical risk (the global average success rate is c.17%). A balanced exploration prospect is one where the risked NPV values of the success cases are greater than the risked costs of failure. We suggest that investors should employ simple risked calculations such as Expected Monetary Value (EMV) to identify prospects that have a good balance between risk and reward. A balanced portfolio should have a positive EMV.
5. A focus on drilling in the near term: The bottom line is the more wells an investor can get drilled for their investment the greater their exposure to upside. This improves the chance investors have of finding a valuation changing success and the returns that come with it. This holds true providing companies are embarking on a well risked drilling programme by demonstrating that they can balance risk and reward, and have derisked through farm-ins. Much of which can only be achieved if they have demonstrated good sub-surface understanding.

Valuation: Expected Monetary Valuation

EMV calculations are designed to compare an asset, company or portfolio's exposure to the cost of failure against the rewards available in a successful outcome. It is a ranking tool rather than a measure of absolute value.

EMV compares the risked chance of success against the risked dry hole cost. It is a key metric used by major oil companies to rank prospects both in times of low and high oil prices. In theory, a portfolio with a high EMV is skewed further towards the upside than the downside.

EMV can be applied to reduce the risk associated with drilling wells, a 17% chance of success is not high, but when spread over five prospects, the chances of all five failing fall dramatically and, by definition, increases the exposure of a portfolio to a successful outcome.

The sensitivity of an EMV calculation to oil prices through both revenues and dry hole costs means that EMVs are at their most useful in portfolios which have near-term exploration. The uncertainty associated with oil prices and exploration costs adds a further layer of risk if wells are being drilled later than 24 months after the calculation, hence our focus on companies with drilling programmes in the next 24 months.

All EMV outcomes within this piece represent post tax cash flows discounted at 10% p.a. from January 2008.

Sensitivities: Exploration remains risky

Hydrocarbon exploration comes with inherent risks; we identify throughout this piece a number of potential sensitivities which may impact on the efficacy of the methodology which we have outlined previously. In particular we focus investors' attention to the following three risks:

- **There is still a chance that all the wells fail:** Oil and gas exploration by nature is a risky business. Whilst we set out in this piece the methodology to optimise the risk/reward proposition, it is still conceivable that even the most intensive drilling portfolios deliver only dry holes.
- **EMVs are comparative indicators not valuations:** We stress that EMV is a useful ranking tool rather than a measure of absolute valuation. In reality, a 10% chance of finding a $1bn valuation still has a significant chance of achieving a zero outcome. This is the fundamental reason why major companies such as ExxonMobil or Shell, with exploration portfolios containing billions of barrels, do not have valuations built on the EMV potential of that exploration acreage, the numbers would run into trillions.
- **Oil price view may not hold:** Our approach is predicated on the oil price remaining near its current levels over the next three to four years. There are a host of political and other risks that impact the price of oil, and a significant spike in oil price may shift the risk/reward balance back towards producing assets.

Financials: Exploration costs and finances

We highlight the key cost and financial considerations that exploration companies face:

- **Cost of data gathering:** To better understand the sub-surface, companies use 2D and 3D seismic surveys as well as other tools such as CSEM. In its prospectus, Rockhopper estimated its costs of shooting seismic on its Falkland licences at $15m.
- **Drilling rigs:** The cost of drilling a well and hiring a rig is driven by where the well is being drilled and consequently the type of rig required to successfully drill a prospect. Aside from the largest and deepest prospects, onshore wells can generally be drilled by smaller rigs at lower costs. Offshore prospects tend to be more complicated and require either more expensive jack-up rigs or deep sea semi-submersibles The limited availability of rigs

has driven the total daily rate (or 'spread rate'), including all other additional expenditure, for semi-submersibles towards c.$400,000 a day, with jack-ups trading at c.$250,000 a day.

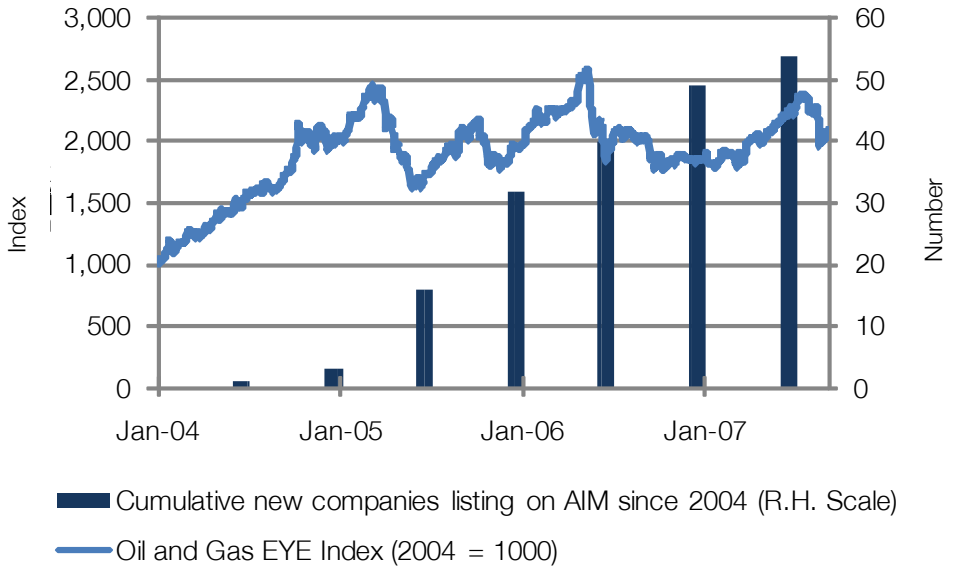
- **Fiscal regimes a key factor:** Some fiscal regimes provide opportunities to reduce risk through maximising tax opportunities, which in turn can help to reduce the capital cost associated with exploration, helping to increase EMVs and the risk/reward balance of projects. Faroe Petroleum's activities in Norway, for example, benefit from an immediate 78% rebate on all exploration costs in the event of a dry hole. The 78% tax rate is, however, levied as the corporation tax rate in the event of successful outcome.
- **Financing methodology:** It is generally assumed that companies will finance exploration activity through their own cash resources or shareholder funds.

1. Production: How you used to make alpha

Over the last three years investor success in the oil space has typically been biased towards companies with producing assets. The two reasons we identify for this trend are:

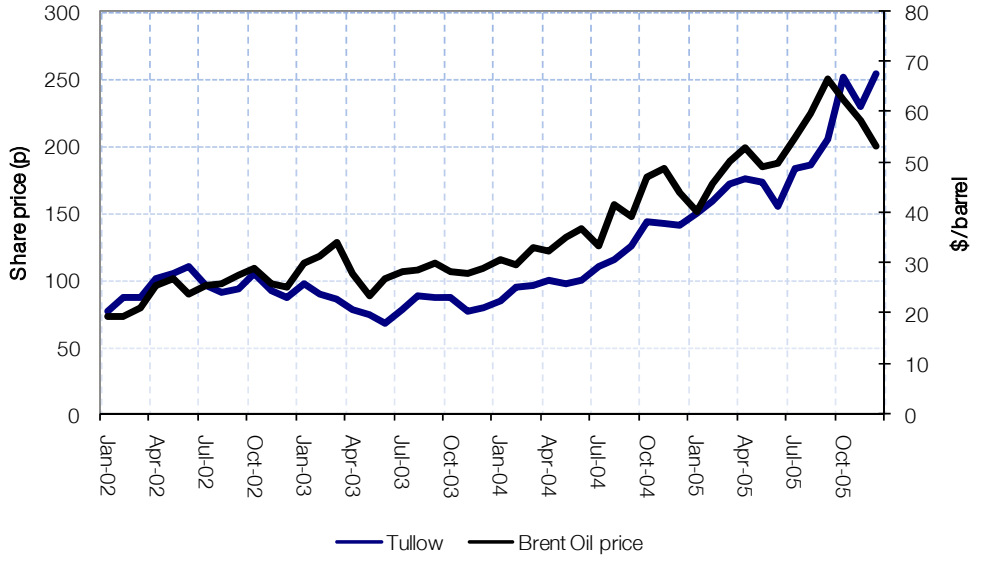
- Rising oil prices and the resulting improved financial performance from those companies exposed to the sector (as shown in Exhibit 2). Exhibit 3 shows how Tullow's share price largely tracks the oil price.
- Disappointing well results from a number of companies and misleading technical announcements from a few AIM-listed explorers.

Exhibit 2: 54 new listings on AIM since 2004, EYE index up 210% since start of 2004



Source: London Stock Exchange, Ernest & Young Oil & Gas EYE index

Exhibit 3: Tullow Oil vs. Brent Oil curve reflects the commodity tracking nature of a producer



Source: Bloomberg

The production model was predicated on the assumption that smaller companies which had acquired production and development assets in an uncertain (low discount, low price) environment prior to the oil price boom would see guaranteed increases in valuations as revenues grew in line with a rising oil price.

2. Oil price: Expect to stay at current highs

Oil price: Where's the ceiling?

In January 2004 the Brent spot price was trading at $30/bbl, by January 2006 the price had nearly doubled to $59/bbl. At the time of writing the oil price is trading at $80/bbl, a 36% increase on 2006 and a 167% increase on January 2004. Investors seeking to acquire fully-valued producing assets today and achieve a similar return to that achieved between 2004 and today will require a 2010 oil price of $213/bbl. Whilst we accept that the potential exists for further oil price increases as a response to increasing OECD and BRIC (Brazil, Russia, India and China) demand, we feel that a long-term $213/bbl oil price assumption comes with much greater risk than a 17% exploration chance of success.

Key assumptions (building a success case valuation)

The key assumptions that have gone into our EMV calculations (see pages 21 to 26) relate to hydrocarbon prices and foreign exchange rates. Our hydrocarbon prices are conservative and are on average 20% lower than the comparative 90-day average Brent forward curve price. Post the Brent forward curve we assume flat real prices escalate at 2.5% (our general inflation assumption). Where applicable, our gas assumptions assume a 20% discount to either the UK NBP average yearly forward prices or US Henry Hub prices. As with our oil price assumptions post the forward curve, we assume a flat real price from the last quoted yearly average. In summary, we assume the following:

- A long-term global spot price for oil of $55/bbl.
- A UK average yearly NBP gas price of 30p/therm.

- A Henry Hub gas price of $4.50/mmbtu.
- A US$/£ conversion rate of 1.8.

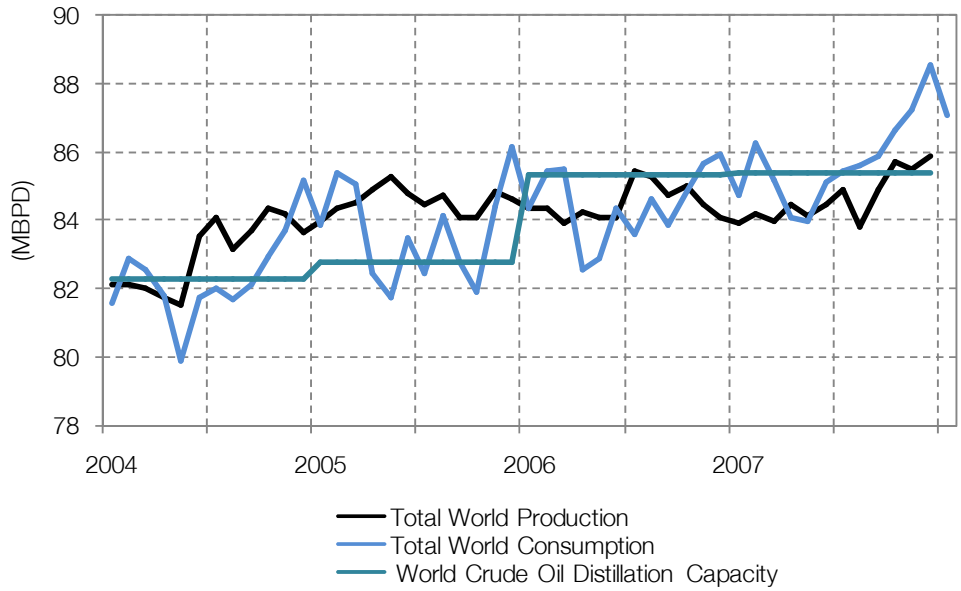
The rationale behind oil prices remaining at their current levels is explained below.

Rising demand and precarious supply leads to market volatility

Since 2004 oil prices have risen by 93%, with prices currently trading at record highs. Whilst the global market for crude is complex and volatile, the key factor is the tightening margin between global supply and demand. Exhibit 4 shows how close the margin between available supply and demand has become. Between Q406 and Q207, supply has not been sufficient to meet demand. As a result, countries have taken stocks from their crude inventories. Furthermore, the tight supply/demand margins data on US inventory stocks have been used by the market as a proxy for global supply.

Forecasts from the US Government's Energy Information Administration (EIA) suggest that demand will continue to rise in line with growth in the global economy, whilst production quota limits set by OPEC suggest an increase in capacity of one million bbl/day (excluding Iraq) in the next 18 months.

Exhibit 4: Supply and demand suggest oil price will remain at current highs



Source: EIA September 2007

Capacity bottleneck exaggerates supply worries

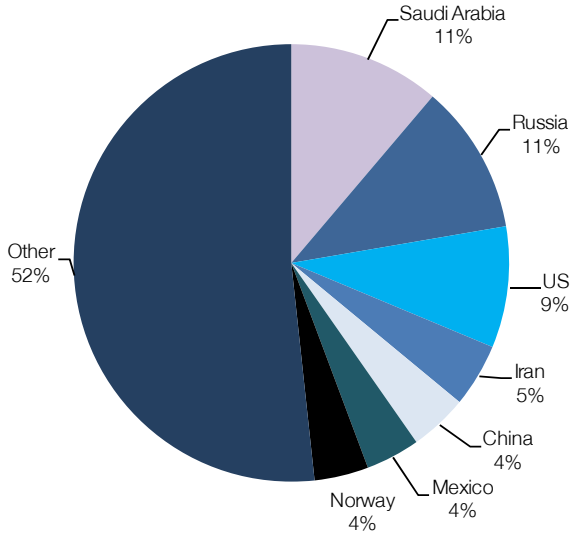
OPEC's reluctance to increase production quotas is driven firstly by a desire to maintain high oil prices without damaging the global economy, but there is also concern regarding a lack of refining capacity required to process any increase. Refining capacity has proved to be a bottleneck in recent years, and with new refining capacity taking up to five years and $2bn to install, this seems unlikely to change dramatically in the near term, particularly in OECD countries. China is expected to account for more than 40% of the 1.4 million barrels of new capacity in 2008, with its output dedicated to supplying domestic demand. To meet EIA growth forecasts, companies will need to continue to build capacity at the one million bbl/day rate for the next decade, which seems a difficult task.

On this basis we envisage a period of at least four to five years with oil prices above $60/bbl, with a floor of a $55/bbl flat real price. We also suggest that the development of a global liquefied natural gas market will continue to create opportunities for gas to replace oil as a cheaper and more environmentally-friendly alternative. Consequently, we suggest that gas prices in the US and South East Asia (the main markets for LNG) will continue the current trend of tracking oil prices.

Political instability drives volatility

Markets with tight supply and demand margins are usually characterised by extreme volatility. The location of reserves in non-OECD countries makes oil supplies and markets particularly sensitive to political risk. Exhibit 5 (overleaf) reflects the fact that more than 60% of the world's daily supply of oil currently comes from non-OECD countries. This position is likely to become more pronounced as reserves in mature OECD countries such as the UK, the US and Norway continue to decline and areas such as Iraq, Iran, Venezuela and Libya maintain or increase production (see Exhibit 6 below).

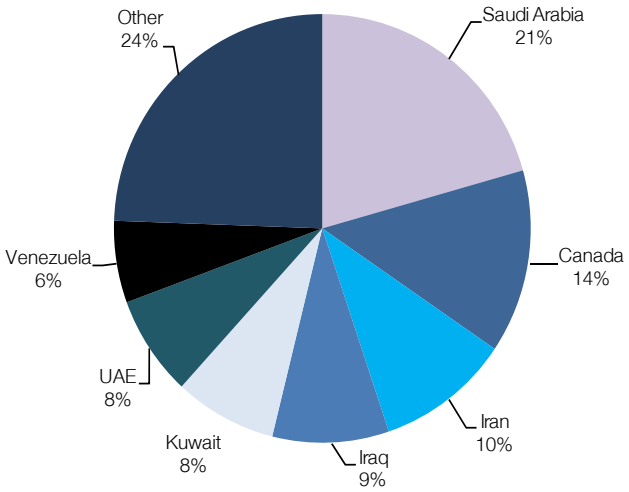
Exhibit 5: Global daily oil production by country



Source: EIA September 2007

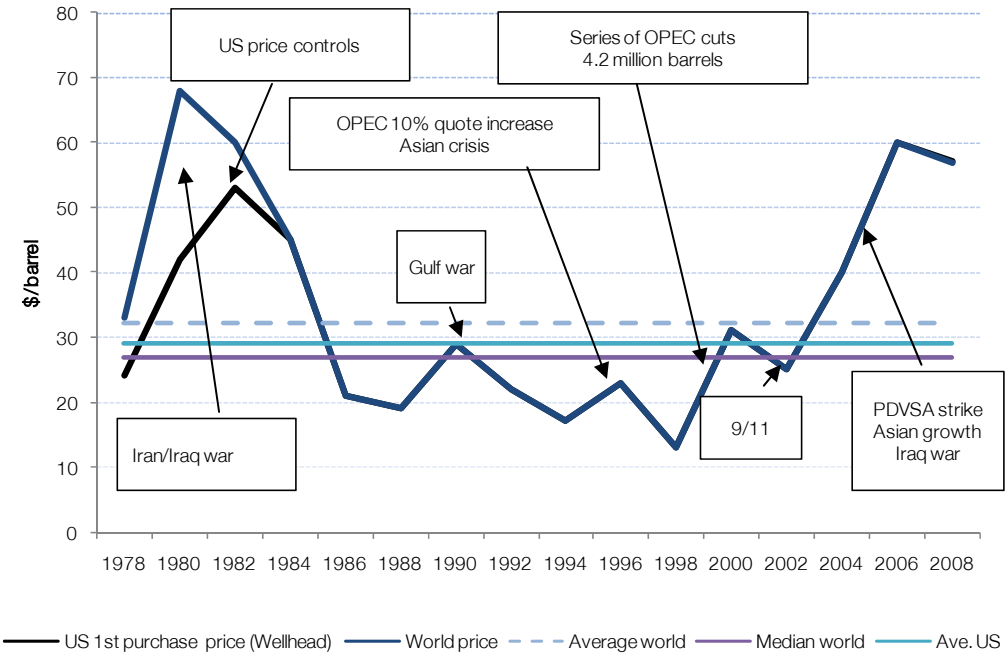
A number of analysts have suggested that the location of production and reserves in non-OECD countries has necessitated, within the current oil price, a premium for events as wide ranging as the Middle East conflict, tensions in the Niger Delta, the war in Iraq and weather in the Gulf of Mexico. There are varying estimates as to when these premiums apply, how much of the oil price they account for and to what extent they overlap. What is clear is that as the proportion of global production shifts further towards non-OECD states, the impact of conflict and political tension will (more frequently than not) exaggerate basic underlying supply concerns.

