Drillers & Dealers

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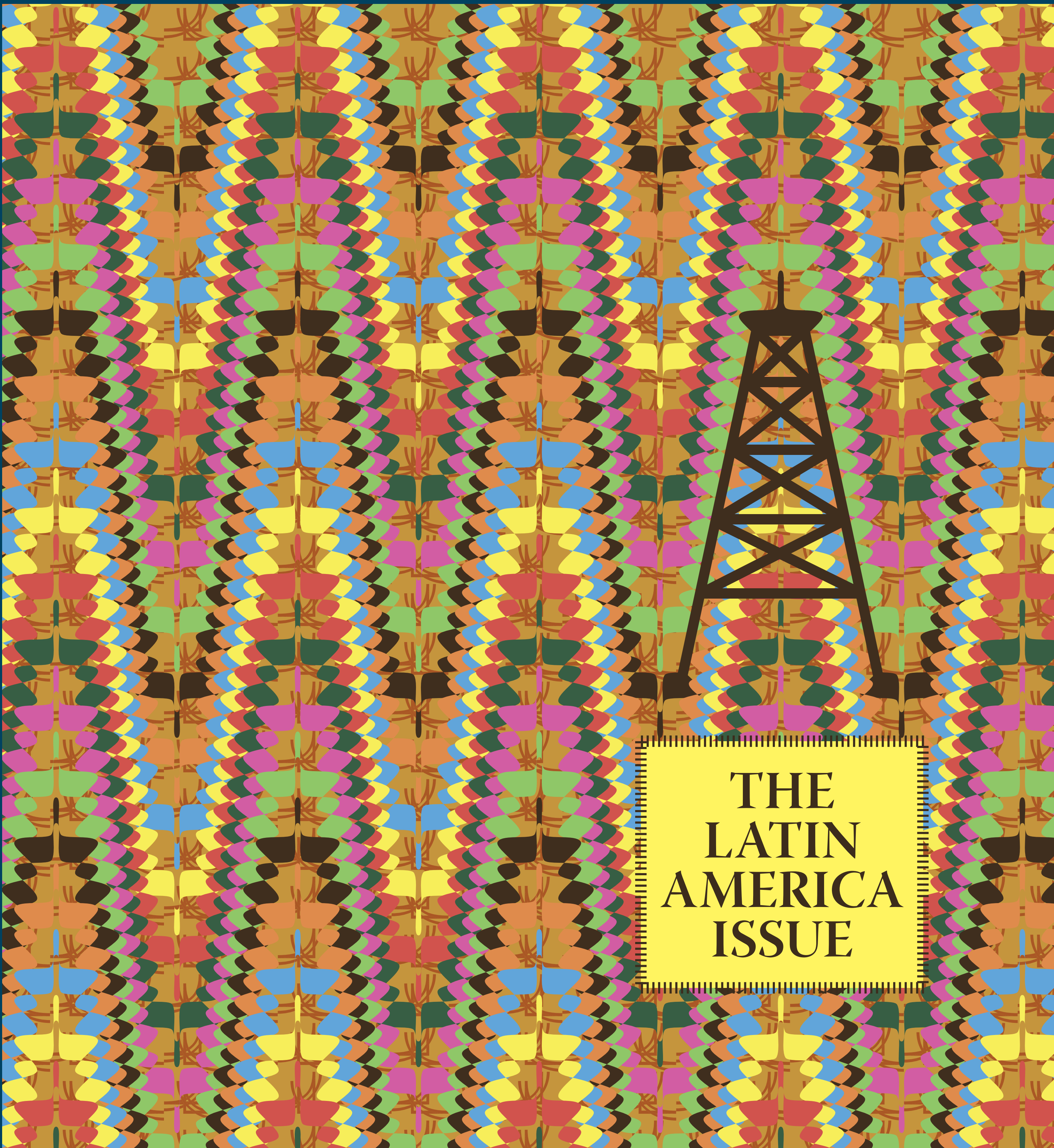
IN THIS EDITION



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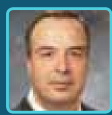

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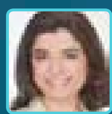

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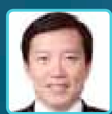

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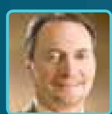

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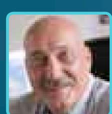

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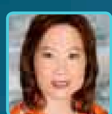

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THE LATIN AMERICA ISSUE

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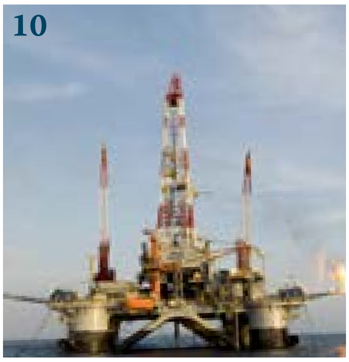
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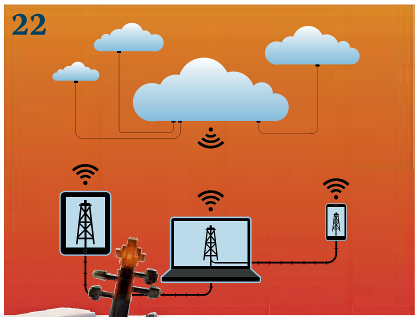
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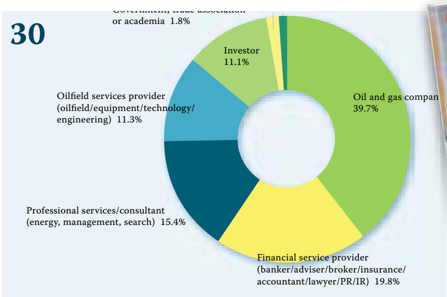

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Bouncing Bogotá reflects rest of region

Team Oil Council returned from Bogotá a few weeks back after kicking off our 2013 season with the first gathering of the year, the Latin America Assembly. This is always a popular meeting – and not just because Bogotá is the only place we've come across to feature infant head-sized mojitos with up to 11 shots of spirits in them. It's an exciting 48-hour gathering because one cannot help get energised by the flurry of activity of hundreds of operators working in dozens of different plays and geographies. From Argentina's burgeoning shale play, to the frenetic pace of exploration in Colombia, to the slow and lengthy elephant hunts in Peru and offshore Guyanas, the continent is a Baskin Robbins of business strategies – there's a different flavour for everyone.