Exhibit 6: Remaining reserves by country



Source: EIA September 2007

Exhibit 7: Crude oil prices (US$)



Source: WRTG Economics

3. Exploration: Where the upside is today

Today we believe that given the oil price is unlikely to push materially higher, production assets are likely to be fully valued. Instead we see three types of play that are more likely to lead to upside: niche plays, high impact wildcat or frontier exploration, and high impact opportunities in mature areas.

Definition of terms

Before explaining the exploration plays it is important to set out a definition of the terms we use in reference to them:

- High impact exploration is defined as exploration activity that has the potential to have a significant impact on the valuation of a company through valuation changing data or discoveries.
- Wildcat exploration is defined as exploration wells drilled one to two miles from existing production or those designed to find deeper untested plays in existing oil and gas areas. The risk associated with wildcat exploration is usually built around a lack of available data and sub-surface understanding. Independent, smaller oil companies have in the recent past acquired data, built acreage positions and used technical expertise to reduce risk and create partnerships with larger companies in areas (such as the East African Margin, Faroe Islands and Mauritania) which have subsequently become 'exploration hotspots'.
- Frontier exploration is defined as a first mover advantage in a region where little or no commercial exploration activity has been conducted.

Three types of play: Niche, high impact wildcat/frontier and mature

Given our outlook that oil prices are likely to remain at current levels in the medium term, this has removed the potential for the easy win commodity tracking opportunities which fuelled investor and sector interest in producing assets.

Allied to this is the stream of cheap production and/or development assets that have dried up as competition for assets increases in a saturated market and uncertainty is replaced by bullish valuations on asset prices, leaving little room for value-add. Most near-term production or producing assets attract a small discount to life of field cash flows and, in our view, are therefore fully valued. Instead, we draw investors to three types of play in the oil sector where we see potential for material returns:

- Niche plays. We suggest that within the sector there are a number of companies which are utilising expertise in specific areas to target low risk opportunities outside the 'pure vanilla' E&P plays. These include companies focused on heavy oil prospects and production from abandoned fields. These assets, because of the specific expertise required to develop them, still attract a material discount with the potential for high value add even at the development phase.
- High impact wildcat frontier exploration is where we believe the greatest potential for value creation and high returns exists. Our case study on Hardman Resources (see page 19) and its entry into Mauritania is an example of the benefits that 'first movers' can gain in frontier areas. We suggest that high impact exploration usually comes with a risk/reward balance which is skewed in favour of the upside potential. We use an EMV analysis to measure that balance, and rank opportunities and companies accordingly.
- High impact opportunities in mature areas, which also often attracts super major interest, is the focus of our second case study: Edinburgh Oil & Gas (see page 18), which had a stake in the North Sea Buzzard discovery which was the largest made in a decade.

Exhibit 8: Summary of profiled companies by type of play

Company	Type of play	Region	Comment
Aminex	High impact wildcat frontier exploration.	East Africa	In May signed a 25% farm-out of its Nyuni licence (Offshore Tanzania) to UAE-based Rakgas.
EnCore Oil	High impact opportunities in mature areas.	UK North Sea	EnCore Oil has a management team closely associated with the 500mmbo Buzzard discovery which helped drive the growth of Canadian independent EnCana.
Falkland Oil and Gas	High impact wildcat frontier exploration.	Falkland Basin	Farm-in deal secured with BHP indicates potential exploration 'hotspot'.
Faroe Petroleum	High impact wildcat frontier exploration.	West of Shetlands/Faroe Islands	Excellent sub-surface understanding and significant potential. Farm-downs, tax efficiency and partnerships with majors reduce risk.
Mediterranean Oil & Gas	High impact opportunities in mature areas.	Italy, Malta, France and Tunisia	Started a four-well program, with potential for high-value returns including the 278mmbo Monte Grosso well, partnered with ENI and Total.
Nautical Petroleum	High impact opportunities in mature areas.	UK North Sea and France	Embarking on a four-well high-impact drilling campaign in the UK central North Sea. Technical competency means that it has been able to complete a number of high value farm-out deals.
Northern Petroleum	High impact opportunities in mature areas.	Netherlands, UK, Italy and Spain	100bcf Savio prospect, located within the high-value Italian market, has the potential to create significant value in 2008.
Providence Resources	High impact wildcat frontier exploration.	Offshore Ireland	Technically focused sub-surface team. Benefits of Irish fiscal regime.
Rockhopper Exploration	High impact wildcat frontier exploration.	Falkland Basin	Strong sub-surface understanding. Farm-in deal signed by Falkland Oil and Gas indicates future exploration 'hotspot'.
Serica Energy	High impact wildcat frontier exploration.	Indonesia	Has contracted a rig to drill two high-impact wells in a previously unexplored area of Indonesia.

Source: Edison Investment Research

Cash rich environment encourages risk

The sustained period of high oil price has also helped to increase revenues, which in a cash rich environment has reduced the cost of capital for many large independents and major oil companies. With cost of capital reduced, companies are willing to pay attractive prices for farm-in deals and success case valuations for metrics such as EMV have been done within the industry on an NPV 8% analysis.

Frontier exploration creates a role for the minnows

Production in mature areas such as the UK, Norway and the US is beginning to decline, whilst the predominance of national oil companies in emerging markets such as sub-Saharan Africa, Iran and, most recently, Venezuela have begun to squeeze out most private sector companies.

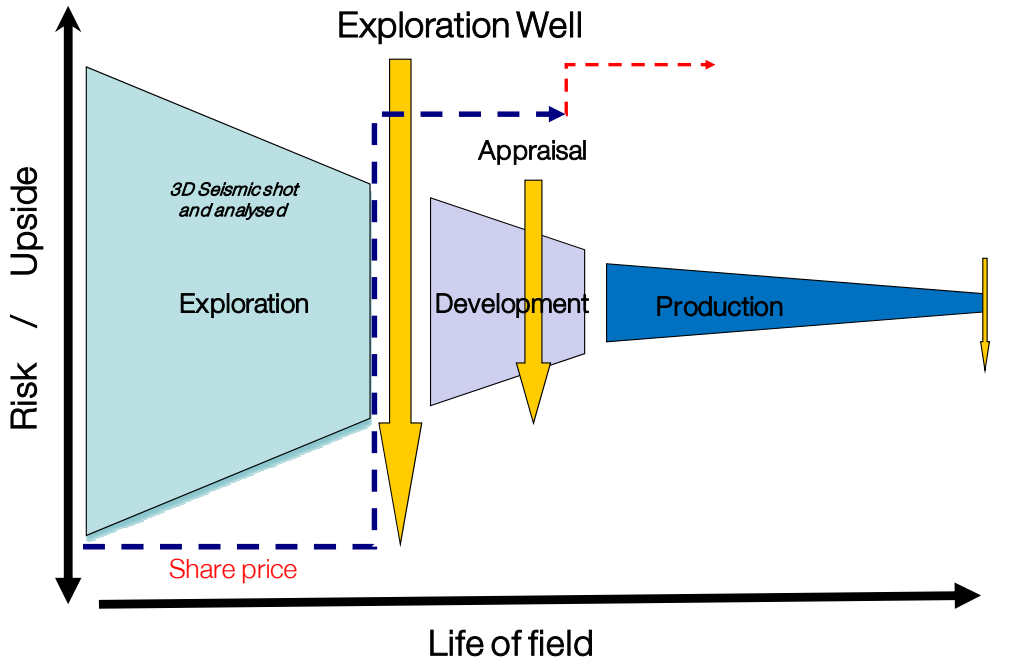
The consequence has been a growth in wildcat drilling in frontier areas. In the past the dominance of major oil companies, and the vast amount of available exploration acreage meant that rig providers and oil service companies (essential to exploration activity), did not supply the equipment required to drill wildcat wells in frontier areas. Instead companies focused on developing easier targets in proven areas.

Independent exploration and service companies in the period following the oil price boom focused their attention on exactly these frontier areas and were able to build acreage positions and relationships in countries such as the Faroe Islands, Sudan, Mauritania, Tanzania and Madagascar, which are now attracting the attention of major oil companies. The consequence has been the development of 'hotspot' regions where AIM-listed independents work in joint ventures and are able to utilise the expertise of major oil companies.

4. A guide to understanding E&P project risk

The life of an oil and gas field can be broken down into three distinct bands: exploration, development and production. Exhibit 9 illustrates how the risk/reward balance shifts as you move from exploration (higher risk, but associated higher reward) to development and then production (lower risk, lower reward).

Exhibit 9: Funnel of value



Source: Edison Investment Research

Exploration: Derisking built around sub-surface understanding

A lack of information means that the exploration phase of any oil and gas project carries both significant risk and the opportunity for material value upside. The derisking process for exploration prospects is built around understanding the sub-surface environment.

In most cases, exploration companies do not start from a blank sheet: hydrocarbon exploration has touched most of the world and as a result even frontier zones will probably have some (if antiquated) sub-surface data gained through a variety of methods. The greater the amount of data (wells drilled, seismic, etc.) on a prospect the lower the range of outcomes and, in theory, the smaller the discount placed on assets.

Appraisal/development: High oil price reduces discount and upside

Post exploration and determination of commerciality, the range of potential outcomes shrinks and as a result so does the discount placed on assets. Whilst the drilling of a successful well will reduce the chance of achieving a zero revenue outcome, the high cost of exploration ensures that the first well drilled on a structure is designed to target the minimum economic volume. This usually proves up a small reserve number and, where possible, will attempt to remove the key technical uncertainties.

However, the potential still exists for a range of reserve outcomes post exploration. This, coupled with the potential for schedule delay and cost over-run, requires that a discount is still placed on the acquisition value of prospects prior to first production.

In a low oil price environment, where companies are cash poor, greater emphasis is placed on the capital risks associated with both delay and budget overspend. As a result a higher discount is given to projects at the development stage. In a high oil price, cash-rich environment the impact of cost overruns and delays is perceived to have less of an impact on overall project value. The consequence is a reduced discount placed on the acquisition value of development assets, squeezing the upside margin available to investors and companies with portfolios skewed towards assets at this stage in the project life cycle.

Production: Again oil price limits upside potential

Post first production, acquisition valuations are generally built on P50 (a 50% chance of achieving at least these reserves) production forecasts. These reserves are commonly referred to as 2P reserves. 2P reserves by definition are built on fairly solid foundations and are based on actual well data from a number of wells drilled in different areas of a reservoir and are adjusted and history matched to take into consideration historical pressure depletion and production rates.

As with assets at the development stage in a low oil price, cash-poor world a discount is placed on the acquisition value of producing assets based on their ability to achieve 2P forecasts and the potential costs associated with operations. The range of potential outcomes in a production scenario is limited and this reduces exponentially with increasing production data. Allied to this, the operational costs and the potential for growth are generally far less than the capex associated with a development project. As a result the discount placed on the acquisition value of producing assets is generally small. Again, as with development assets in a high oil price world, this discount can be limited purely to the cost of capital, leaving little or no room for economically meaningful upside.

5. Five investment criteria to look for

Given that we believe production assets are likely to be fully valued in an environment where the oil price does not increase materially, and that our house view is that the oil price is likely to remain close to its current levels in the medium term, our preferred strategy is to look at companies that optimise the risk-to-reward balance for shareholders through meeting the following five criteria:

1. Exploration geared upside

Oil prices have risen 93% between January 2004 and January 2006. In that same period the AIM E&P producer index has seen average rises of 53%. A material part of that growth can be

attributed to independent oil companies which acquired producing and development assets from major oil companies and have seen the value of those assets grow on the back of a rising oil price.

We suggest that with oil prices likely to remain close to record highs and sector acquisitions being made at low discount rates, the majority of producing and development assets are now fully valued. We instead believe that a high oil price environment and the associated potential for high reward have created the ideal environment for investment in high risk/high reward exploration.

2. Strong sub-surface understanding

It seems obvious, but good sub-surface understanding is fundamental in developing a successful exploration strategy. That understanding comes from both capex spent on obtaining data and having the skills required to effectively analyse that data. In general, the more analysis a company has carried out, the smaller the range of potential outcomes in its portfolio and the lower the risk. In essence, companies which invest in good sub-surface understanding are more likely to identify and reject the high risk/low reward opportunities that can cripple companies and seep value.

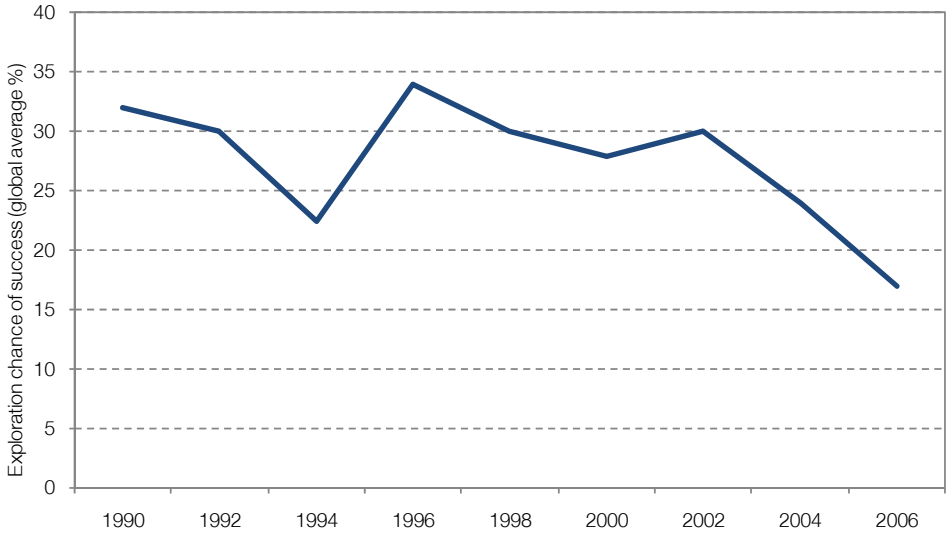
The background and size of a company's sub-surface team (and management) are particularly important to investors trying to determine a realistic picture of a company's risk/reward proposition, which is vital to maximising the chances of achieving high returns. Taking this into consideration we have defined sub-surface competency as the number of geologist, geophysicists and petroleum engineers that are employed on a full-time basis, combined with the technical background and industry experience of a company's management team.

3. Efficient use of capital — a strategy for derisking via partnerships

In the world of exploration, spending capital efficiently can be more important in determining success than the quality of a company's asset portfolio. A saturated junior oil and gas market restricts the availability of potential project partners, which are central to sharing risk. In this competitive environment those companies who are able to present derisked ready-to-drill projects will inevitably fare much better in attracting capital investment from their peers.

Those who have identified high reward prospects with a smaller range of outcomes are also more likely to attract potential peer group partners, therefore reducing their own risk whilst retaining their exposure to high reward. The ability to share risk and reduce capital exposure allows companies to drill more wells, giving investors a greater chance of achieving a successful outcome.

Exhibit 10: Global average exploration chance of success



Source: Oxford Institute for Energy Studies

4. Ability to balance risk and reward

High impact oil and gas exploration usually comes with significant technical risk (the global average success rate is c.17%, see Exhibit 10). We suggest that investors who identify companies with strong sub-surface understanding will have a more realistic view of that risk and ultimately the returns which are required to balance that risk. A balanced exploration prospect is one where the NPV values of the success cases on a risked basis are greater than the risked costs of failure.

We suggest that investors should employ simple risk calculations such as Expected Monetary Value (EMV) to identify those prospects that have a good balance between risk and reward. A balanced portfolio should have a positive EMV.

5. A focus on drilling in the near term

There are two obvious ways to manage this risk of exploration:

- The first is to focus on those wells with a high chance of success. In practical terms this involves either buying assets that are proven discoveries prior to development or purchasing producing assets with the hope of accelerating production and increasing rates of return through further drilling. The high oil price and low discount rates demanded for producing and development assets have squeezed the potential upside available to companies which acquire development and (in particular) producing assets.
- The second is to create exposure to a high number of wells where the risk-to-reward balance has been optimised. We suggest that investors should use this approach. Probabilistic analysis shows that an investor exposed to five wells has a higher chance of achieving at least one successful outcome, which does not necessarily mean increasing the size of your portfolio; instead it should mean identifying those companies which are able to gain more 'bang for their buck', through drilling wells which carry limited capital exposure due to advantageous farm-in deals. If those wells are also high EMV prospects with significant reward potential than the value associated with a single success case should still provide significant returns in the face of the inevitable failures in other wells.

6. Three case studies

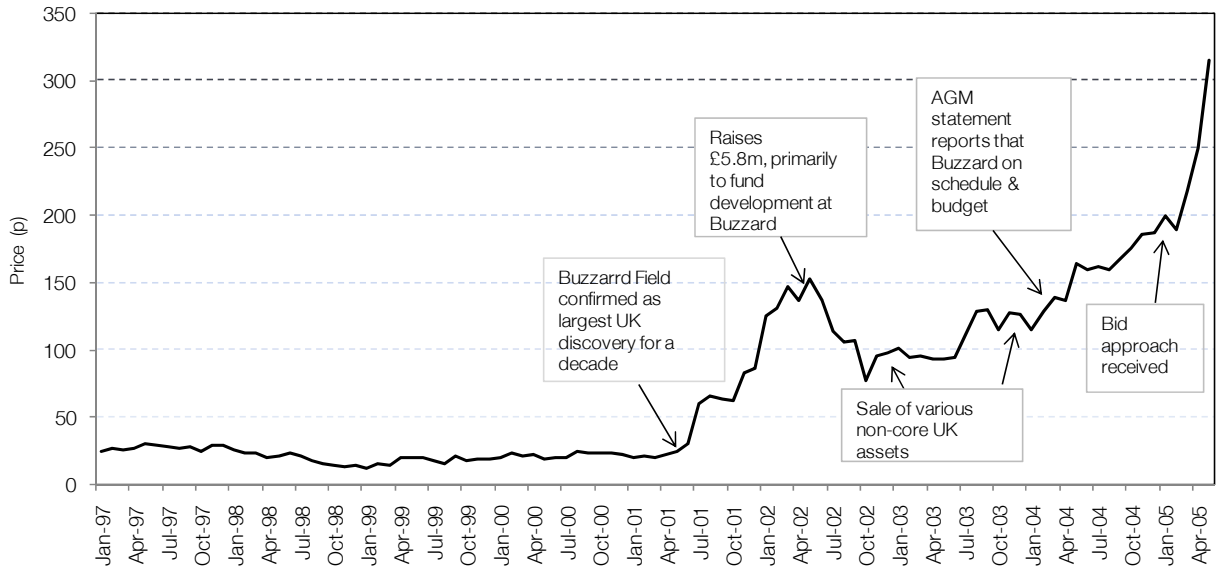
We highlight two case studies that demonstrate the share price upside from high impact exploration through a high impact mature asset play strategy (Edinburgh Oil & Gas) and a high impact frontier wildcat exploration play (Hardman Resources). These case studies also demonstrate how the successful companies had the five investment criteria we look for. We also highlight Regal Petroleum as an example of the associated risks of exploration and how this company failed to meet all of our five investment criteria.

Case study 1: Edinburgh Oil & Gas — pure exploration pays off

Edinburgh Oil & Gas' share price rose by over 1,500% between January 2000 and May 2005 (a month after the acquisition by Dyon, a JV comprised of Dutch independents Dyas and Oranje Nassau was announced). A success in exploration, we show overleaf how the company demonstrated the five investment criteria we looked for.

- **Exploration geared upside:** A specialist oil and gas company focused on exploration in the UK Central North Sea.
- **Strong sub-surface understanding:** Edinburgh Oil and gas followed a strategy of partnering in consortiums for licensing rounds with larger independents. The company focused on areas such as the Outer Moray Firth which were less explored areas of mature prolific regions. Sub-surface data in these areas were more easily accessible for companies with limited capital.
- **Efficient use of capital:** The company was an initial partner (5.2%) in the 500mmboe North Sea Buzzard discovery, the UK's largest hydrocarbon find for more than a decade. Whilst its exposure to capital and dry hole cost was limited the potential upside in a success case was significant.
- **Ability to balance risk and reward:** The company had a targeted strategy of concentrating the majority of its exploration efforts on small working interests in licences with prospects that were high risk in terms of chances of success but which offered the potential for significant reserves.
- **A focus on drilling in the near term:** In 2000 Edinburgh Oil & Gas changed its strategy, moving away from low risk onshore production instead focusing on high reward exploration.

Exhibit 11: Edinburgh Oil & Gas



Source: Bloomberg

Case study 2: Hardman Resources — frontier exploration

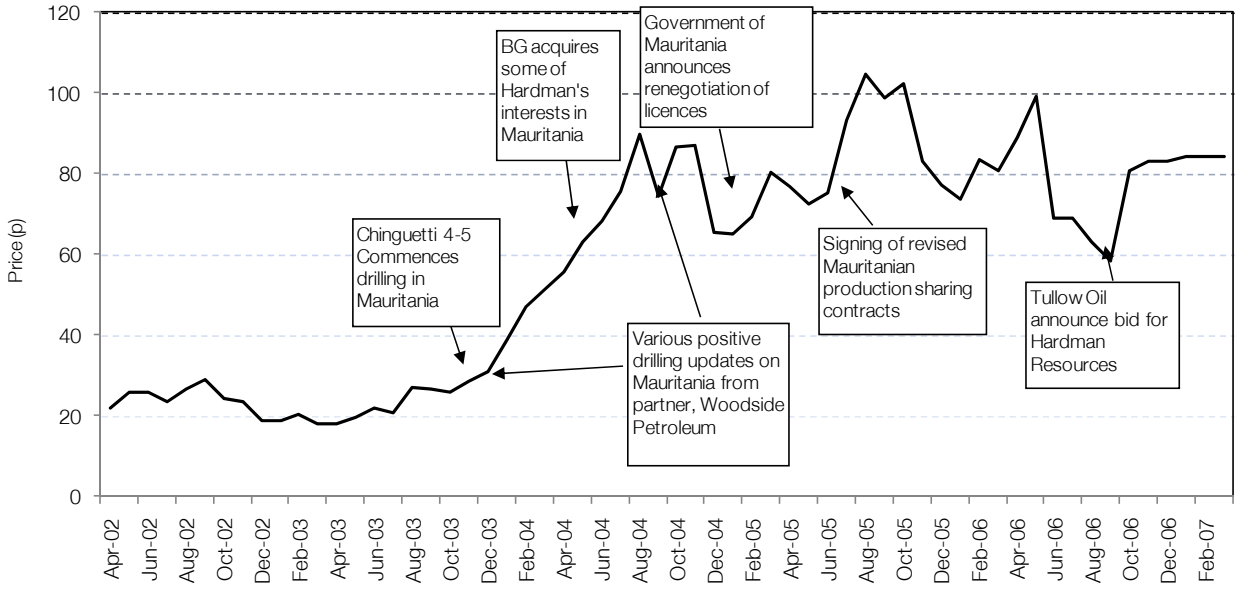
Hardman Resources was an AIM-listed oil and gas company which focused on identifying frontier exploration areas, building a strong acreage position which could then be farmed out to potential companies in exchange for covering the cost of exploration. Between January 2003 and January 2007 (when it was acquired by Tullow), Hardman's share price increased by 400%. We highlight how this exploration success also met our five key investment criteria:

- **Exploration geared upside:** The company's key projects and growth were built around its assets in Mauritania. In 1996 Hardman signed three exploration licences with the Mauritanian Government (following a meeting between director Max de Vietri and Mauritanian oil minister M'Boye Ould Arafa) which covered more than 50% of all Mauritanian offshore acreage.
- **Strong sub-surface understanding:** Hardman had a history of using its strong sub-surface knowledge to target frontier plays, in areas such as Mauritania, the Falklands and Uganda. The company focused on working through large amounts of acreage and packaging equity in "ready to drill prospects" to larger players in exchange for high carried interests.
- **Efficient use of capital:** In 1998, after sifting through seismic data and identifying some significant opportunities, the company signed a farm-in deal with Australian company Woodside Petroleum and Italy's ENI. The basis of the deal covered Hardman's share of any future exploration costs in exchange for Woodside and ENI taking a majority interest in the project.
- **Ability to balance risk and reward:** Hardman's ability to complete high carry deals meant that it had limited exposure to the cost of exploration failure, with investors getting more

"bang for their buck" as the company increased its likelihood of success by drilling more wells.

- **A focus on drilling in the near term:** Woodside subsequently drilled a number of successful wells including the Chinguetti and Tiofi discoveries (100mmboe in total).

Exhibit 12: Hardman Resources



Source: Bloomberg / Edison Investment Research

Case study 3: Regal Petroleum — risks of poor technical knowledge

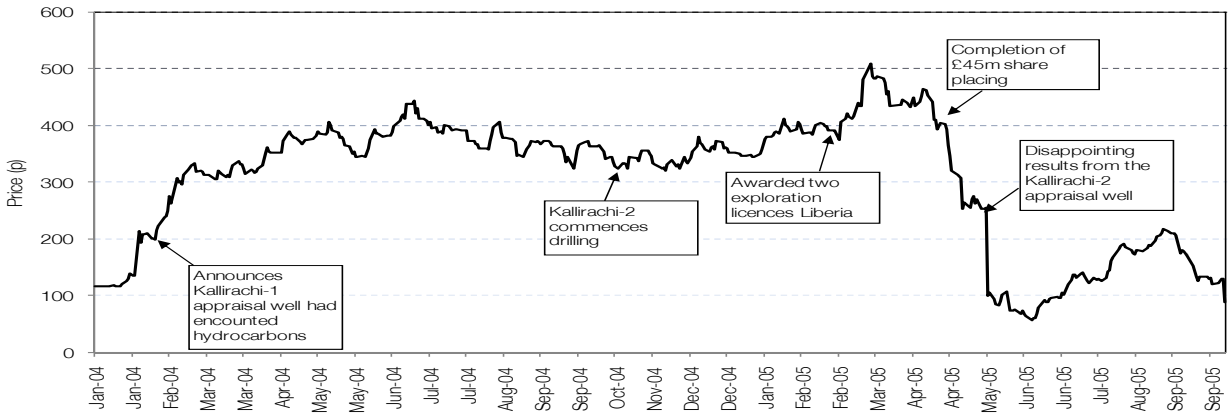
Regal Petroleum illustrates how lack of technical knowledge at a company increases risks for shareholders. The company's share price fell 60% on the announcement that a key asset in Greece had significantly smaller reserves than originally thought almost immediately after the company had raised £45m to fund the project. Examining our five investment criteria, we find that the company failed to meet our criteria of having a strong sub-surface understanding and consequently was unable to attract farm-in partners at Kallirachi-2.

- **Exploration geared upside:** Regal Petroleum's key asset in Greece and its most advanced prospect was the Kallirachi discovery. In 2004 the company announced that its initial exploration well had encountered hydrocarbons. Expectation fuelled by data from the well test and company releases suggested a project with reserves of 250mmboe. The company's share price, on expectations of the acquisition value associated with a significant find, rose sharply.
- **Lacked strong sub-surface understanding:** Commenting at the announcement of his appointment as chief executive officer of Regal, Rex Gaisford was quoted as saying that prior to his arrival the company was "devoid of commercial and technical expertise" (*The Observer*, 31 July 2005). Independent analysis and data from other wells drilled in the region suggested that a successful outcome was always dependent on a highly complicated set of factors, with the prospect being both a stratagraphic (unconformities or pinchouts in rocks causing a trap) and structural (faults or folds) trap. The prospect was

made even more complicated by the location of the main drilling target, which was in an area which degrades seismic evaluation (a key tool for determining the trajectory of the well). In such an instance, prior experience and sedimentology modelling are key to drilling wells in the right place.

- **Lacked efficient use of capital:** Poor sub-surface understanding usually results in difficulty in attracting farm-in partners. It is a matter of record that Regal failed to attract any farm-in partners. Consequently, in 2005, prior to completion of a £45m placing, the company drilled a further appraisal well, Kallirachi-2. Results from the Kallirachi-2 well were not released prior to the placing. Following completion of the placing, the company announced that results from the well indicated a much smaller, uneconomic (25mmboe) accumulation.
- **Inability to balance risk and reward:** We believe that had there been appropriate technical know-how at the company, a more balanced decision about pursuing Kallirachi-2 may have been taken. It is noteworthy that the Ukrainian assets that Regal owned generated plenty of interest in the industry, ultimately attracted farm-in partners and a new drilling programme is expected to start in 2008.
- **A focus on drilling in the near term:** The well at Kallirachi-2 highlights how ultimately a well exposes investors to the potential upside and downside. The key message is that whilst we want investors to be exposed to companies that are ready to drill, they need to have in place the other investment criteria as well.

Exhibit 13: Regal Petroleum



Source: Bloomberg/Edison Investment Research

7. Valuation: EMV and maximising upside

High chance of failure an unavoidable characteristic

Exploration is a complicated and high-risk business. In an ideal portfolio investors would have a number of prospects with a high chance of finding hydrocarbons and high reward outcomes in the event they were successful. Unfortunately, in a global environment where average success rates are 17%, finding the high chance of success element of this scenario seems unlikely.

Exhibit 10 reflects the fact that risk has always been an unavoidable element of hydrocarbon exploration; as a matter of fact it is that inherent risk that provides the volatility which can lead to valuation changing discoveries that yield the greatest returns. The key to a successful exploration portfolio is ensuring that with high risk comes the opportunity to achieve comparably high reward. We suggest that EMV (or Expected Monetary Value) calculations in this respect are a very useful tool.

The key components of an EMV calculation are:

- The dry hole cost (the capital cost of failure).
- The chance of achieving a successful outcome (COS).
- The value in discounted cash flow terms associated with a successful outcome.

EMV calculations are designed to compare an asset, company or portfolio's exposure to the cost of failure against the rewards available in a successful outcome. When done correctly it should cover the range of potential outcomes. An example calculation is detailed below in Exhibit 14.

Exhibit 14: Example of an EMV calculation (figures may not sum due to rounding)

		A	B	A x B
Reserve levels	MMBOE	NPV ($m)	Probability	Risked NPV ($m)
P10	700	5,600	30%	1,680
P50	500	4,000	40%	1,600
P90	10	80	30%	24
Total risked NPV (C)				3,304
Chance of success (D)			17%	
Risked value of success (E = C x D)				562
Dry hole cost (F)		80		
Chance of failure (G)			83%	
Risked cost of failure (H = F x G)				66
EMV (I = E - H)				495

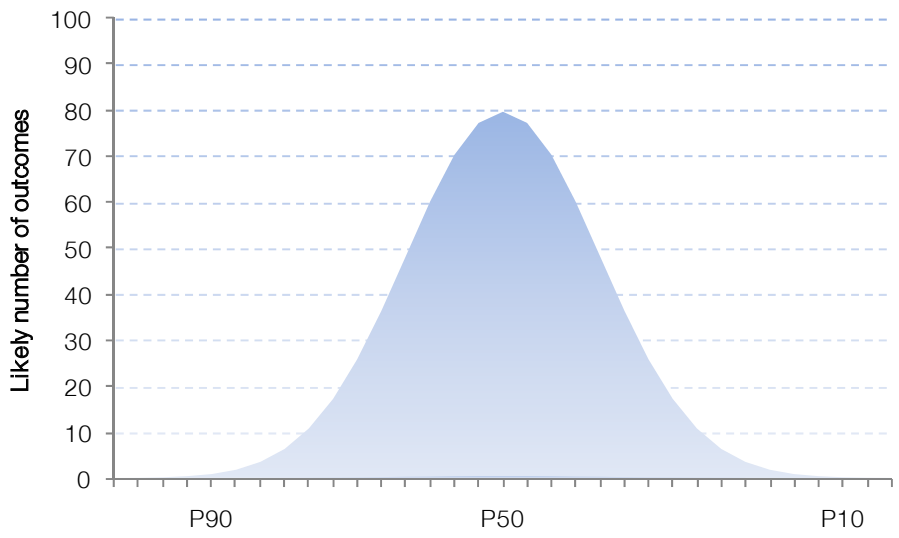
Source: Edison Investment Research

The risked value of success is calculated by taking a company's net high, base and low case reserves and calculating the associated NPV. A probability of 30%, 40% (base) and 30% is applied to each NPV value (Swanson's Rule). This number would then be multiplied by the chance of success. It is important to note that "chance of success" percentages refer to the chance of finding a single unit of hydrocarbons. It is in this sense a technical chance of success and not an economic one, therefore Swanson's rule is applied to reflect the potential range of outcomes in a success case.

By including within the success case valuation more than just the best estimate, the calculation can better capture the complete range of outcomes. In many cases an oil and gas prospect may (if all of the inputs come in or fail) have the potential for a distribution of outcomes outside of the generally accepted bell curve (see Exhibit 15). That is to say that they could have a small chance of huge or tiny reserve outcomes. This can have a dramatic effect on the overall value proposition if

the outcomes are extreme enough. Taking into consideration an upside and downside case helps to capture that potential.

Exhibit 15: Typical reserve distribution



Source: Edison Investment Research

Based on the calculation in Exhibit 14, the best estimate of the risked value associated with a successful outcome would be $562m.