Highlights from the two days included an NOC panel featuring the president of Ecopetrol, and senior vice-presidents from PEMEX, Petrobras, and Petroamazonas EP, Ecuador's new, foreign joint venture-friendly E&P entity. There was a strong contingent from outside Latin America with the likes of Ali Moshiri, Chevron's head of E&P for Latin America leading a delegation from the supermajor, and newcomers such as TNK-BP attending from Moscow.

Unconventionals featured prominently in many discussions, especially the buzz around Argentina's Vaca Muerta and its estimated 900tcf of shale gas reserves. Pioneers in this area such as Barclay Hambrook of Americas Petrogas (see p14), Andes Energia, Tecpetrol and Pluspetrol all sent their CEOs, giving the delegates a good idea of the business climate there in a year marred by the government's nationalisation of Repsol's share of its venture with YPF.

From Argentina's burgeoning shale play, to the frenetic pace of exploration in Colombia, to the slow and lengthy elephant hunts in Peru and offshore Guyanas, the continent is a Baskin Robbins of business strategies – there's a different flavour for everyone

Colombia remains the most open of all countries in the continent and local success stories Pacific Rubiales, Amerisur, Equion Energia and others were all represented at the CEO level to talk about their acquisitions during the year. Colombia has its share of challenges, but many juniors are still unlocking significant value in the country's highly prospective basins.

2013 Survey

Thank you to the 2,000-plus people who took the time to take our annual survey, the results of which can be read on page 30. Perhaps there are some surprises there, but there seems to be more divided opinion than anything else. On very few issues was there an overwhelming consensus of bulls or bears – for example, Asian national oil companies making an impact abroad, the eurozone economy. Apart from those few, there are unknowns and unknown unknowns – to use a perfectly acceptable label curiously and unfairly marred by association with Donald Rumsfeld. The unknowns are surely part of what makes this industry so interesting to be a part of and follow on a daily basis.

Next stop … the Far East

Our next Assembly is in Hong Kong, on 24-25 April and it is IOC- and NOC-tastic. Check out our website to see who is coming. At the beginning of the month we also sent Craig Bennett, senior vice-president of corporate development at the Oil Council, to Singapore to open our regional office there to better serve our Asian clients and members. I'm sure he'd appreciate a visit if you're passing through!

Drake Lawhead
London, February 2013

DUTCH MASTER

Drake Lawhead catches up with Jaap Huijskes, executive board member for exploration and production at OMV

Jaap, let's take a walk around your portfolio. Starting with Romania and Austria, where most of your production and proved reserves are, production in both countries has begun to stagnate, how are you looking to kick-start higher production in these assets, and how much potential is still left?

In Austria, OMV has been undertaking E&P (exploration and production) activities for more than half a century. With Romania, OMV has come to operate in one of the oldest oil-producing areas in the world. Together they are on track to deliver a stable 200-210 kboe/d production rate until 2014.

We are one of the world's best operators of mature fields with ultimate oil recovery rates up to 60%. This is a result of continued hard work, strong production focus and applying state-of-the-art oil recovery technologies. Furthermore, we are progressing some 20 field redevelopment projects, working two polymer injection pilots and performing several water injection field trials with the ambition to further increase the recovery rates. We need this strong performance in our core countries as they deliver the bulk of our cash and we expect them to support the growth in our international portfolio. We will continue to invest in them so they remain strong.

Moving onto the Middle East and the Caspian. What new ventures do you have here? And are there any crucial project updates from UAE, Pakistan, Yemen and Kurdistan?

Last year was an exceptional one for exploration thanks to the Domino-1 discovery in the Black Sea, Bina Bawi-3 finds in Kurdistan Region of Iraq (KRI) and Zidane-2 well in Norway. Over a 12-month period, three key assets were acquired in Norway. OMV and Latif joint venture partners signed a lease deed for the development of Latif gas field in the province of Sindh in Pakistan and, together with partners Wintershall and the Abu Dhabi National Oil Company (ADNOC), we will appraise the Shuwaihat sour gas field.

Areas of North Africa and the Middle East are still suffering from political instability. How did Yemen, Tunisia and Libya fare throughout 2012 and did this regional unrest affect asset performance and project development timelines?

The Arab Spring dominated events in 2011 and even still 2012, which led to high oil prices on the one side but missing volumes from Libya and Yemen on the other. But in fact, we managed to return a strong operating performance and production in Libya – and also in Yemen since Q3 2012 – is back on stream.

In the middle of February 2011, OMV concluded the purchase of the Tunisian E&P subsidiaries of Pioneer Natural Resources in the south of the country. The transaction increased existing production and added significant exploration and development upside. It offers substantial operational synergy potential, given it is adjacent to OMV's existing assets. Tunisia operates and is developing quite well, we have two rigs drilling in the south of Tunisia, the Nawara field is being developed and OMV has taken over the operator role in the South Tunisia Gas Pipeline consortium.

The North Sea and Norway appears to be a long-term play for OMV in terms of production contribution, what are your plans here and how important is the region to your portfolio?