Deducted from the risked value of success is the **risked cost of failure** (also known as the dry hole cost). The risked cost of failure is calculated by taking a company's net contribution to the cost of drilling a well (in this example $80m) and multiplying the number by the chance of failure (100% — the chance of success).

The risked cost of failure can be reduced by factors such as capital efficiency through farm-outs and targeting tax efficient fiscal regimes. Companies such as Faroe Petroleum, Nautical Petroleum and Northern Petroleum have all been able to utilise tax efficiencies as a means of reducing dry hole risk.

The resulting EMV per our example is the COS less the dry hole cost ($562m less $66m), which is equal to $495m.

EMV is a key metric used by major oil companies to rank prospects both in times of low and high oil prices. In theory, a portfolio with a high EMV is skewed further towards the upside than the downside. Clearly in a world where average success rates are 17%, in order to move away from the probabilities associated with a single discreet outcome and gain the benefit of an overall portfolio skewed towards the upside, a portfolio has to contain a material number of wells (we suggest at least five). We have therefore identified companies which have a number of near-term exploration opportunities with high EMVs and which, through capital efficiency, have the funding available to successfully complete those wells.

17% is still 17% — managing risk through capital efficiency

Using EMV to help balance risk with adequate reward ensures that the returns associated with a high-risk exploration when successful are also high. However, investors are still faced with the dilemma of chances which are stacked against them. Exhibit 16 provides the potential solution to improving the odds, which is drilling more wells.

Exhibit 16: Five projects with an 83% chance of failure means only a 39% chance all fail

N.B. 83% based on 17% chance of success.

83%	X	83%	X	83%	X	83%	X	83%	=	**39%**

Source: Edison Investment Research

Probabilistic theory tells us that to calculate the cumulative chance of a set of incidents occurring you need to multiply the combined probabilities of those events. In simple terms, if you have a 50% chance of flipping a coin and achieving a heads outcome the chances of you throwing two coins and them both landing on heads are 50% x 50% or 25%.

The same theory can be applied to reducing the risk associated with drilling wells: a 17% chance of success is not high, but when spread over five prospects, the chances of all five failing fall dramatically and by definition increases the likelihood that one well will be successful. As detailed earlier, if we focus on high EMV prospects with a big skew towards the upside, success from one well should still provide high returns, significant enough to cover the cost of the previous failures.

Oil and gas exploration wells can however be extremely expensive and, in general, high impact prospects tend to require significant amounts of capital. The junior oil and gas market is characterised by companies with limited cash balances and, in some cases, the cost of preparing and drilling a high impact prospect can take up most of a company's cash reserves. The solution again in an ideal portfolio would be to reduce dry hole costs by farming out equity to other companies in exchange for reduced dry hole risk. In most cases, and particularly with offshore prospects, the cost of gathering data can be high, but when compared to the costs associated with drilling wells it represents a much smaller proportion.

Companies which are able to leverage their sub-surface understanding will give investors greater value for money by being able to present 'ready to drill prospects' compared to those which lack the required sub-surface skill and are willing to pay a premium for it (examples include non-UK companies). By reducing dry hole cost through farm-out deals companies can make better use of their capital and drill more wells. The bottom line is the more wells an investor can get drilled for their investment the greater their exposure to upside, the more chance they have of finding that valuation changing success and the returns that come with it.

Timing fundamental to reducing risk

The sensitivity of an EMV calculation to oil prices through both revenues and dry hole costs means that EMVs are at their most useful in portfolios which have near-term exploration. The uncertainty associated with oil prices and exploration costs adds a further layer of risk if wells are being drilled later than 24 months after the calculation. As a result we have chosen companies which will be drilling high EMV prospects in the next 24 months.

The more you know the less you know (chance of success)

Unfortunately, whilst the EMV calculation is an easy way of comparing the risk/reward balance of an oil and gas proposition, the inputs that provide the data that go into the calculation are fraught with complexity. In reality investors from a distance cannot be expected to have the level of detailed knowledge required to understand the sub-surface risks which go into determining the range of uncertainties that drive a value proposition.

In VERY simplistic terms the key questions that define exploration risk are:

1. Does the sub-surface trap (a structure made up of rock types that stops the movement of hydrocarbons) exist that is capable of accumulating and storing hydrocarbons?
2. Is there a sufficient source rock (rock which when heated creates oil or gas) available to fill the trap and are the migration (movement) pathways in place to allow the creation of a reservoir?
3. Is a suitable reservoir present? This relates to the quality, type and size of the rock formations which will contain the hydrocarbons. Certain rock types (usually sandstone, dolomite and limestone) have higher porosity and permeability levels and are thus better suited to storing and transmitting hydrocarbons.
4. Play dynamics: In the absence of specific sub-surface or well data, technical experts generally look to analogues (in the immediate vicinity or globally which share similar characteristics) as a starting point for assessing the risk associated with the previous three points. In many cases the success of a well with comparable sub-surface characteristics helps to reduce the risks associated with a prospect with less data.

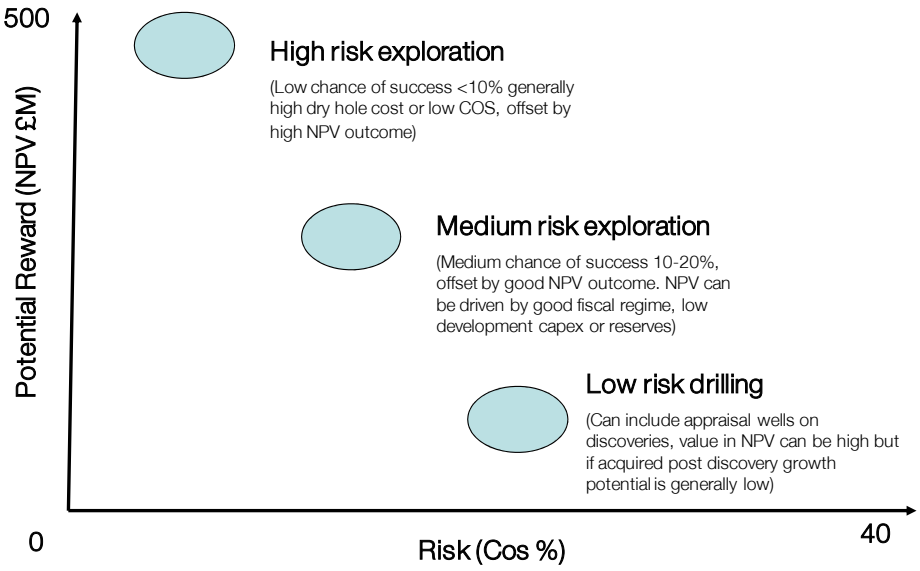
Exploration chance of success (again in simplistic terms) summarises the confidence that sub-surface personnel have in answering 'yes' to these questions. The availability of sub-surface data such as seismic evaluation help to improve the understanding of risks. However, in the absence of a number of wells drilled in exactly the right places, significant levels of risk will always exist, any suggestion otherwise is misleading and likely based on skewed analysis. In the absence of a definitive 'yes', investors must look for two things:

- A realistic and technically robust view of the sub-surface uncertainties and potential outcomes.
- A reward package which complements the risk profile.

Being confident that 17% means 17%

With fair and technically competent responses to these two points investors can attempt to build a useful EMV calculation. On this basis, and with the understanding that investors are reliant on the information supplied to them, we have selected the profiled companies partly on the basis of their sub-surface competency. We suggest that an important part of good sub-surface analysis is peer review and challenge; consensus opinion as in most scientific disciplines can be the key to arriving at a balanced outcome. As noted earlier we have defined sub-surface competency as the number of geologists, geophysicists and petroleum engineers that are employed on a full-time basis, combined with the technical background and industry experience of a company's management team.

Exhibit 17: Categorising exploration opportunities



Source: Edison Investment Research

Cash flows discounted at NPV 10%

All EMV outcomes represent post tax cash flows discounted at 10% p.a. from January 2008. Our 10% assumption is based on a number of components:

- The first component is our assumed inflation rate of 2.5%.
- In all cases we also assume that the companies profiled are fully funded for the period of exploration and as a result will not finance activities via debt. Post exploration into development we assume that the bulk of development costs will be debt financed at a cost of capital rate close to 7.5%. It is important to note that in reality a number of options would be available to both the companies profiled and, more importantly, those willing to acquire them.

Even in a conservative $55/bbl oil world, the sector would be rich in cash and any likely acquisition would be done with a mix of equity and debt. By the same token, post discovery, the profiled companies would be well placed to seek further funding in the market. Either way, with all other factors such as political, technical or delivery risk being equal, we suggest that 10% reflects a fair indication of capital risk within the sector. In the AIM market, the share price of junior oil and gas companies is driven by the value of reserves, metrics such as rates of return are of less importance than the absolute value of assets.

8. Sensitivities: Exploration remains risky

Hydrocarbon exploration comes with inherent risks; we identify a number of potential sensitivities which may impact upon the efficacy of the methodology which we have outlined previously.

The numbers don't lie … most of the time

Oil and gas exploration by nature is a risky business and whilst we suggest that investors can greatly improve their chances of success by adopting methods such as EMV analysis and portfolio theory, it is still conceivable (though unlikely) that even the most intensive drilling portfolios deliver only dry holes.

EMVs are comparative indicators not valuations

We suggest as a caution that EMV does not, in the absence of producing assets or proven reserves, provide an absolute valuation metric. Instead it gives a strong indication of a field/region/company's risk/reward balance and therefore should only be used by companies and investors as a means to rank potential investments and opportunities. In reality a 10% chance of finding a $1bn valuation still has a significant chance of achieving a zero outcome. This is the fundamental reason why major companies such as ExxonMobil or Shell, with exploration portfolios containing billions of barrels, do not have valuations built on the EMV potential of that exploration acreage; the numbers would run into trillions.

Oil price view

Our analysis and recommendation of a switch from producing assets, which we believe are already discounting the current oil price, to a portfolio of assets which expose the investor to an optimally balanced risk-to-reward proposition through exploration companies that meet our five key investment criteria is driven by a key assumption that we will not see the same kind of increases in oil price in the next three years as we did between 2004 and 2007. There remain a number of potential unseen risks underlying this view that may result in oil prices spiking further in the coming three years.

9. Financials: Exploration costs and finances

Excluding the costs associated with maintaining and running an office of staff, the key capital requirements for any exploration company can be separated into two parts: data gathering and drilling rig costs.

Data gathering and sub-surface understanding

Data gathering is the acquisition of data required to understand the sub-surface which in turn allows a company to turn a licence over exploration acreage into a lead with an identifiable exploration opportunity and then into a drillable prospect.

Seismic reflection (seismic) is, in simple terms, gathering seismic data through reflecting sound waves onto the sub-surface. Geophysicists use the acquired data, along with other tools, to generate models designed to predict the behaviour of the sub-surface and determine the likelihood of achieving a successful exploration outcome. Seismic is usually classified on the basis of the level of detail.

3D seismic provides more data points allowing for less interpolation and better mapping-in of faults and other important risk factors; the increase in data comes at a cost. 3D data is sometimes reserved for more complex reservoirs or where historical data is limited. 2D data can also be used where a company has a large area of seismic to cover. After initial screening, specific areas of interest can be identified and 3D seismic can then be shot.

Drilling rigs

The cost of drilling a well and hiring a rig is driven by where the well is being drilled and, consequently, the type of rig required to successfully drill a prospect. Aside from the largest and deepest prospects onshore wells can generally be drilled by smaller rigs at lower costs. Offshore prospects tend to be more complicated and require either:

- More expensive jack-up rigs (rigs with metal legs which extend and lift the rig off the sea bed, used for shallower water), or
- deep sea semi-submersibles (floating vessels used to drill wells in deeper offshore environments).

The drilling rig market has become extremely competitive as oil prices have risen and companies have seen increases in revenues and exploration budgets. Data from oil analysts Petrodata suggest that there are currently 674 semi-subs and jack-ups in operation worldwide, with 88% currently contracted. The figure belies significant regional variations in rig demand. Whilst rig utilisation in the US Gulf of Mexico and South America is under 72%, the figure is higher than 95% in South East Asia (including Australia), northern Europe/Mediterranean and West Africa. The limited availability of rigs has driven the total daily rate (or 'spread rate'), including all other additional expenditure, for semi-submersibles towards c.$400,000 a day, with jack-ups trading at c.$250,000 a day.

What goes into the cost of an exploration well?

Costs of an exploration well can be broken down into three broad categories:

- **Day rate:** The day rate is the day-to-day cost to the operator of renting the rig, excluding fuel and other services. It is basically the cost of hiring the equipment. The current day rate for semi-submersibles is $226,000 per day, for jack-up rigs it is $110,000.
- **Mobilisation–demobilisation ('Mob-demob'):** This relates to the cost of moving a rig from one destination to another. The daily cost is generally the same as the day rate itself. In remote areas Mob-demob costs can make up a significant proportion of drilling cost.
- **Additional costs:** The day rate for a rig generally does not include the cost of service providers such as Schlumberger and Halliburton which provide the tools required to manage the drilling process. Neither does it generally include the costs associated with maintaining the crew or fuel. The costs of materials, such as casing, are also not included.

Fiscal regimes a key factor

We have attempted to model each fiscal regime associated with the key prospects from each of our profiled companies. Unlike a generic $/bbl figure value applied to exploration success, this attempts to identify the benefits that can be gained from specific fiscal regimes. In particular we believe that some fiscal regimes provide opportunities to reduce risk through maximising tax

opportunities, which in turn can help to reduce the capital cost associated with exploration helping to increase EMVs and the risk/reward balance of projects.

Faroe Petroleum's activities in Norway, for example, benefit from an immediate 78% rebate on all exploration costs in the event of a dry hole. The Norwegian regime is unique in that the government provides rebates to companies in the form of cash payments as opposed to relief on a corporation tax liability. In summary this means that for every £1 spent by a company on exploration the Norwegian government covers 78p of that cost.

In the UK Central North Sea the Treasury will allow companies to use exploration well costs to offset their corporation tax liability on revenues. Unlike the Norwegian example this benefit only applies to companies with taxable revenues and therefore producing assets. The tax benefits provided in most countries are in themselves not enough to justify the high acquisition costs associated with producing assets in the current market. However, companies which have been able to acquire assets in a lower oil price environment or which have targeted niche plays ignored by the sector will benefit from the state covering a proportion of their costs. Companies such as Nautical Petroleum and Northern Petroleum, which have proven discoveries, will benefit from being able to offset their exploration costs against a future or current tax liability.

Financing methodology

The types of available financing methods for oil and gas projects vary depending on the size of company, stage of development and expected project returns.

It is generally assumed that companies will finance exploration activity through their own cash resources or shareholder funds. The risk associated with exploration makes it unlikely that without reserves (and the guaranteed revenues that come with them) structured finance will be made available to exploration companies at acceptable terms. Post discovery and with proven and probable reserves, companies are better placed to gain good financing terms for exploration projects.

Edison Investment Research

Edison is Europe's leading independent investment research company. With a team of 44, including 29 analysts, supported by a department of supervisory analysts, editors and assistants, Edison writes on more than 200 companies across every sector. Working directly with corporates, investment banks and fund managers, Edison's research is read by every major institutional investor in the UK, as well as by the private client broker and international investor communities. Edison was founded in 2003 and is authorised and regulated by the Financial Services Authority. Readers wishing greater detail should visit our website (*www.edisoninvestmentresearch.co.uk*), where reports are available for download.

Appendix: Company profiles

Aminex

Year End	Revenue ($m)	PBT* ($m)	EPS* (¢)	DPS (¢)	PE (x)	Yield (%)
12/05	3.0	(5.0)	(3.8)	0.0	N/A	N/A
12/06	5.0	(2.9)	(1.7)	0.0	N/A	N/A
12/07e	5.3	(2.6)	(1.3)	0.0	N/A	N/A
12/08e	5.4	(2.6)	(1.1)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding goodwill amortisation and exceptional items

Investment summary: Hakuna matata

The near-term focus for Aminex is on assets located in Tanzania and Madagascar, targeting the exploration hotspot region commonly referred to as the East African margin. Management has a proven track record delivering returns from commercially-difficult exploration and production environments. This reputation was established from its successful exit from Russia in 2001 and a return of capital to shareholders in 2002 of profits made. The company has derisked the Tanzanian acreage through timely farm-in deals and meets our requirement of looking to drill in the near term. Our analysis indicates an overall EMV for the company's two key prospects of £76m.

Farm-in deals: Key Petroleum, Hardman and Rakgas

Aminex has completed material farm-out deals on its crucial Nyuni prospect. The first was with Key Petroleum, an Australian company formed by the founders of Hardman Petroleum. The second farm-in deal was with UAE-based Rakgas. The company has also completed deals with private company East Africa Exploration. We estimate that the farm-out deals have saved the company more than $10m in capex costs.

High impact: First mover advantage in exploration hotspot

Aminex was one of the first independent oil companies to target East Africa as an exploration play, drilling Tanzania's first well for 13 years. As a result of targeting frontier plays, the company has been able to build a high impact portfolio and has leveraged its sub-surface experience through farm-in deals with new entrants. This has helped to significantly reduce its capital exposure. We also believe that Aminex's acreage positions in Madagascar and Kenya will provide significant growth potential in the medium term.

Near-term catalysts: Tanzania's two-well programme

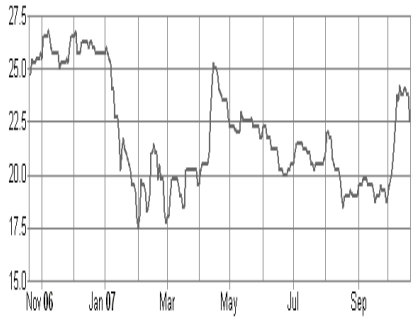
Aminex is about to start operations on a two-well exploration programme in its Nyuni East Songo Songo prospect. The Nyuni licence is located in close proximity to the 600bcf Songo Songo discovery. We place an EMV valuation on Nyuni and Songo Songo East of £76m.

Aminex is a research client of Edison Investment Research Limited

Price	22.5p
Market Cap	£54m

Note: Priced at 22 Oct 2007

Share price graph



Share details

Code	AEX
Listing	FULL
Shares in issue	242m

Price

52 week	High	Low
	26.5p	17.5p

Balance Sheet*

Debt/Equity (%)	N/A
NAV per share (¢)	19.1
Net cash ($m)	25.0

**as at 30 June 2007*

Business

Aminex is an independent oil and gas exploration company focused on targeting frontier exploration opportunities, leveraging first mover advantage to target high impact plays and reduce risk through advantageous farm-out deals. Its key exploration assets are located in Tanzania and Madagascar, targeting the exploration hotspot region commonly referred to as the East African margin.

Recent newsflow

27 Sep — Interim results

24 Sep — US drilling update

20 Aug — Tanzania: Extension to licences

07 Aug — Caroil 6 rig to spud October 2007

01 Aug — Didier Murcia appointed COO

Geography based on revenues

UK	Europe	US	Other
0%	10%	53%	37%

Analyst

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Key criteria

Investment criteria	Summary	Comment
Exploration geared upside	☑	Significant acreage in Tanzania, acquired through frontier exploration strategy. Nyuni licence covers 1,300 sq km, and is adjacent to the producing Songo Songo field.
Strong sub-surface understanding	☑	Team of geologists, geophysicist and production engineers supplemented with external consultants. Also has a subsidiary logistics company.
Efficient use of capital	☑	Has farmed Nyuni licence down to Key Petroleum (20%), Rakgas (25%), East Africa Exploration (10%) and Bounty Oil (6%).
Ability to balance risk and reward	☑	EMV on Nyuni estimated at £30m.
A focus on drilling near term	☑	About to commence a four-well drilling programme, the Caroil 6 rig expected to spud Kiliwani-1, the first of two targets in the Nyuni licence, in October 2007.

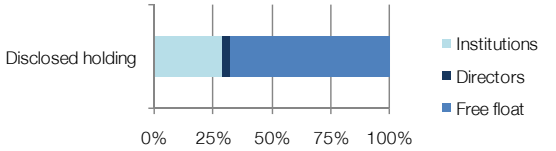
Location of assets

East African Margin, North Korea, Egypt, the US

EMV analysis

Prospect	Chance of success	Dry hole cost (£m)	P50 reserves (mmbo)	EMV (£m)
Songo Songo East	20%	1.5	7.8	46
Nyuni	20%	1.5	8.5	30

Free float



Financial summary

Year end Dec	2005	2006	2007e	2008e
Profit & Loss				
Turnover	3,000	5,019	5,335	5,375
(% change)	N/A	67%	6%	1%
EBITDA	**(3,933)**	**(2,620)**	**(2,165)**	**(2,125)**
(% margin)	N/A	N/A	N/A	N/A
(% change)	N/A	N/A	N/A	N/A
EBIT pre GW and except's.	(4,930)	(2,787)	(2,655)	(2,670)
(% margin)	N/A	N/A	N/A	N/A
Net financial items	(49)	(75)	50	50
Other	0	0	0	0
Pre-tax profit (norm'd)	(4,979)	(2,862)	(2,605)	(2,620)
Tax	0	0	0	0
Net Income	**(4,979)**	**(2,862)**	**(2,605)**	**(2,620)**
EPS (norm'd and fd)	**(3.8)**	**(1.7)**	**(1.3)**	**(1.1)**
(% change)	N/A	N/A	N/A	N/A
Balance Sheet				
Fixed Assets	24,435	26,907	28,547	29,707
Current Assets	5,063	5,180	23,255	13,680
Current Liabilities	(2,189)	(1,353)	(1,545)	(1,545)
Long term Liabilities	(2,220)	(2,285)	(2,333)	(2,383)
Shareholders Equity	**25,089**	**28,449**	**47,924**	**39,459**
Cash Flow				
Cash flow from operations	(2,189)	(2,366)	(1,943)	(2,125)
Capex	(2,746)	(3,534)	(20,000)	(7,500)
Net debt(cash)	**(3,749)**	**(3,503)**	**(1,610)**	**(2,035)**

CEO

Brian Hall is a chartered accountant who has worked continuously in the offshore oil industry since 1973. He created Aminex in its present form in 1991 and has managed it since then, taking it into Tunisia, the US, Pakistan, Russia, Tanzania, North Korea, Madagascar and Egypt. He has founded and managed several companies and has served on the boards of four publicly-traded oil and gas companies.

COO

Didier Murcia is an Australian lawyer based in Perth with wide experience in natural resources. He was the founder of Tanzoil which Aminex acquired in 2002, at which time he joined the board. He was appointed an executive director in 2004. Mr Murcia is the Honorary Consul for Tanzania in Australia and has many strong links within Tanzania.

EnCore Oil

Year End	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	PE (x)	Yield (%)
06/06	0.0	(0.9)	(1.0)	0.0	N/A	N/A
06/07	0.0	(2.0)	(0.8)	0.0	N/A	N/A
06/08e	0.0	(0.6)	(0.2)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding goodwill amortisation and exceptional items

Investment summary: Proven track record

A strategy of using technical experience to target high impact opportunities with valuation changing potential is a model that should attract investor interest. Several of EnCore's management team were heavily involved in the 500mmboe Buzzard discovery and are better placed than most to identify and deliver on high impact wells. The company has 10 wells scheduled to be drilled in the next 18 months. We suggest an EMV value for its three key prospects of £110m.

Proven model, proven management

Access to infrastructure and proximity to markets can make medium-sized prospects in mature areas as attractive as larger prospects in frontier zones. Mature areas by definition tend to provide smaller discoveries which are harder to find; we suggest that a key indicator of a company's ability to identify prospects in this environment is prior experience and technical expertise. Chairman Michael Lynch was a founder of independent oil company Intrepid Energy, which was eventually sold for $1bn. The company also includes a number of employees from former UK independent EnCana. Prior to his current role, CEO Alan Booth was the chairman and managing director of EnCana presiding over the company's $2.1bn sale to Nexen Petroleum. EnCana discovered and operated the 500mmboe Buzzard field.

Wide ranging drilling programme unvalued

Between Q407 and Q109, EnCore is involved in 10 planned/firm exploration and appraisal wells. This is a significant number of wells and includes both high-risk, high-impact exploration and medium-risk appraisal. The current share price indicates an EV of c.£36m which is a small premium for the potential value associated with an extensive exploration programme and places a significant discount on the potential value associated with a successful outcome.

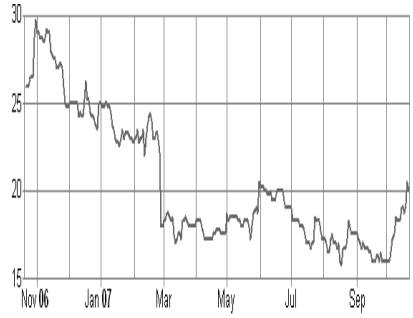
EMV and key prospects in the next 18 months

Our EMV analysis focuses on the company's key high impact assets. The Breagh Discovery has estimated reserves of 540bcf and an associated COS of 20%; we also assume a gross dry hole cost of £15m. The Bowstring East well has estimated reserves of 56mmboe with an estimated COS of 25% and a dry hole cost of £10m.The Catcher prospect has estimated reserves of 30mmboe and a chance of success of 20%, with an estimated dry hole cost of £8.5m.

Price	20.0p
Market Cap	£54m

Note: Priced at 22 Oct 2007

Share price graph



Share details

Code	EO.
Listing	AIM
Shares in issue	271.15m

Price

52 week	High	Low
	29.75p	15.75p

Balance Sheet*

Debt/Equity (%)	N/A
NAV per share (p)	16.7
Net cash (£m)	18.0

**as at 30 June 2007*

Business

EnCore is an exploration company focused on the UKCS. The company aims to participate in the drilling of at least 10 wells in 2007/2008.

Recent newsflow

24 Sep — Drilling begins at Breagh gas

20 Sep — Contract: Old Head of Kinsale

9 Aug — Prelim results

8 Aug — Successful testing at Schull

Geography based on revenues

UK	Europe	US	Other
0%	0%	0%	0%

Analyst

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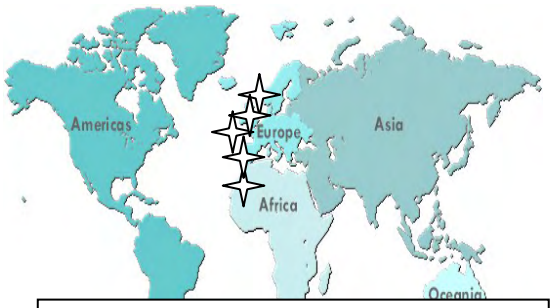
Key criteria

Investment criteria	Summary	Comment
Exploration geared upside	☑	Focus on exploration and appraisal in mature areas.
Strong sub-surface understanding	☑	Management and technical team credited with 500mmboe Buzzard discovery.
Efficient use of capital	☑	Bowstring farm-out to Revus Energy on a 1:1.5 basis.
Ability to balance risk and reward	☑	EMV value of three key prospects estimated at £110m.
A focus on drilling near term	☑	10 wells to be drilled in the next 18 months.

Location of assets

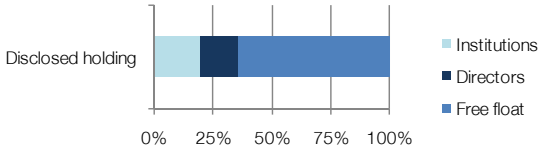


UK North Sea, UK onshore, Irish Sea, on and offshore Netherlands, onshore France, Western Sahara

EMV analysis

Prospect	Chance of success	Dry hole cost (£m)	P50 reserves (mmbo)	EMV (£m)
Breagh	20%	4.5	12	31
Bowstring East	25%	1.3	16	50
Catcher	20%	1.7	10.5	29

Free float



Financial summary

Year end Jun	2006	2007	2008e
Profit & Loss			
Turnover	0	0	0
(% change)	N/A	N/A	N/A
EBITDA	**(1,283)**	**(2,846)**	**(1,200)**
(% margin)	N/A	N/A	N/A
(% change)	N/A	N/A	N/A
EBIT pre GW and except's.	(1,283)	(2,846)	(1,200)
(% margin)	N/A	N/A	N/A
Net financial items	337	923	619
Other	0	(51)	(25)
Pre-tax profit (norm'd)	(946)	(1,973)	(606)
Tax	(18)	4	0
Net Income	**(964)**	**(1,969)**	**(606)**
EPS (norm'd and fd)	**(1.0)**	**(0.8)**	**(0.2)**
(% change)	N/A	N/A	N/A
Balance Sheet			
Fixed Assets	9,371	24,268	39,242
Current Assets	18,370	20,917	3,070
Current Liabilities	(406)	(1,187)	(1,500)
Long term Liabilities	(1,149)	(4,327)	(7,005)
Shareholders Equity	**26,186**	**39,672**	**33,807**
Cash Flow			
Cash flow from operations	(865)	(1,413)	(887)
Capex	0	0	(15,000)
Net debt(cash)	**(18,035)**	**(17,967)**	**(2,700)**

Non-exec Chairman

Mike Lynch began his career with Texaco. Prior to founding Intrepid Energy in 1996, he spent 20 years with Santa Fe International and Kuwait Petroleum Corporation. In 1988, he was appointed Managing Director and Chief Executive of Santa Fe Exploration (UK) Limited. It was subsequently sold to Saga for US$1.23bn. Mike Lynch was also Chairman and Chief Executive of Intrepid Energy, which was subsequently sold for over US$1bn.

CEO

Alan Booth was Chairman and Managing Director of EnCana (UK) Limited (now Nexen Petroleum UK Limited), and a member of EnCana Corporation's executive management team. In late 2004 Alan lead the UK team which sold EnCana (UK) Limited to Nexen Corporation for $2.1bn. Prior to EnCana, Alan worked in a number of positions for Amerada Hess and Oryx Energy, both in the UK and overseas.

Falkland Oil and Gas

Year End	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	PE (x)	Yield (%)
12/05	0.0	(0.8)	(1.2)	0.0	N/A	N/A
12/06	0.0	(1.0)	(1.2)	0.0	N/A	N/A
12/07e	0.0	(1.1)	(1.1)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding goodwill amortisation and exceptional items

Investment summary: Attracting heavyweights

The challenge of finding a rig to come out to the remote Falkland Islands required two key components to succeed: (1) a drilling programme for at least one year, and (2) a financial guarantee for the rig owner that the company or consortium could afford the rig. Having done its own work to focus on key targets, the significant potential of the Falklands attracted BHP which unlocked the conundrum of getting a rig to the Falklands. BHP brings with it a sizeable balance sheet and access to rigs.

Strong technical teams at both FOGL and BHP

Tim Bushell had brought on a team he knew. Colin Moore came across from Palladin Resources in April 2006 as FOGL's exploration manager. He comes with 24 years' experience including time at Palladin, Cairn, Conco and Scott Pickford. The BHP team has a dedicated seismic team (Houston) and a CSEM expert (Melbourne).

Narrowing down the leads with sizeable prospects

Having shot 33,000km of seismic and seven CSEM lines, management focused on a set of promising targets in the north of its licence areas. The TRACS competent persons report focused on the top 10 leads and estimated unrisked resources of 10bn bbls. It is this sizeable potential that attracted BHP's interest.

Commercial farm-out

Whilst there has been some debate in the market as to whether FOGL should have given BHP up to 65% of the equity in the prospect, we share management's sentiment that 35% of something is better than 100% of nothing. Importantly, FOGL were prepared to allow BHP to farm-in to all areas of its 2002 and 2004 licences, which we believe was key to keeping BHP at the negotiating table; many other oil exploration companies have not been prepared to do so.

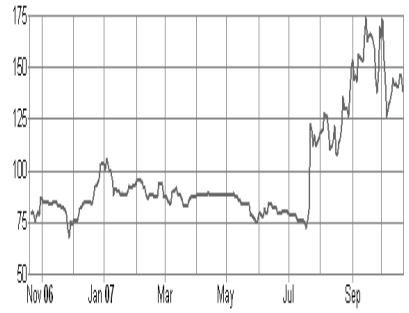
£559m EMV, rig likely to reach Falklands end '08, early '09

Our EMV analysis focuses on only one prospect, Loligo, which has reserves of 3.4bnbboe, a dry hole cost of $50m (assuming BHP does not increase option) and a 11.5% chance of success, giving an EMV of £559m. BHP currently has two deep water rigs and their semi-submersible becomes available mid-2008, suggesting we are likely to see a rig ready to drill by end-2008 or early 2009.

Price	139.0p
Market Cap	£128m

Note: Priced at 22 Oct 2007

Share price graph



Share details

Code	FOGL
Listing	AIM
Shares in issue	91.95m

Price

52 week	High	Low
	174.5p	67.5p

Balance Sheet*

Debt/Equity (%)	N/A
NAV per share (p)	24.6
Net cash (£m)	3.7

**as at 30 June 2007*

Business

Falkland Oil & Gas is an oil and gas exploration company operating in the undrilled South and East Falkland Basins.

Recent news

9 Oct — Presentation on farm-in

2 Oct — BHP Billiton farm-in

23 Jul — Reports talks with farm-in partner

7 Jun — Encouraging CSEM results

Geography based on revenues

UK	Europe	US	Other
0%	0%	0%	0%

Analyst

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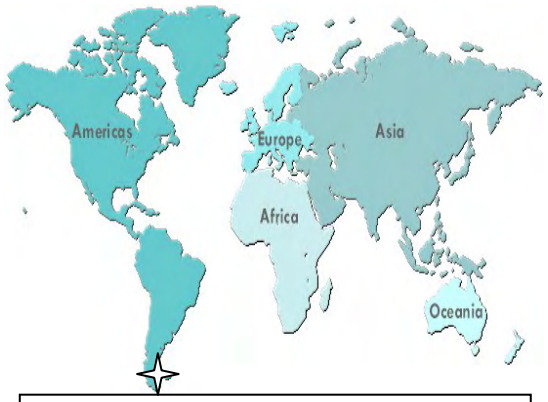
Key criteria

Investment criteria	Summary	Comment
Exploration geared upside	☑	Significant frontier acerage in the Falklands, equivalent of 300 North Sea blocks.
Strong sub-surface understanding	☑	Strong technical team, complemented by BHP's in-house resources. BHP team already working on offshore Namibia and South Africa, which has similar geology.
Efficient use of capital	☑	Raised the prospects of getting a rig to the Falklands through farm-out agreement with BHP Billiton. BHP has an option to increase stake further.
Ability to balance risk and reward	☑	EMV of £559m from lead prospect; there are numerous other plays in the area.
A focus on drilling near term	☑	Rig is expected to arrive end-2008, early 2009. BHP currently contracting two deep water rigs, may require a swap with another operator.