The keynote of our new strategy is to sharpen our portfolio so that it is more compatible, commercial and strengthened. We swapped and divested some of our legacy assets in the UK Central North Sea and focused on the West of Shetland area. We added to our future growth by continuing to buy assets. Three key assets were acquired in Norway: a 20% participation in Zidane; 15% in the Aasta Hansteen gas project; and 20% in the Edvard Grieg oil development. To give a sense of how significant this is for the North Sea region, this will bring the production from the UK and the Norwegian North Sea together, from roughly 1 kboe/d next year to 80-100 kboe/d by the end of the decade.

>

Offshore Ashtart in Tunisia. OMV is now developing projects in the south of the country

< Your proven reserves are currently 1.13bn boe. How do you plan to increasing this number? Can you share with us your overarching upstream growth strategy? How does this tie in with the overall integrated growth story of OMV?

In 2011, we introduced the new OMV strategy, in which growing upstream is a key pillar. After one year, we are on track with significant achievements in all of our operations. Let's recall the targets we set:

- In the short term, stabilise production in the core countries of Romania and Austria and drive production performance across the portfolio.
- Mid term, grow production by 2% organically and double growth rate through acquisitions, and bring required rate of return to 100% by 2016.
- Until 2021, focus on exploration efforts and portfolio renewal and support for transition towards integrated gas with upstream access for Nabucco. The basis for that is a pipeline of projects in our international portfolio, containing, for example, Nawara gas and South Tunisian oil development in Tunisia, Schiehallion and Rosebank in the UK, the new acquisitions in Norway, Mehar and Latif developments in Pakistan, Habban in Yemen and the drilling campaign in New Zealand.

I am delighted with the way we have expanded our project portfolio. Compared with the previous year, we now have far more projects in all stages of development from appraisal to execution. Our total portfolio now has some 0.9bn boe under appraisal and development, almost as much as our current total reserves base.

Focusing on inorganic growth, do you hope to buy new producing assets, or form joint ventures to gain access to new reserves?

We are have it in our mind and we are constantly working on new opportunities in interesting countries. Most important for any acquisition is that it fits our stated strategy and we need to see a way of creating additional value out of any acquisition, otherwise we shouldn't be buying.

How important is operational excellence in increasing margins across your day-to-day activities and how are you managing to improve standards, while at the same time streamlining costs?

OMV has a very good track record concerning operational progress in mature fields. This is only one example showing our continuous knowledge management and our efforts to transfer and secure know-how. With ongoing investments in the development of fields in Austria, we are able to keep them on stream for many more decades. Know-how transfer within the company guarantees that we are able to apply new methods also in Romania at OMV Petrom.

More and more emphasis is being put on technology as being the differentiator in ensuring greater degrees of E&P success. Is OMV adopting any new technological practices?

We are continually adopting technical know-how. For us, Austria is the centre of OMV's global research and development activities, where various theses and studies, such as new concepts for reserve modeling, water flooding stations and gas injection, are being prepared. We have also gained substantial knowledge in exploring and producing in environmentally sensitive areas in Austria. OMV is renowned for its technological innovations. These technologies – once successfully applied in the company's home country – are transferred to many other parts of our "OMV E&P family".

Can you tell us more about your upstream agreement with ADNOC and what value it brings to OMV and your upstream portfolio? Is this agreement a one-off or the first of many co-operations with NOCs?

The signing of our first upstream joint venture in Abu Dhabi underlines our exploration and production strategy in the Middle East and strengthens relations with the United Arab Emirates and ADNOC. Moreover, we secured our first upstream access in Abu Dhabi. Together with Wintershall and ADNOC we will appraise the Shuwaihat sour gas field. A successful appraisal campaign will result in Shuwaihat being an important development of a gas and condensate field in the Western region of Abu Dhabi, contributing to cover the increasing hydrocarbon demand of the UAE and the country's long-term export capability.

Everywhere you turn you cannot escape the buzz of unconventionals, be it the US "shale gale", new shale frontiers in Argentina and China, and of course, Europe's shale gas potential. What are your thoughts on how unconventionals will contribute to the wider global energy mix?

Shale gas is an interesting future opportunity. For Europe it is necessary to develop a common strategy on this topic.

To where do you enjoy travelling in your spare time?

It's luxury for me not to travel. Therefore the Netherlands, my home country, is one of my favourites. I like to go back there during holidays to meet my family and friends. If there is time left to travel, Australia is the place I like to be.

Finally, a question we always ask, what three luxury items would you take to a desert island? (NB: You may NOT choose a boat, satellite phone,* Practical Raft-building for Dummies*, etc!)

My family is the biggest luxury for me, so I would take them with me, some good food and drinks and of course some state-of-the-art exploration equipment – if you enter an island you have not seen before, you never know.

BASIN INSTINCT

Drake Lawhead talks to John Clarke, vice-president, business development, at CGX Energy, about its operations in the Guyana-Suriname basin

CGX is a pure-play exploration company focused on oil in the Guyana-Suriname basin. What are you targeting there?

We are targeting Equatorial Atlantic Margin plays parallel to West Africa, French Guiana and Brazil. Our two primary plays are Turonian and Albian age prospects, both of which we expect to be sourced by the same prolific Cenomanian source rock. The Late Cretaceous, Turonian clastic fan systems are analogous to the Jubilee discovery offshore Ghana and the Zaedyus discovery offshore French Guiana. The Albian prospects are shelf margin carbonate targets similar to the discoveries in the Campos Basin offshore Brazil.

The size of the prize is very large – independent resource estimates range from 100 million barrels for our smallest Albian target, to more than a billion barrels for a single Turonian fan prospect.

Does that make CGX Energy a "ten bagger"?

Well, that depends on the size of a potential discovery, our interest in the license, and at what level the stock is trading. However, based on a 300 million barrel development scenario, we see a net present value of about $15/barrel. Therefore, if we do the math on net 100 million barrels to CGX post-farm out, this equates to around $3.60 per share on our current float

Tell us about your progress offshore Guyana so far. How do you interpret the results of the Eagle well, which was plugged and abandoned, and the Jaguar well, which was abandoned earlier this year. What happened?

CGX has been operating in this basin for over 14 years, and has drilled three offshore wells and three onshore wells since 2000. The Eagle-1 well was targeting one of several Eocene prospects across our acreage, and would have provided us with a "string of pearls" had it been successful. The well had oil and gas shows in the Oligocene, Eocene, Paleocene and Maastrichtian/Campanian formations, confirming the presence of a working hydrocarbon system, but results indicated an apparent lack of seal. Detailed analyses on migration, trapping and preservation are required to assess the remaining potential of these reservoirs throughout the Guyana-Suriname basin.

The Jaguar-1 well was encouraging and several zones had oil and gas shows and light oil was recovered from a zone that had sub-commercial reservoir characteristics. Unfortunately, the forecast High Temperature and High Pressure regime was encountered shallower than prognosis and was more severe. This resulted in the well having to be abandoned for safety reasons some 5,000ft above the main Turonian objective.

What are the next steps for Jaguar and what is the time frame?
The Georgetown license is under negotiation with the government for re-issue, with the intention of drilling a new well. Technical analysis is now indicating that the Jaguar Turonian target should encounter light oil and gas or liquids-rich gas

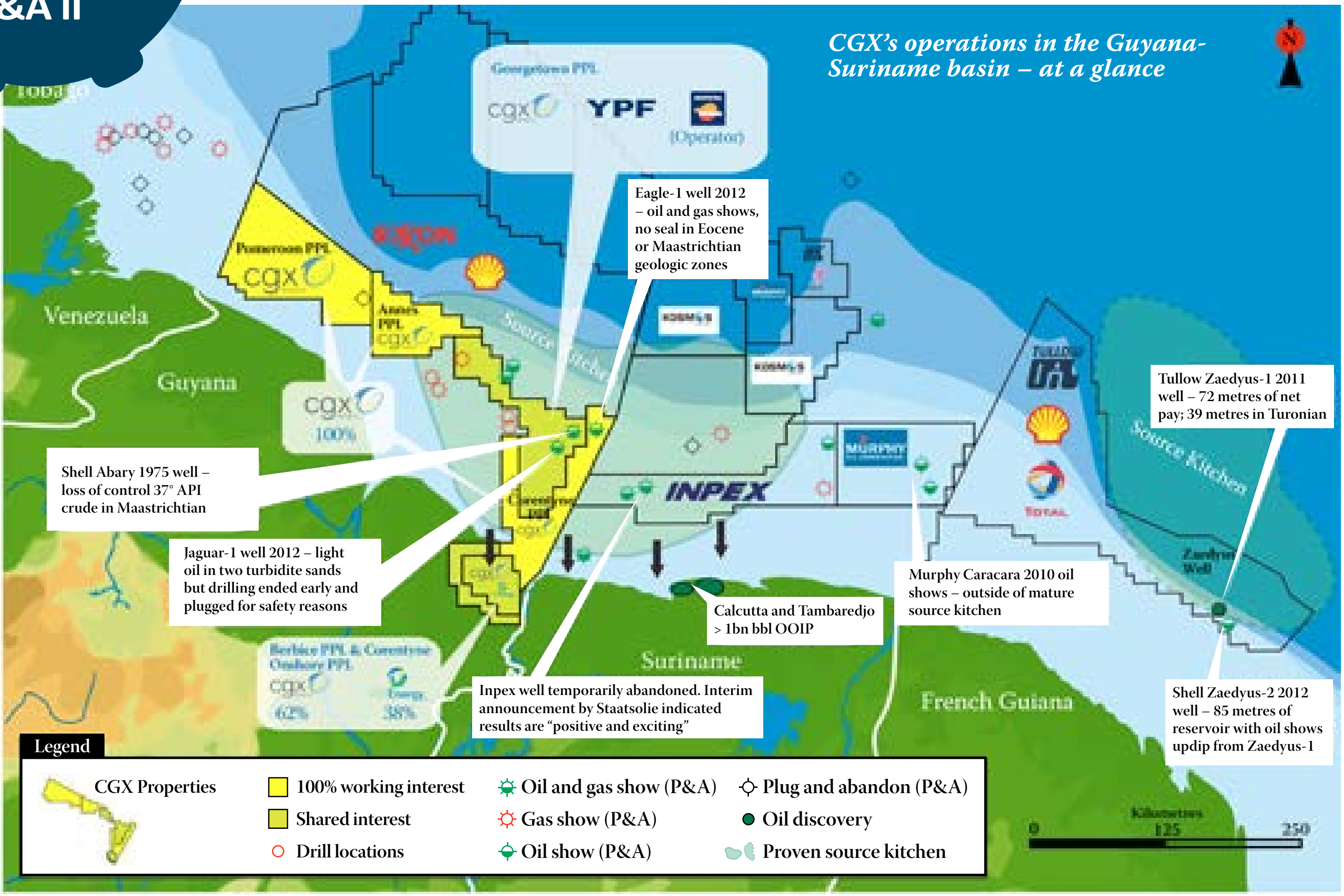
Last year was a tough one for juniors and especially exploration-only juniors. How did CGX weather the storm? How have you managed to fund $50m-$100m wells?
We had prepared for our estimated 2012 capital expenditures through a financing late in 2011, and at that time were fortunate to get the backing of a strategic partner in Pacific Rubiales. Due to the increased costs we incurred while drilling both wells, Pacific Rubiales added to its interest through a cash injection early in 2012 and now holds approximately 35% of CGX. CGX has financed all of its exploration expenses in Guyana over the past 14 years through equity financing, and is now working very hard to nail down one or more joint venture partners to carry us through the next round of drilling on our Georgetown and Corentyne licenses.