Location of assets

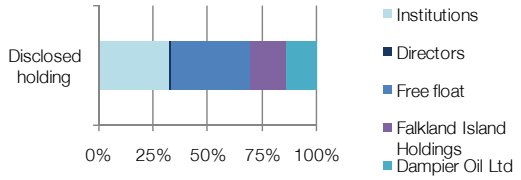


Offshore Falkland Islands

EMV analysis

Prospect	Chance of success	Dry hole cost ($m)	P50 reserves (mmbo)	EMV (£m)
Loligo	11.5%	50	3,382	559

Free float



Financial summary

Year end Dec	2005	2006	2007e
Profit & Loss			
Turnover	0	0	0
(% change)	N/A	N/A	N/A
EBITDA	**(1,519)**	**(1,435)**	**(1,340)**
(% margin)	N/A	N/A	N/A
(% change)	N/A	N/A	N/A
EBIT pre GW and except's.	(1,540)	(1,463)	(1,370)
(% margin)	N/A	N/A	N/A
Net financial items	719	433	300
Other	0	0	0
Pre-tax profit (norm'd)	(821)	(1,029)	(1,070)
Tax	(228)	(85)	0
Net Income	**(1,049)**	**(1,114)**	**(1,070)**
EPS (norm'd and fd)	**(1.17)**	**(1.21)**	**(1.13)**
(% change)	N/A	N/A	N/A
Balance Sheet			
Fixed Assets	8,473	11,426	22,100
Current Assets	14,970	17,642	15,926
Current Liabilities	(1,191)	(5,864)	(1,800)
Long term Liabilities	0	(1,296)	(4,211)
Shareholders Equity	**22,252**	**21,909**	**32,015**
Cash Flow			
Cash flow from operations	(1,578)	(1,197)	(3,787)
Capex	(5,996)	(206)	(10,674)
Net debt(cash)	**(13,975)**	**(13,629)**	**(10,615)**

Chairman

Richard Liddell was Operations Director of Premier Oil from 1999 until 2003 and prior to that spent two years as Director of Development at BG Exploration and Production. He previously held a number of positions during an eighteen-year career at Philips Petroleum Company.

CEO

Tim Bushell joined from Paladin Resources where he was Managing Director, Norway, from 2001. Previously he had 10 years with Lasmo, including as Manager of Lasmo's North Sea assets and General Manager of its South Atlantic business unit. Prior to Lasmo, he spent time at Ultramar, British Gas and Schlumberger.

Faroe Petroleum

Year End	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	PE (x)	Yield (%)
12/05	0.0	(0.5)	(0.9)	0.0	N/A	N/A
12/06	0.0	(3.2)	(3.5)	0.0	N/A	N/A
12/07e	1.3	(2.5)	(1.6)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding goodwill amortisation and exceptional items

Investment summary: Built on expertise

Faroe Petroleum has a focused exploration strategy built on excellent sub-surface understanding gained in the high impact areas of the West of Shetland/Faroe Islands and North Sea. As a result, the company has been able to leverage that knowledge through a diversified risk reduction strategy, including farm-downs and tax synergies. Our analysis indicates an overall EMV for the company's three key prospects of £166m.

Sub-surface expertise drives strategy…

Faroe's strategic focus is built on strong technical foundations. Its initial move into the West of Shetland was driven by local experience and sub-surface expertise. The team includes a number of the successful former Paladin Resources Norway team in Stavanger appointed following the sale of Paladin Resources to Talisman in late 2005. The sub-surface and technical team is made up of 12 people, including nine dedicated to geology and geophysics, one reservoir and one petroleum engineer and a drilling manager.

… and leads to capital efficiency

The benefit of specialised knowledge is reflected in the quality of the company's partners. Idemitsu Kosan Co (the parent company of Idemitsu E&P UK Limited) is one of Japan's leading energy and petrochemical companies. Other partners include Shell, BP, ENI and ChevronTexaco in the Faroe's, and Centrica and ConocoPhillips in Norway. The company's ability to partner with major companies and qualify for a 78% Norwegian tax subsidy on exploration activity was based on the credentials of its dedicated team in Stavanger. We believe the farm-in agreements will save c.£10m.

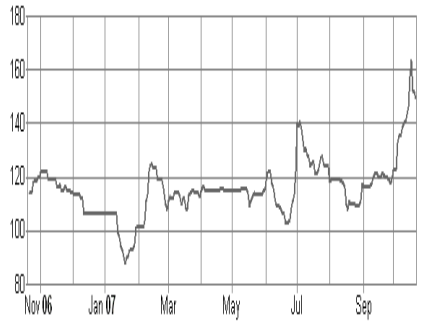
Key assets in the next 18 months and EMV

The Anne-Marie prospect lies in the Faroe Islands and has a 25% chance of success, based on a gross dry hole cost of £40m and reserves of 400mmbo. We assume a net project EMV of £86m. The Tornado prospect has a net EMV of £19m. Cardhu has 25% chance of success, on gross dry hole cost of £40m and reserves of 400mmbo. We assume a net project EMV of £61m. A rig has been secured to start drilling at Anne Marie in 2008/2009.

Price	149.5p
Market Cap	£111m

Note: Priced at 22 Oct 2007

Share price graph



Share details

Code	FPM
Listing	AIM
Shares in issue	74m

Price

52 week	High	Low
	164.0p	88.0p

Balance Sheet*

Debt/Equity (%)	N/A
NAV per share (p)	75.3
Net cash (£m)	28.3

**as at 30 June 2007*

Business

Faroe Petroleum is an independent upstream oil and gas company which is currently operating in the Faroe Islands, the UK West of Shetlands, the North Sea and the Norwegian Sea.

Recent newsflow

17 Oct — acquires 18.8% of Wissey gas field

10 Sep — Interims, gas production income

4 Jul — Rig secured for Breagh appraisal well

29 Jun — John Bentley appointed Non Ex Chair

22 Jun — First gas production from Minke

4 June — £10m credit facility secured

Geography based on revenues

UK	Europe	US	Other
100%	0%	0%	0%

Analyst

Kwaku Boakye-Adjei 020 7190 1620

kboakye-adjei@edisoninvestmentresearch.co.uk

Key criteria

Investment criteria	Summary	Comment
Exploration geared upside	☑	A pure exploration play built around unexplored potential in the Faroe Islands, the North Sea and Norway.
Strong sub-surface understanding	☑	Strong and diverse sub-surface team of 12: nine in geology and geophysics, one reservoir, one petroleum engineer and one drilling manager.
Efficient use of capital	☑	Farm-in agreements with Shell, BP, Celtic Oil & Gas and ChevronTexaco. Estimated savings of £10m and 78% Norwegian tax subsidy reduces dry hole costs.
Ability to balance risk and reward	☑	EMV for Anne-Marie alone £86m. Focusing on the highest value project first.
A focus on drilling near term	☑	Anne-Marie operator plans to drill prospect in 2008/2009.

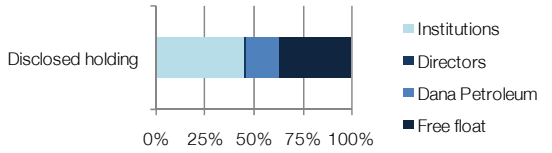
Location of assets

UK West of Shetland, the North Sea and the Norwegian Sea

EMV analysis

Prospect	Chance of success	Dry hole cost (£m)	P50 reserves (mmbo)	EMV (£m)
Anne-Marie	25%	3	60	86
Cardhu	25%	4	42	61
Tornado	33%	2	10	19

Free float



Financial summary

Year end Dec	2005	2006	2007e
Profit & Loss			
Turnover	0	0	1,300
(% change)	N/A	N/A	N/A
EBITDA	**(1,317)**	**(3,803)**	**(3,445)**
(% margin)	N/A	N/A	N/A
(% change)	N/A	N/A	N/A
EBIT pre GW and except's.	(1,354)	(3,927)	(3,670)
(% margin)	N/A	N/A	N/A
Net financial items	890	751	1,209
Other	0	0	0
Pre-tax profit (norm'd)	(464)	(3,176)	(2,461)
Tax	0	801	869
Net Income	**(464)**	**(2,375)**	**(1,592)**
EPS (norm'd and fd)	**(0.9)**	**(3.5)**	**(1.6)**
(% change)	N/A	N/A	N/A
Balance Sheet			
Fixed Assets	12,419	18,670	22,511
Current Assets	23,249	36,646	28,904
Current Liabilities	(2,048)	(2,954)	(3,100)
Long term Liabilities	0	(452)	(2,500)
Shareholders Equity	**33,620**	**51,910**	**45,815**
Cash Flow			
Cash flow from operations	(567)	(5,149)	(3,821)
Capex	(2,683)	(7,819)	(9,000)
Net debt(cash)	**(22,851)**	**(33,016)**	**(21,404)**

Non-exec Chairman

John Bentley has 35 years' experience in the natural resources sector. In 1996 he was instrumental in spinning off Energy Africa from Engen and listing it on the Johannesburg and Luxembourg stock exchanges. As CEO during its first five years he guided Energy Africa through its development into one of the leading independent E&P companies in Africa. John holds a degree in Metallurgy from Brunel University.

CEO

Graham Stewart was instrumental in founding Faroe Petroleum in 1998. Graham has 21 years' experience in oil and gas technical and commercial affairs. He has an honours degree in Offshore Engineering from Heriot-Watt University and an MBA from Edinburgh University. He previously held positions with Schlumberger, DNV Technical and the Petroleum Science and Technology Institute, where he was commercial director.

Mediterranean Oil & Gas

Year End	Revenue (€m)	PBT* (€m)	EPS* (¢)	DPS (¢)	PE (x)	Yield (%)
06/06	4.5	(1.0)	(3.6)	0.0	N/A	N/A
06/07	4.9	(0.1)	(1.0)	0.0	N/A	N/A
06/08e	5.0	(0.4)	(1.9)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding goodwill amortisation and exceptional items.

Investment summary: High quality assets

Mediterranean Oil & Gas (MOG) has a portfolio of assets with both signifcant and near-term potential. The company plans to begin a high impact three-well drilling programme in November 2007 by spudding the Teboursouk well located onshore Tunisia. This will be followed, in early 2008, by the Ombrina Mare field and in December, by the Monte Grosso field located onshore Italy. All three assets have valuation changing potential; we have ascribed a combined EMV of £166m.

Key assets: Significant exploration geared upside

With potential volumes of 280mmbo, Monte Grosso (MOG 23%) reserves would be classed as a significant find by any company. The Teboursouk prospect onshore Tunisia has comparatively low exploration costs and high values associated with potential reserves (80mmboe, MOG 25%) in a success case. Access to high oil prices, low development costs and available infrastructure make the Ombrina Mare discovery an attractive opportunity.

Strong technical team in place

Mediterranean Oil & Gas has a strong technical focus in both senior management and the project teams set up to deliver on the company's key assets. The company has inherited a number of key technical personnel from UK major BG Group (the original operator of Monte Grosso) after the company exited Italy following internal difficulties. The quality of its sub-surface team is reflected in the confidence of its high profile partners.

Super majors endorsement

ENI is a world class operator, both onshore and offshore, and has the largest equity interest (53%) in Monte Grosso. It is rare in the sector to see large super majors (including Total, 11%) with material capital exposure acting as non-operators to AIM-sized companies; the fact that this is the case with MOG is testament to the expertise and background of both management and the project team.

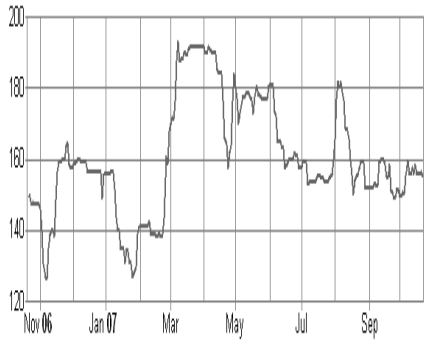
Management has experience with key prospects

Current CEO Sergio Morandi has direct experience working on two of the company's key assets. At Elf (now Total) he worked within the technical team which discovered the Ombrina Mare discovery and as exploration manager of Elf's Italian subsidiary and was involved in the evaluation of the Monte Grosso prospect.

Price	155.0p
Market Cap	£52m

Note: Priced at 22 Oct 2007

Share price graph



Share details

Code	MOG
Listing	AIM
Shares in issue	33.6m

Price

52 week	High	Low
	193.0p	126.5p

Balance Sheet*

Debt/Equity (%)	N/A
NAV per share (¢)	61.6
Net cash (€m)	8.4

**as at 30 June 2007*

Business

Mediterranean Oil & Gas is focused on exploration in the regions of Italy, Malta, France and Tunisia.

Recent newsflow

17 Sep — CEO Sergio Morandi appointed

6 Sep — New Italian permits awarded

26 Jul — Permit for well in France, Grenade 3

12 Jul — Convertible bond terms changed

5 Jun — 2D seismic starts in Malta, Area 4

Geography based on revenues

UK	Europe	US	Other
0%	0%	0%	0%

Analyst

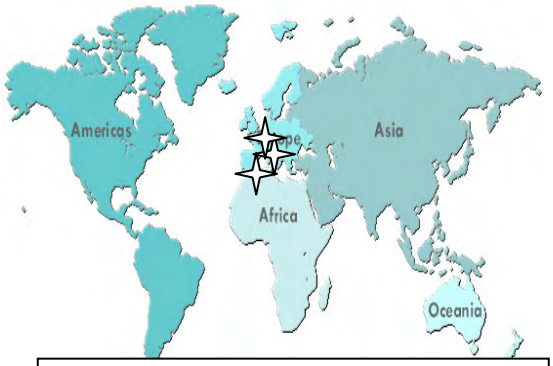
Kwaku Boakye-Adjei 020 7190 1620

kboakye-adjei@edisoninvestmentresearch.co.uk

Key criteria

Investment criteria	Summary	Comment
Exploration geared upside	☑	High impact exploration at Monte Grosso coupled with high success value asset at Teboursouk.
Strong sub-surface understanding	☑	Inherited BG's technical team when BG left Italy, management has technical experience on key projects.
Efficient use of capital	☑	High profile partners in ENI and TOTAL.
Ability to balance risk and reward	☑	EMV reflects low dry hole costs mateched and high potential reward. EMV estimated at £166m for three key assets.
A focus on drilling near term	☑	Three high impact wells to be drilled in 2008.

Location of key assets

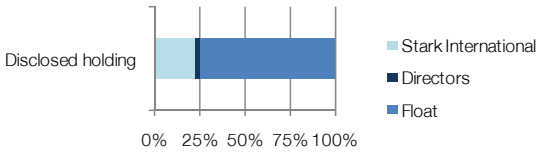


Italy, Malta, France and Tunisia

EMV analysis

Prospect	Chance of success	Dry hole cost (£m)	P50 reserves (mmbo)	EMV (£m)
Monte Grosso	15%	7.5	27	87
Teboursouk	20%	1.0	37.5	21
Ombrina Mare	33%	10.4	28	58

Free float



Financial summary

Year end Jun	2006	2007	2008e
Profit & Loss			
Turnover	4,486	4,922	5,000
(% change)	N/A	10%	2%
EBITDA	**381**	**941**	**800**
(% margin)	8%	19%	16%
(% change)	N/A	N/A	N/A
EBIT pre GW and except's.	(962)	(677)	(700)
(% margin)	N/A	N/A	N/A
Net financial items	(33)	614	300
Other	0	0	0
Pre-tax profit (norm'd)	(995)	(63)	(400)
Tax	(64)	(287)	(250)
Net Income	**(1,059)**	**(350)**	**(650)**
EPS (norm'd and fd)	**(3.6)**	**(1.0)**	**(1.9)**
(% change)	N/A	N/A	N/A
Balance Sheet			
Fixed Assets	18,804	18,785	26,285
Current Assets	18,580	19,306	10,999
Current Liabilities	(2,727)	(6,019)	(5,750)
Long term Liabilities	(11,964)	(11,381)	(9,839)
Shareholders Equity	**22,693**	**20,691**	**21,695**
Cash Flow			
Cash flow from operations	499	2,753	571
Capex	(1,897)	(3,358)	(9,000)
Net debt(cash)	**(8,674)**	**(8,416)**	**501**

Non-exec Chairman

Michael Bonte-Friedheim has over 15 years' experience in the Investment Banking Industry, during which he focused primarily on the European Power and Energy Sector. Prior to joining MOG he was a managing director in Goldman Sachs Energy and Power team working within the bank's European Investment banking division.

CEO

Sergio Morandi has 27 years' experience in oil & gas exploration, operations management and the acquisition, processing and interpretation of seismic data. He has worked at ENI, Coparex, ELF, Enterprise Oil, Shell Italia E&P and Shell International E&P. From 1997 to 2003, he was a lecturer of Applied Seismology at Basillicata University in Italy, and in 2002 and 2003 he was a board member of the Italian National Upstream Association (Associazione) Mineraria Italiana).

Nautical Petroleum

Year End	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	PE (x)	Yield (%)
06/06	0.0	(2.4)	(0.3)	0.0	N/A	N/A
06/07	0.0	(0.9)	(0.0)	0.0	N/A	N/A
06/08e	0.0	(4.9)	(0.4)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding goodwill amortisation and exceptional items

Investment summary: Drill-ready

Nautical Petroleum is a UK-based exploration and production company, with a focus on heavy oil prospects. The company is about to begin a three-well, high impact drilling programme in the UK North Sea. Nautical has married its ready-to-drill portfolio with strong commercial expertise and, as a result, has achieved a number of attractive farm-in deals which have reduced capital exposure by £10m. The company also recently raised an estimated £19m (net). The clustered nature of the company's portfolio also provides the potential for significant additional tax efficiencies. We have ascribed a combined EMV value for the company's three key assets of £107m.