What is the secret to keeping a frontier explorer afloat in an era of challenging capital markets?
We do see opportunity in the mergers and acquisitions and joint venture space, where larger players with solid balance sheets can acquire significant interests in quality exploration plays through farm-in or purchase, exposing them to potentially giant discoveries, which are needed to replace production or to gain access to new areas and geological experience.

CGX's strategy revolves around promoting its government relations and past expenditures to maintain its asset base through negotiated license re-issues, progressing our joint venture discussions – which are ongoing for all our licenses – and never giving up on our expectations for a major discovery in the Guyana Basin.

You also have an onshore concession – how important is that in your portfolio?
Although our onshore concession is considered to have less potential for significant discoveries than the offshore, we are looking at ways to gain a better idea of how the onshore accumulations at Tambaredjo and Calcutta, in neighbouring Suriname, may be duplicated in Guyana. Our onshore concession is held by ON Energy, in which CGX holds a 62% interest. We are looking at low-cost screening alternatives to identify and high-grade prospects.

Many explorers on the Atlantic Margin and in South America have also made forays into West Africa to exploit analogous plays – including your neighbours and partners, such as Tullow, Repsol and Anadarko. Have you been tempted to farm-in there? Or anywhere else in the world?
CGX was formed as an exploration company focused on Guyana. To date, we have identified multiple plays on our blocks targeting Albian Carbonates, Turonian fans, and Campanian prospects that are similar to discoveries elsewhere in the Atlantic Margin. When combined with a legislative and fiscal environment that encourages exploration, CGX has chosen to continue its focus on Guyana. >



< ***Does CGX intend always to be an exploration-focused company or do you have contingent plans for what to do with the proverbial wheel when you catch it? What might CGX look like in five years' time?***

Success would be a problem we would welcome in maximising shareholder value at different stages throughout the full exploration, development, and production "S-Curve". CGX is a Guyana-focused company, with a long history of working with the government co-operatively. Perhaps that role could be continued in some manner, although the operatorship of any significant discoveries will likely be done by those majors and/or super-majors that are already positioned throughout the Guianas.

What is the next piece of news to watch out for from CGX?

License re-issues and joint venture negotiations are both ongoing, and news on either front will be important. Of course, we did recently announce the re-issue of our 100% WI Corentyne License and look forward to further press releases early in the new year.

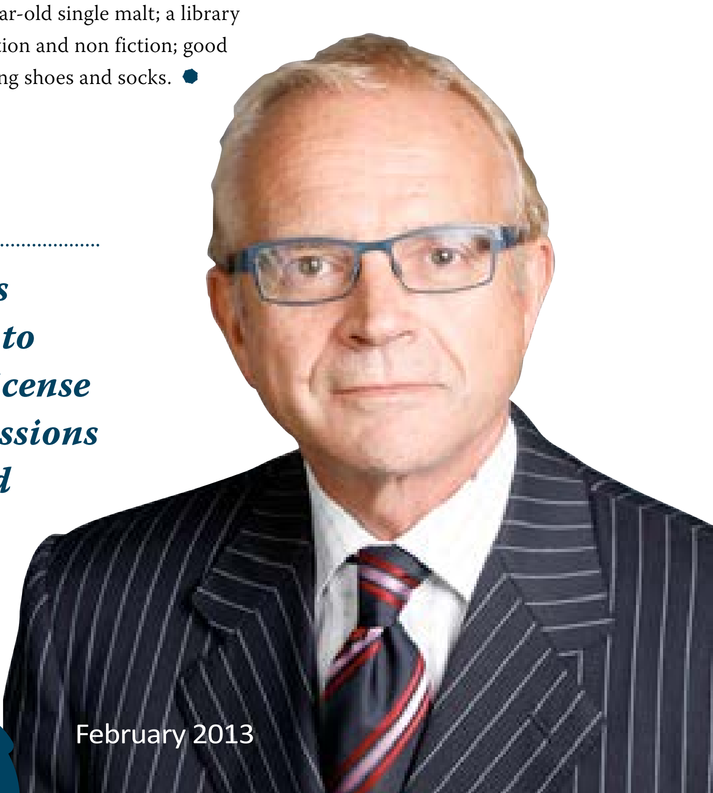
How do you enjoy spending your spare time?

Coming from Canada, it probably is not surprising that I enjoy skiing. I have also travelled widely in the international oil and gas sector and enjoy visiting new countries. South America, sub-Saharan Africa and the Far East are still on my bucket list.

Finally, a question we always ask, what three luxury items would you take to a desert island? (NB: You may NOT choose a boat, satellite phone,* Practical Raft-building for Dummies*, etc!)

Strangely, this is a hard question because luxury in isolation cannot be shared. If a mate, friend, or pet is disallowed then I choose: The Macallan 15-year-old single malt; a library of fiction and non fiction; good walking shoes and socks.

CGX's strategy revolves around promoting its government relations and past expenditures to maintain its asset base through negotiated license re-issues, progressing our joint venture discussions – which are ongoing for all our licenses – and never giving up on our expectations for a major discovery in the Guyana Basin



FLUENT IN LATIN

● Drake Lawhead talks to Barclay Hambrook, CEO of Americas Petrogas

Americas Petrogas is a Canadian, Calgary oil and gas exploration and production company with assets in Argentina and Peru. Its development activities are in Argentina's most prolific hydrocarbon basin of Neuquen, where they are one of the largest land holders with more than two million acres spread over 16 large blocks, 14 of which they operate.