Farm-in deals

In a saturated, competitive and capital intensive sector, Nautical has completed a number of attractive farm-in deals with both foreign investors and peer group companies. In 2006 the company completed a wide ranging farm-in deal with SK Corp of Korea, which covered four blocks. Following on from that, the company this year completed a further farm-in deal with UK-based Silverstone Energy. We value the capex savings associated with these farm-in deals at £10m.

A specialist explorer

The costs associated with refining heavy oil crudes meant that in the periods prior to the recent oil price boom, many heavy oil prospects were ignored. In the wake of increased oil prices and improvements in refining technology, the margins associated with heavy oil fields have improved dramatically. With the assets located in mature areas, the exploration potential has begun to attract the attention of super majors. Nautical has developed a significant amount of expertise in the field and has been able to develop partnerships with super major operators such as StatoilHydro as a result.

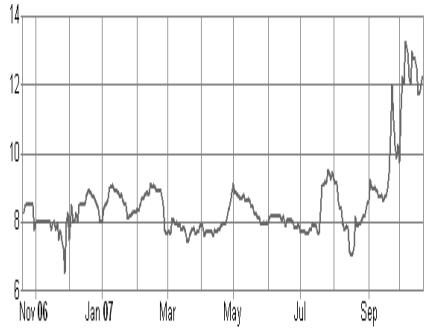
Key assets in the next 18 months and EMV

Nautical is about to embark on a heavily subsidised high impact three-well campaign in the UK North Sea. The wells to be drilled are the 53mmboe Kraken discovery, which has a 40% chance of success, the 129mmboe Mermaid prospect, which has a 20% chance of success, and the 30mmboe Catcher prospect, also with an estimated chance of success of 20%. We estimate that the combined dry hole cost associated with drilling all prospects is £7.2m.

Price	12.25p
Market Cap	£132m

Note: Priced at 22 Oct 2007

Share price graph



Share details

Code	NPE
Listing	AIM
Shares in issue	1077.7m

Price

52 week	High	Low
	13.25p	7.0p

Balance Sheet*

Debt/Equity (%)	N/A
NAV per share (p)	5.3
Net cash (£m)	10.3

**as at 30 June 2007*

Business

Nautical Petroleum is an upstream oil and gas company with assets in the UKCNS and France.

Recent newsflow

17 Oct — £19m (net) fundraising

3 Oct — Prelims

20 Sep — Announces appraisal at Kraken

19 Sep — Silverstone Energy farm-out

26 Jul — Drilling approval of Grenade-3 well

Geography based on revenues

UK	Europe	US	Other
0%	0%	0%	0%

Analyst

Kwaku Boakye-Adjei 020 7190 1620

kboakye-adjei@edisoninvestmentresearch.co.uk

Key criteria

Investment criteria	Summary	Comment
Exploration geared upside	☑	Niche play, focusing on heavy oil in UK North Sea.
Strong sub-surface understanding	☑	Significant expertise in heavy oil both in house and through association with Masefield group of companies.
Efficient use of capital	☑	Farm-in deals with SK Corporation of Korea and Silverstone Energy, estimated to reduce capex by £10m.
Ability to balance risk and reward	☑	EMV value of three key prospects estimated at £107m.
A focus on drilling near term	☑	About to commence a three well drilling campaing in the North Sea.

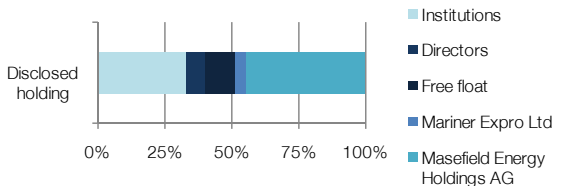
Location of key assets

UK Central North Sea and onshore France

EMV analysis

Prospect	Chance of success	Dry hole cost (£m)	P50 reserves (mmbo)	EMV (£m)
Kraken	40%	4.7	23	29
Mermaid	20%	1.2	97	76
Catcher	20%	1.3	5	2

Free float



Financial summary

Year end Dec	2005	2006	2007e
Profit & Loss			
Turnover	495	227	4,500
(% change)	N/A	N/A	1882%
EBITDA	**(969)**	**(2,039)**	**16,000**
(% margin)	N/A	N/A	355.6%
(% change)	N/A	N/A	N/A
EBIT pre GW and except's.	(1,022)	(2,114)	14,800
(% margin)	N/A	N/A	329%
Net financial items	164	415	1,000
Other	0	0	0
Pre-tax profit (norm'd)	(858)	(1,699)	15,800
Tax	(13)	0	(1,200)
Net Income	**(871)**	**(1,699)**	**14,600**
EPS (norm'd and fd)	**(1.62)**	**(2.66)**	**20.71**
(% change)	N/A	N/A	N/A
Balance Sheet			
Fixed Assets	3,871	9,043	18,546
Current Assets	3,007	18,549	24,894
Current Liabilities	(930)	(3,381)	(7,700)
Long term Liabilities	0	0	0
Shareholders Equity	**5,948**	**24,211**	**35,740**
Cash Flow			
Cash flow from operations	(540)	(361)	18,613
Capex	(2,806)	(5,299)	(12,000)
Net debt(cash)	**(1,904)**	**(15,954)**	**(22,867)**

Chairman

Ian Williams has 27 years' experience with Royal Dutch/Shell, latterly in a range of senior positions. Joined Masefield Group in 1999 with responsibility for development and management of business ventures leading to the formation of Masefield Energy Holdings AG.

CEO

Stephen Jenkins joined the Masefield Group in 2003 and is responsible for all upstream technical management. As part of a 20-year career in oil and gas, Stephen spent the 11 years prior to joining Masefield at Nimir Petroleum as Business Development and HSE Manager, where he was responsible for acquisition strategy and technical dimensions of strategic planning. He also managed a drilling programme that resulted in the quadrupling of production in a field on Sakhalin Island in the Russian Federation, and identified and secured a farm-out for a substantial carry on a large oilfield in Kazakhstan.

Northern Petroleum

Year End	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	PE (x)	Yield (%)
12/05	0.5	(0.9)	(1.6)	0.0	N/A	N/A
12/06	0.2	(1.7)	(2.7)	0.0	N/A	N/A
12/07e	4.5	15.8	20.7	0.0	8.6	N/A

Note: *PBT and EPS are normalised, excluding goodwill amortisation and exceptional items

Investment summary: Ready-made market

Northern Petroleum is poised to begin drilling its first well onshore Italy in 2008. We believe its two Italian prospects represent an attractive opportunity to investors through the location of proven reserves in a large, tax-efficient market. The group has a 50% interest in the 100bcf Savio prospect and a 50% interest in licence CR147 NP. Together we value these assets on an EMV basis at £389m.

Commercially-focused management team

Management has shown itself adept at realising value from producing assets, allowing it to focus on its exploration activities. In April the group sold 25% of its Netherlands licences to Dyas in a deal that valued the assets at £86m. Furthermore, Northern retains a 5% royalty over Dyas' share of production. Perhaps of greater significance, is Dyas' €14m commitment to support Northern's non-Netherlands exploration programme, which indicates the support for Northern's exploration-focused growth strategy. Dyas is a leading European independent which acquired Edinburgh Oil & Gas in 2005. The company is also a shareholder in the 150K/bbl day Elgin Franklin field.

Italy is a high value exploration hub

Falling reserves coupled with long lead times between development and production as well as increasing demand has driven up Italian gas prices. As a result the country has begun to attract significant amounts of exploration capital. Reduced discovery sizes are compensated for by high prices (double those found in the UK) and high value barrels. Consistent with a mature producing area, high levels of infrastructure also encourage fast track developments. Aside from ENI, Northern Petroleum holds the largest exploration acreage position in Italy.

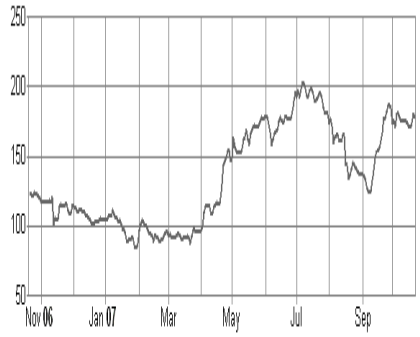
Italian assets drilled in 2008

Northern will begin its drill programme at Savio with a single appraisal well. We have assumed a 20% chance of success for this programme. For its less developed CR147 NP licence we have assumed a two-well programme and a 15% chance of success. For both prospects we estimate a dry hole cost of £7m. Our combined EMV for these two prospects is £389m.

Price	177.5p
Market Cap	£125m

Note: Priced at 22 Oct 2007

Share price graph



Share details

Code	NOP
Listing	AIM
Shares in issue	70.5m

Price

52 week	High	Low
	202.5p	83.5p

Balance Sheet*

Debt/Equity (%)	N/A
NAV per share (p)	41.5
Net cash (£m)	24.7

**as at 30 June 2007*

Business

Northern Petroleum is an upstream oil and gas company which is currently operating in the Netherlands, the UK, Italy and Spain.

Recent newsflow

4 Oct — Additional 9.8m bbl reserves

30 Jul — Licences transferred to Northern

23 July — Testing of Ottoland-1

25 Jun — Award of licences offshore Italy

Geography based on revenues

UK	Europe	US	Other
0%	100%	0%	0%

Analyst

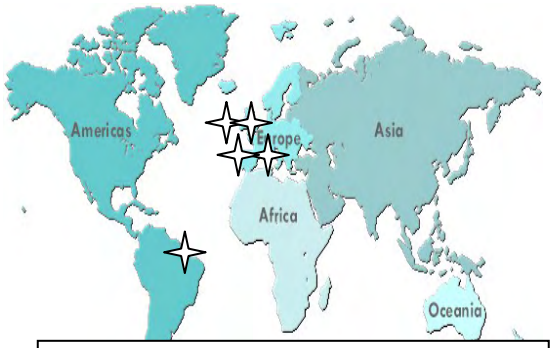
Kwaku Boakye-Adjei 020 7190 1620

kboakye-adjei@edisoninvestmentresearch.co.uk

Key criteria

Investment criteria	Summary	Comment
Exploration geared upside	☑	High impact Italian drilling programme.
Strong sub-surface understanding	☑	Strong expertise in-house coupled with partnerships including Dyas.
Efficient use of capital	☑	Operating, tax and logistical efficiences from activities in Western Europe.
Ability to balance risk and reward	☑	Farm-in agreements secured on a number of prospects. Italian production provides high value in a success case.
A focus on drilling near term	☑	Savio gas appraisal well expected to be drilled in 2008.

Location of assets

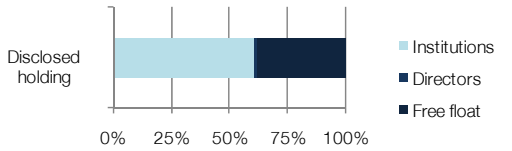


On/offshore Netherlands, on/offshore UK, offshore Guyane, on/offshore Italy and onshore Spain

EMV analysis

Prospect	Chance of success	Dry hole cost (£m)	P50 reserves (mmbo)	EMV (£m)
Savio	20%	7	17	58
CR147 NP	15%	7	400	331

Free float



Financial summary

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Turnover	495	227	4,500
(% change)	N/A	N/A	1882%
EBITDA	**(969)**	**(2,039)**	**17,000**
(% margin)	N/A	N/A	377.8%
(% change)	N/A	N/A	N/A
EBIT pre GW and except's.	(1,022)	(2,114)	15,800
(% margin)	N/A	N/A	351%
Net financial items	164	415	0
Other	0	0	0
Pre-tax profit (norm'd)	(858)	(1,699)	15,800
Tax	(13)	0	(1,200)
Net Income	**(871)**	**(1,699)**	**14,600**
EPS (norm'd and fd)	**(1.62)**	**(2.66)**	**20.71**
(% change)	N/A	N/A	N/A
Balance Sheet			
Fixed Assets	3,871	9,043	18,546
Current Assets	3,007	18,549	25,894
Current Liabilities	(930)	(3,381)	(7,700)
Long term Liabilities	0	0	0
Shareholders Equity	**5,948**	**24,211**	**36,740**
Cash Flow			
Cash flow from operations	(540)	(361)	19,613
Capex	(2,806)	(5,299)	(12,000)
Net debt(cash)	**(1,904)**	**(15,954)**	**(23,867)**

Chairman

Richard Latham was formerly Deputy Chairman of Aberdeen Petroleum, Chairman and Managing Director of Claremount Oil and Gas Limited, and a Non-Executive Director of Atlantis Resources Limited, a company listed on the London and Toronto Stock Exchanges.

MD

Derek Musgrove is also the Chairman of Plus markets-quoted ATI Oil Plc. He had previously held senior managerial or board positions with RTZ Oil & Gas Limited, Candecca Resources, Plascom, Anglo Scandinavian Petroleum and Bass Resources Limited. He was also a consultant to a number of oil and gas companies, particularly in the areas of new projects and trading of oil and gas properties.

Providence Resources

Year End	Revenue (€m)	PBT* (€m)	EPS* (¢)	DPS (¢)	PE (x)	Yield (%)
12/05	1.4	0.1	0.0	0.0	N/M	N/A
12/06	2.0	0.1	0.0	0.0	N/M	N/A
12/07e	3.5	0.8	0.0	0.0	N/M	N/A

Note: *PBT and EPS are normalised, excluding goodwill amortisation and exceptional items

Investment summary: Attractive terms drive value

Providence Resources is an oil and gas exploration and production company with high impact assets concentrated largely in the unexplored acreage of offshore Ireland. Whilst relatively unexplored, the area has already delivered material value through Providence's recent Hook Head oil discovery. Irish fiscal terms are generally recognised as being among the most attractive in the world. The company has built a strong technical presence in the area and has used that to introduce partners and reduce risk. Providence has completed farm-in deals with partners which include super major ExxonMobil. We suggest an EMV for the company's two key assets of £216m. This compares to its current EV of £167m.

A variety of attractive farm-in deals

Providence Resources has completed a number of farm-in deals on its key assets. The company is fully carried by Exxon in the data acquisition phase of its Dunquin prospect, with the potential for a two-well programme. On its Spanish Point prospect the company has recently completed a 10% farm-down with independent, CM. On the Hook Head prospect the company has completed numerous farm-in deals with Dutch independent Dyas (purchased Edinburgh Oil & Gas' interest in the Buzzard oil field) and smaller independents, such as Atlantic Petroleum.

Technical competency

Providence has eight permanent sub-surface personnel including two geologist and two petroleum engineers. Added to this is a strong management team: COO Tony Odone is a member of the Institute of Civil Engineers and the Society of Petroleum Engineers, with 30 years' experience in the oil and gas sector. John O'Sullivan, the exploration manager, is a Fellow of the Geological Society and has 16 years of sector experience with Mobil and Marathon, some of that time spent working up prospects offshore Ireland.

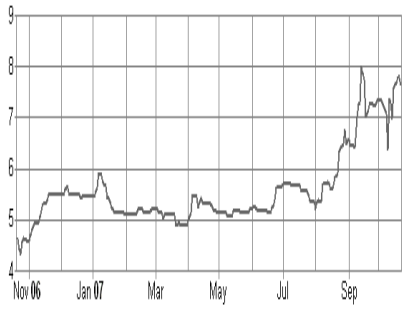
Key assets in the next 18 months and EMV

In the next 18 months we expect Providence to complete three high impact wells all in largely unexplored areas off the coast of Ireland. These include the potential 390mmboe Spanish point prospect which has a 15% chance of success and a $60m gross dry hole cost. The ExxonMobil-operated Dunquin North, prospect has estimated base case reserves of 500mmboe, gross dry hole costs of $100m and a chance of success of 15%.

Price	7.7p
Market Cap	£190m

Note: Priced at 22 Oct 2007

Share price graph



Share details

Code	PVR
Listing	AIM
Shares in issue	2,471m

Price

52 week	High	Low
	8.0p	4.5p

Balance Sheet*

Debt/Equity (%)	N/A
NAV per share (¢)	1.8
Net cash (€m)	23.4

**as at 30 June 2007*

Business

Dual listed international exploration company with activities in Ireland, the UK, Nigeria and the Gulf of Mexico.

Recent newsflow

10 Oct — Confirms oil find at Hook Head

25 Sep — Interims

13 Sep – New Celtic Sea licensing option

06 Sep — First production at High Island

20 Aug — Trading update

Geography based on revenues

UK	Europe	US	Other
0%	100%	0%	0%

Analyst

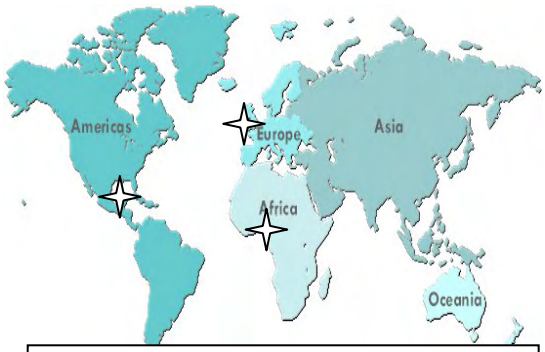
Kwaku Boakye-Adjei 020 7190 1620

kboakye-adjei@edisoninvestmentresearch.co.uk

Key criteria

Investment criteria	Summary	Comment
Exploration geared upside	☑	High impact frontier wildcat exploration in the North Celtic basin in offshore Ireland and offshore West Ireland. This includes the Spanish Point prospect.
Strong sub-surface understanding	☑	A team of eight sub-surface personnel , including two geologists and two petroleum engineers.
Efficient use of capital	☑	Completed numerous farm-in deals, partners include ExxonMobil, CM, Dyas and Atlantic Petroleum. Benefits from attractive Irish fiscal regime.
Ability to balance risk and reward	☑	EMV of £216m.
A focus on drilling near term	☑	Expected to drill the 390mmboe Spanish Point discovery in 2008.