It is said that Argentina trails only the USA and China in shale potential. When did you first become interested in the region and what was the genesis of Americas Petrogas?
At 774 trillion cubic feet (tcf), the Energy Information Administration (EIA) ranks Argentina third in the world for shale resources. Argentina is rapidly becoming the most interesting shale gas and shale oil play, anywhere. In early 2013 we are experiencing increasing interest in Argentina after several multi-billion dollar investments announced over Christmas 2012 by Chevron, followed immediately by Bridas and China National Offshore Oil Corporation (CNOOC) with YPF. Add to this a new gas price of $7.75/million cubic feet and a new higher oil price.

Regarding Americas Petrogas, I founded the company in 2004 along with Carlos Lau, whom I have known for more than 20 years. Our early objective was to establish the foundation for a large and successful oil and gas company in Latin America. We studied, visited and considered almost every country and hydrocarbon basin in Latin America. Our main investment criteria included, of course, geological risk; ability to amass a very large land portfolio and high working interests in a proven producing basin; our requirement for operatorship and nearby access to infrastructure – to enable us to monetise, or rapidly generate cash flow from any discoveries – and access to oil and gas expertise. Additionally, we layered on top of these criteria the fiscal terms, culture, history and politics.

Today, we have more than two million gross acres spread over 16 blocks, on 14 of which we are operator – this includes four blocks with our partner ExxonMobil.

Additionally, we have been very successful in growing our conventional production, the most rapid growth in just the last few quarters and we just completed our own facilities for processing 6,300 bopd. In late December, we announced our first Vaca Muerta vertical shale oil discovery well with partner ExxonMobil, which flowed at an initial production of 800 boepd (80% oil) and averaged 300 boepd over 60 days.

One of the striking figures in your corporate presentation is that the Neuquen province has recoverable resources estimated to be 20 times that of the Eagle Ford – some 400tcf. What is the route to monetisation for that? Where are Argentina's markets in the short term and longer term?
Just like Eagle Ford, Neuquen's Vaca Muerta shale has an oil window, a dry gas window and a condensate window allowing for a good mix of marketable products. Local market demand for all hydrocarbons has been growing, along with Argentina's growing economy. In fact, today, Argentina is a net importer of gas and some liquids, paying high prices for imports of liquefied natural gas (LNG) from the Caribbean and Middle East and gas from Bolivia.

Remember, just a few years ago, Argentina was a significant exporter of gas to Chile. That infrastructure – for example, several large pipelines – is still in place and, in time, after local demand is satisfied, Argentina may export gas to countries such as Brazil, Chile, and Uruguay.

However, Argentina's demand for gas, continues to grow rapidly, with a very large percentage of electrical power generation from natural gas. Additional demand for gas could come from agricultural sources, for example for nitrogen fertilizers. It was for that reason, we entered into a strategic agreement with Iffco (Indian Farmers Fertilizer Co-op, an organisation with 55 million farmers as members). Someday, if conditions warrant it, there could be a need for a large ammonia plant in Argentina, with natural gas as a feedstock. Remember, too, that Argentina has one of the largest auto controlled natural gas (CNG) fleets in the world.

At what stage do you consider the development of Argentina's unconventional resources in the Neuquen, and what needs to be invested, or achieved, to exploit it effectively?

Overall, companies are in the exploration stage, however, this can change quite quickly to development. In our own situation, we have already announced a very significant shale oil discovery, reported to be the best initial production rate outside North America, by a North American company. Perhaps fortuitously, for companies like ourselves, de-risking of very large blocks does not always require a great number of wells, given the continuous nature of some shales, in some areas. It follows that in blocks that have been de-risked, development could occur rather rapidly.

In terms of investment, after the recent multi-billion dollar deals announced by Chevron and Bridas and CNOOC with YPF, one could expect additional investment from larger players, which could take the shape of joint ventures, mergers and acquisitions, and creative debt financings, such as the $500m loan to YPF by CNOOC.

From experienced professionals, both technically astute and financially sophisticated, excitement is gaining for the Vaca Muerta shales. In terms of oil and gas anywhere on the planet, the size of the prize looks to be enormous.

You hold the largest acreage in the Neuquen after YPF and Pluspetrol and have farmed out to ExxonMobil and Apache. Do you plan to farm out more of your acreage?

We have several very large blocks in which we have 90% working interest and, given the right terms and conditions, with a sizeable, established oil company, we may consider ventures. Our current conventional production is growing rapidly along with our cashflow, allowing us to re-invest in both the conventional and unconventional.

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< What's your view on mergers and acquisitions, joint venture activity and corporate and asset-level deal flow in the region – do you see more activity in the next 12-24 months?

We share the vision of our recent discussions with several large investment bankers that deal flow has potential to grow significantly in 2013.

How do investors perceive a more or less pure-play Argentinian exploration and production company?

What I can say is that, from experienced professionals, both technically astute and financially sophisticated, excitement is gaining for the thick and rich Vaca Muerta shales. In terms of oil and gas anywhere on the planet, with Ryder Scott's assessment of 23bn boe recoverable over just 2.2m acres, at a recovery factor of just 4%, the size of the prize looks to be enormous.

Besides the Vaca Muerta, there is an even thicker, deeper Los Molles shale, as well as the shallower, Agrio shale. Applying technologies advanced in Canada and the US, such as horizontal drilling and multiple staged hydraulic stimulations, offer additional potential opportunities for tight oil and tight gas in formations including the Mulichinco, the Quintuco and the Tordillo.