Location of assets

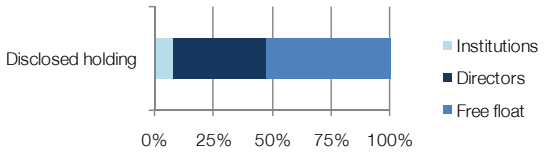


Offshore Ireland, the UK, Nigeria and the Gulf of Mexico

EMV analysis

Prospect	Chance of success	Dry hole cost ($m)	P50 reserves (mmbo)	EMV (£m)
Spanish Point	15%	16	62	153
Dunquin North	15%	36	80	63

Free float



Financial summary

Year end Dec	2005	2006	2007e
Profit & Loss			
Turnover	1,376	1,997	3,500
(% change)	N/A	45%	75%
EBITDA	**10**	**372**	**766**
(% margin)	0.7%	18.6%	21.9%
(% change)	N/A	N/A	N/A
EBIT pre GW and except's.	(18)	133	466
(% margin)	N/A	7%	13%
Net financial items	124	10	300
Other	0	0	0
Pre-tax profit (norm'd)	106	143	766
Tax	0	0	0
Net Income	**106**	**143**	**766**
EPS (norm'd and fd)	**0.01**	**0.01**	**0.03**
(% change)		N/A	N/A
Balance Sheet			
Fixed Assets	21,365	24,364	42,897
Current Assets	3,797	6,960	9,701
Current Liabilities	(1,940)	(2,738)	(4,000)
Long term Liabilities	(1,624)	(6,406)	(1,627)
Shareholders Equity	**21,598**	**22,180**	**46,971**
Cash Flow			
Cash flow from operations	(285)	315	3,507
Capex	(8,322)	(3,643)	(18,800)
Net debt(cash)	**(2,990)**	**299**	**(8,701)**

Non-exec Chairman

Dr Brian Hillery is currently non-executive chairman of both Independent News & Media PLC and UniCredito Italiano Bank (Ireland) Plc. A former Professor at the Graduate School of Business, University College Dublin, he has also served as a member of the Irish Parliament as a TD and Senator (1977–1994). He was an executive director of the European Bank for Reconstruction and Development (EBRD).

CEO

Tony O'Reilly Jnr previously worked in mergers and acquisitions at Dillon Read and in corporate finance at Coopers and Lybrand, advising natural resource companies. He served as Chairman of Arcon International Resources (having been Chief Executive from 1996 to 2000) until April 2005 when Arcon merged with Lundin Mining Corporation. He is a non-executive director of Independent News and Media, Lundin Mining Corporation, Fitzwilton Limited and a number of other companies.

Rockhopper Exploration

Year End	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	PE (x)	Yield (%)
03/07	0.0	(0.7)	(1.0)	0.0	N/A	N/A
03/08e	0.0	(1.1)	(1.4)	0.0	N/A	N/A
03/09e	0.0	(1.2)	(1.6)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding goodwill amortisation and exceptional items

Investment summary: Frontier potential

The recent entry of major natural resource company BHP Billiton into the Falklands and its commitment to a drilling programme, supports the view that the area has signficant and near-term exploration potential. Rockhopper has a technically mature portfolio, having carried out signficant sub-surface data gathering and are well placed to take advantage of its "first mover" status in an area soon to become an "exploration hotspot". To date , Rockhopper has completed its technical programme on licences PL023 and PL024, with the recently acquired 3D on licences PL032 and PL033 currently being interpreted. We suggest that its three key assets in licences PL023 and PL024 have an EMV value of £278m.

Technically mature and ready to drill

Rockhopper is well placed to attract the undoubted interest which will centre on the Falkland's following BHP's entry. The company has invested in detailed technical analysis and is close to completing the final stage of its sub-surface data gathering program; analysis of the results from its recently shot 3D seismic program. We expect an announcement in the near future regarding potential well targets and believe the company is well placed to participate in any Falkland's-wide exploration program.

The next "exploration hotspot"

BHP Billiton's entry into the Falkland's has gone a long way towards alleviating the major concern regarding potential exploration activity in the region. We suggest that with a rig set to arrive in 2008/2009, the area's untapped hydrocarbon potential is likely to attract a much greater pool of companies than those with pockets deep enough to secure a rig. With a 2.5bn barrel potential portfolio of prospects and leads in licences PL023 and PL024, and more to come shortly from the work in PL032 and PL033, Rockhopper should benefit from significant and high value farm-out deals.

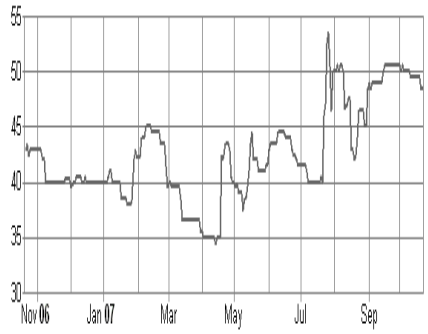
Valuation: Three key prospects

Prior to analysis of further 3D data, Rockhopper Exploration's three key prospects are taken only from licences PL023 and PL024. The 130mmboe Ernest prospect has a chance of success of 25%, the 287mmboe Dolphin prospect has a 20% chance of success and the 254mmboe Weddell prospect has a 25% chance of success. We assume a dry hole cost of £13m for all of the prospects.

Price	48.5p
Market Cap	£37m

Note: Priced at 22 Oct 2007

Share price graph



Share details

Code	RKH
Listing	AIM
Shares in issue	75.7m

Price

52 week	High	Low
	53.5p	34.5p

Balance Sheet*

Debt/Equity (%)	N/A
NAV per share (p)	2.2
Net cash (£m)	3.2

**as at 31 March 2007*

Business

Rockhopper Exploration is an oil and gas exploration company focused on the North Falkland Basin in the southern Atlantic.

Recent news

19 Sep — Relinquishment terms for PL023/4

10 Sep — 3D update on PL032 and PL034

01 Aug — AGM, trading on PLUS

25 Jul — Positive update on PL023 and PL024

18 Jun — Prelims

Geography based on revenues

UK	Europe	US	Other
0%	0%	0%	0%

Analyst

Kwaku Boakye-Adjei 020 7190 1620

kboakye-adjei@edisoninvestmentresearch.co.uk

Key criteria

Investment criteria	Summary	Comment
Exploration geared upside	☑	Frontier play in potential "exploration hotspot".
Strong sub-surface understanding	☑	Close to completing aggressive and comprehensive sub-surface data gathering program to derisk prospects.
Efficient use of capital	☑	Post BHP entry, we expect high interest in the Falklands Basin from a variety of indepedent and major oil companies.
Ability to balance risk and reward	☑	Total EMV of £278m. Significant potential for additional high impact prospects post analysis of new 3D seismic.
A focus on drilling near term	☑	Logistical issues now removed. Timetable however dependent on BHP/FOGL timetable.

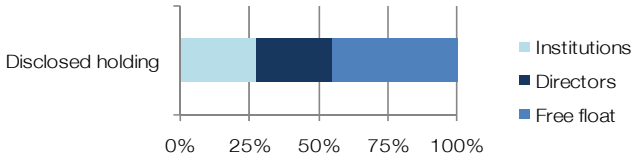
Location of assets

Falkland Islands

EMV analysis

Prospect	Chance of success	Dry hole cost (£m)	P50 reserves (mmbo)	EMV (£m)
Ernest	25%	13	130	54
Dolphin	20%	13	287	119
Weddell	25%	13	254	105

Free float



Financial summary

Year end Mar	2006	2007	2008e	2009e
Profit & Loss				
Turnover	0	0	0	0
(% change)	N/A	N/A	N/A	N/A
EBITDA	**(1,112)**	**(1,165)**	**(1,191)**	**(1,251)**
(% margin)	N/A	N/A	N/A	N/A
(% change)	N/A	N/A	N/A	N/A
EBIT pre GW and except's.	(1,115)	(1,174)	(1,200)	(1,260)
(% margin)	N/A	N/A	N/A	N/A
Net financial items	412	451	131	60
Other	0	0	0	0
Pre-tax profit (norm'd)	(703)	(723)	(1,069)	(1,200)
Tax	0	0	0	0
Net Income	**(703)**	**(723)**	**(1,069)**	**(1,200)**
EPS (norm'd and fd)	**(1.20)**	**(1.01)**	**(1.41)**	**(1.59)**
(% change)	N/A	N/A	N/A	N/A
Balance Sheet				
Fixed Assets	2,514	13,238	13,635	14,035
Current Assets	12,465	3,273	1,802	193
Current Liabilities	(59)	(793)	(800)	(800)
Long term Liabilities	0	0	0	0
Shareholders Equity	**14,920**	**15,718**	**14,637**	**13,428**
Cash Flow				
Cash flow from operations	(782)	(226)	(1,204)	(1,269)
Capex	(2,279)	(10,733)	(400)	(400)
Net debt(cash)	**(12,455)**	**(3,235)**	**(1,762)**	**(153)**

Exec Chairman

Pierre Jungles has held numerous senior international positions within the oil industry with Shell International, Petrofina SA and British Gas Plc. He became CEO of Enterprise Oil in 1996, leading the business to substantial geographic and financial growth until his retirement in November 2001. He is Non-executive Chairman of Offshore Hydrocarbon Mapping plc and Rockhopper Exploration Plc and a Non-executive Director of Woodside Petroleum Ltd.

Managing Director

Sam Moody has been responsible for building and managing the group from its formation in early 2004 and works closely with Dr Jungels in his role at Rockhopper. He previously worked in several roles within the financial sector, including positions at AXA Equity & Law Investment Management and St Paul's Investment Management.

Serica Energy

Year End	Revenue ($m)	PBT* ($m)	EPS* (¢)	DPS (¢)	PE (x)	Yield (%)
12/05	0.1	(12.8)	(13.5)	0.0	N/A	N/A
12/06	0.1	(15.6)	(9.8)	0.0	N/A	N/A
12/07e	0.0	(7.2)	(4.6)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding goodwill amortisation and exceptional items

Investment summary: Proven play

Serica is about to embark on a two-well "wildcat" drilling programme on its Billiton PSC located in the Java Sea, offshore Indonesia. The company has farmed out equity to reduce costs and is targeting large structures with the potential for valuation changing discoveries if they are succesful. We have attached an EMV value for the two prospects of £191m.

Technical focus secures farm-out

Serica has secured deals to farm-out a material proportion of the risked capital associated with its Indonesian prospects. In March 2007, the company completed a 45% farm-out deal with Nations Petroleum Ltd. As a result of a lack of secondary data, wildcat wells are generally more difficult to farm-down. In Serica's case we suggest that its experience in Indonesia and strong technical focus have been key in facilitating an attractive deal. In our EMV analysis we have assumed a well cost of $8m and a1:1.5 carry on the farm-out.

Indonesian "wildcat" term overstated

WoodMackenzie estimates that the average success rate for wildcat wells in Indonesia in 2005 was 20%, in line with the global average for all exploration wells. Remaining Indonesian oil and gas reserves are estimated to be 15 billion barrels of oil equivalent. The Java and Kalimantan regions are thought to hold a significant proportion of that potential. The Java Sea, whilst largely unexplored, lies between the prolific areas of Kalimantan and Java, both of which have success rates (30%) higher than the Indonesian and global exploration average.

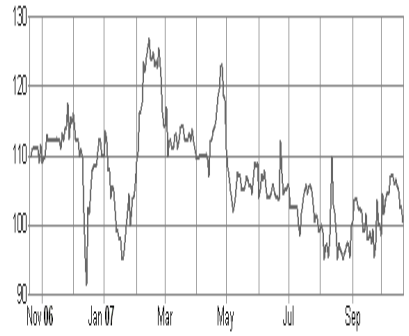
Key assets in the next 18 months and EMV

Serica's Indonesian assets have a good balance between low capital exposure and high impact valuations in a success case. Our EMV analysis is based on a 200mmboe base case for the Ismaya prospect and 400mmboe for the Indra prospect. We assume an $8m dry hole cost for each well and assign a 20% chance of success.

Price	100.5p
Market Cap	£152m

Note: Priced at 22 Oct 2007

Share price graph



Share details

Code	SQZ
Listing	AIM
Shares in issue	151.7m

Price

52 week	High	Low
	127.0p	92.0p

Balance Sheet*

Debt/Equity (%)	N/A
NAV per share (¢)	78.9
Net cash ($m)	56.6

**as at 30 June 2007*

Business

Serica energy is a UK based oil and gas exploration and production company with assets in the UK Central North Sea, Indonesia and Vietnam.

Recent news

25 Sep — Spudded first Columbus well

25 Sep — Secures rig for Indonesia

07 Aug — Q2 results

18 Jul — $100m debt facility

Geography based on revenues

UK	Europe	US	Other
0%	0%	0%	0%

Analyst

Kwaku Boakye-Adjei 020 7190 1620

kboakye-adjei@edisoninvestmentresearch.co.uk

Key criteria

Investment criteria	Summary	Comment
Exploration geared upside	☑	High impact, valuation changing potential in Indonesia.
Strong sub-surface understanding	☑	Strong sub-surface focus, with dedicated technical project teams on each asset.
Efficient use of capital	☑	Farm-in deals with Nations Petroleum Ltd has significantly reduced capital exposure.
Ability to balance risk and reward	☑	EMV value of two key prospects estimated at £191m.
A focus on drilling near term	☑	About to commence a two-well drill programme in Indonesia.

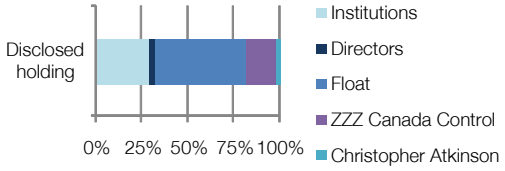
Location of assets

Offshore UK, offshore Norway, onshore Spain, offshore Indonesia and offshore Vietnam

EMV analysis

Prospect	Chance of success	Dry hole cost (£m)	P50 reserves (mmbo)	EMV (£m)
Ismaya	20%	4	90	61
Indra	20%	4	180	130

Free float



Financial summary

Year end Dec	2005	2006	2007e
Profit & Loss			
Turnover	124	61	0
(% change)	N/A	N/A	N/A
EBITDA	**(13,329)**	**(22,704)**	**(9,900)**
(% margin)	N/A	N/A	N/A
(% change)	N/A	N/A	N/A
EBIT pre GW and except's.	(13,359)	(22,799)	(10,000)
(% margin)	N/A	N/A	N/A
Net financial items	526	4,931	2,762
Other	0	2,311	0
Pre-tax profit (norm'd)	(12,833)	(15,557)	(7,238)
Tax	2,309	1,182	0
Net Income	**(10,524)**	**(14,375)**	**(7,238)**
EPS (norm'd and fd)	**(13.47)**	**(9.82)**	**(4.56)**
(% change)	N/A	N/A	N/A
Balance Sheet			
Fixed Assets	27,757	42,574	82,281
Current Assets	112,734	114,994	48,175
Current Liabilities	(13,986)	(30,619)	(6,000)
Long term Liabilities	(955)	(2,288)	(1,000)
Shareholders Equity	**125,550**	**124,661**	**123,456**
Cash Flow			
Cash flow from operations	(3,310)	(19,883)	(11,831)
Capex	(14,098)	(24,601)	(40,000)
Net debt(cash)	**(109,750)**	**(77,306)**	**(33,175)**

Chairman

Tony Craven Walker founded two British independent oil companies, Charterhouse Petroleum, where he held the post of Chief Executive, and Monument Oil and Gas, where he also held the post of Chief Executive and later became Chairman. He was also a founder member of BRINDEX (Association of British Independent Oil Exploration Companies).

CEO

Paul Ellis joined Serica from Emerald Energy where, as Chief Operating Officer, he was instrumental in the successful expansion of the company's exploration and production interests. Paul commenced his career with BP and subsequently held senior positions in the international oil and gas industry including Technical Director at Charterhouse Petroleum, Director International E&P at British Gas and Senior Vice President International at PanCanadian Petroleum.

Appendix: Company meetings

Exhibit 18: Companies met in compiling this sector report

Company	Market Cap
Amerisur Resources	£49m
Aminex	£54m
Antrim Energy	£356m
CDS Oil & Gas	£31m
Circle	£38m
Desire Petroleum	£65m
Dominion Petroleum	£224m
Elixir Petroleum	£8m
Emerald	£131m
EnCore	£54m
Equator Exploration	£74m
Falkland Oil and Gas	£128m
Faroe Petroleum	£111m
Fortune Oil	£111m
Frontera Resources	£60m
Genesis Petroleum	£26m
Geopark	£110m
Great Eastern Energy	£119m
Gulf Keystone	£118m
Gulfsands Petroleum	£161m
Hardy Oil & Gas	£283m
Island Oil & Gas	£48m
Mediterranean Oil & Gas	£52m
Nautical Petroleum	£132m
Northern Petroleum	£125m
Providence Resources	£190m
Roc Oil	£422
Rockhopper Exploration	£37m
Serica Energy	£152m
Sound Oil	£23m
Sovereign Oilfield Group	£15m

Source: Hemscott/London Stock Exchange

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