Many foreign investors have been cautious about entering Argentina out of political risk concerns, and 2012 appears to have lent credence to that fear with the government's appropriation of Repsol's YPF stake. Are junior oil companies affected by such machinations in Argentina or do they fly under the radar?

In actual fact, it was an expropriation of part of the shares that Repsol held in YPF, the former state oil company. There has been considerable misunderstanding by the media, investors and the public in general.

For example, there was no "nationalisation" of any industry, as was often referred to by inexperienced writers. What actually occurred was an "expropriation" of part of the shares – albeit, a large number of shares – of YPF that were owned by Repsol. YPF still trades on the New York Stock Exchange as a public company with Repsol still as a shareholder.

Our senior management has gained many years of varied experience, globally and in Latin America, in the oil and gas industry, and a lot of experience in countries that some perceive to be "higher risk". The question should be: is management experienced enough and capable enough in assessing risks and managing risks? Members of our management team, have that experience, having successfully done business in Latin American countries in the 1960s and 1970s, facing inflation, devaluations, and import and export restrictions, for example. We believe there is very little risk exposure for junior or other oil companies. For those reasons, all along, we have continued to explore and drill our properties, along with our partners ExxonMobil and Apache.

What are the main risks or obstacles to Americas Petrogas's growth and are these geological, financial, political, or regulatory in nature?

From Americas Petrogas perspective, we see few obstacles to growth and lower and manageable risks. Our management team is very experienced globally in oil and gas and, in particular, in dealing with all sorts of risks in Latin America over a long period of time.

Can you tell us briefly about your potash and phosphate project in Peru and how that fits in with your company's growth plan?

In Peru, Americas Petrogas's 80%-owned subsidiary, GrowMax Agri Corp, has a Potash and Phosphate project on approximately 224,000 acres, near Piura in north-west Peru, on the Pacific Ocean. Potash was first discovered there in the 1960s by Kaiser Chemical from the USA. Kaiser built a pilot plant and proved recovery of more than 99% potash from the mineral-rich brines using solar evaporation processes. The same processes as used by Compass Minerals and Intrepid Potash in the USA and by Israeli Chemical and Arab Potash in the Dead Sea. We are completing a resource study for potash as well as a feasibility study.

Additionally, we are exploring for phosphate, which we have discovered at a very shallow level, less than one metre from the surface. Our southernmost blocks are immediately next to a surface phosphate mine that was placed into production in 2011 by Vale and partners Mitsui and Mosaic – from the US.

What is the next piece of news to watch out for from Americas Petrogas in 2013?

Additional results on our shale drilling, growing production and future potential spin-off of GrowMax.

How do you enjoy spending your spare time?

Enjoying time with the family, running, skiing, travelling and eating Asado, (Argentian BBQ) with Malbec wine.

Finally, a question we always ask, what three luxury items would you take to a desert island? (NB: You may NOT choose a boat, satellite phone,* Practical Raft-building for Dummies*, etc!)

A good flowing fresh water well, spear gun, champagne and caviar, coconut palm and banana trees.


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FOLLOWING THE STAR

Drake Lawhead talks to Warren Levy, CEO of Estrella International Energy Services

How would you describe Estrella to a prospective investor?

Estrella is a provider of drilling and workover services to the oil and gas and geothermal sectors. We provide drilling and workover rigs, directional drilling services and consulting and engineering services. Our headquarters are in Buenos Aires, and we have operations in Argentina, Chile, Bolivia, Peru and Colombia.

Estrella operates solely in the Latin American market. What are the opportunities for a full-service company such as Estrella in Latin America, and under what conditions would you considering expanding to other regions?

We see that Latin America is going to be an interesting place to be for a long time to come – there is strong fundamental energy demand growth and exciting reserves such as the non-conventionals in Argentina. In the long term, the same lack of regional mid-market players, those of us who can provide services at the same level as the multinationals, but with local know how and customer affinity exists throughout the southern hemisphere. Saying that, there are still many exciting opportunities for us to continue to expand in Latin America for some time before we seriously look at tacking an entry into another continent.

Where do you see the biggest growth opportunities in Latin America, both for exploration and production (E&P), and for oilfield services? Where are you seeing activity picking up?
There are two main trends driving opportunism for both E&P and service companies. The first is the discovery and development of reserves in increasingly more challenging environments. Whether it is jungle drilling in Peru and Brazil, the Llanos in Colombia, geothermal on the top of a mountain in Chile, or deepwater Brazil, many of the most exciting discoveries over the last 10 years have been outside the core traditional oilfield areas.

The second is non-conventional resources, headed up by the heavy oil belts in Venezuela to shale gas and oil in Argentina, there are numerous world-class resources that are just starting to be seriously looked at.

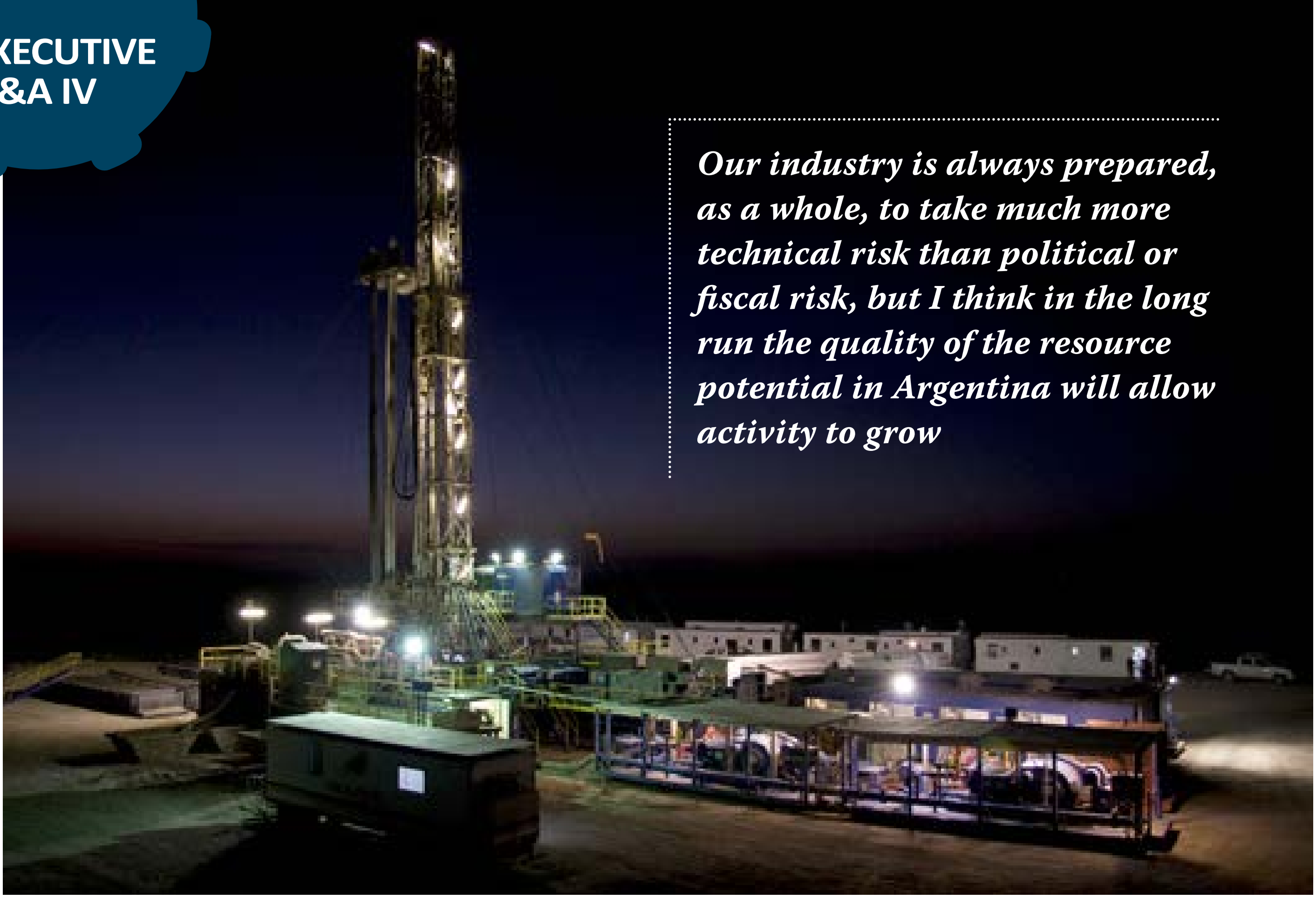
How is Estrella financed, and how have you found the capital-raising environment in 2012? What do you hope for in 2013?
Over the last seven and a half years since we started Estrella, we have accessed capital several different ways. From self-financing the company in the early days, to raising debt in the US, through to going public, we have adapted our capital raising strategy to our needs and the market appetite.

We took the company public in 2010 on the Toronto Venture stock exchange, and since then have relied on both equity and debt financing to grow. The previous year has been one in which public market appetite for small companies such as Estrella has been extremely limited, but we were able to tap into a private equity fund for an equity infusion. We hope the markets will be more responsive to our story, and the sector in general, but we will likely need to see the E&P players have some success before the markets will warm again the service sector.

Looking at Colombia, the targeted one million barrels production per day is proving elusive. How confident/pessimistic are you about the country's production growth prospects in the next five years?
Over the next five years, I am very optimistic. I think we are living through a confluence of challenges, most notably infrastructure limitations, delays in environmental permits and, to a lesser extent, the slight degradation in the security in the country that are delaying plans to drill more wells and bring additional production on line. There are substantial pipeline projects in the works, and as those come on stream, they will unlock potential production that is isolated today for cost or physical constraint reasons.

Argentina rankled many foreign investors and E&P companies with the government takeover in April last year of YPF from Repsol, triggering a fear of renewed resource nationalism. Is it fair to say you have a different take on the situation in terms of what it means for your business?
In a very broad sense, national oil companies tend to be a good thing for service companies. In the specific case of YPF, there is a political and economic imperative for the company to show results. This has led to it being very aggressive on increasing its operations. Because YPF is such a large player in the country, it sucked up most of the available capacity, and are driving utilisation up across the board. This is good for us.

The perception of political uncertainty is concerning. Our industry is always prepared, as a whole, to take much more technical risk than political or fiscal risk, but I think in the long run the quality of the resource potential in the country, and the presence of a qualified work force and pre-existing infrastructure, will allow the activity to grow. The political incentives or restrictions will only influence the pace of that growth. >



Our industry is always prepared, as a whole, to take much more technical risk than political or fiscal risk, but I think in the long run the quality of the resource potential in Argentina will allow activity to grow

< What opportunities do you see in Peru and Bolivia for foreign oilfield service firms?

Both are small markets and, by definition, operating in a small market always brings the challenge of maintaining utilisation. Peru we see as really three markets in one. Talara is a marginal area, which is very price sensitive. The jungle has huge upside potential, but the environmental consultations are taking a long time to allow E&P companies to drill, so the dream is somewhat elusive. The offshore of Peru is also an exciting area for near-term growth. We have worked in both Talara and the jungle and like the market very much.

Bolivia has different challenges. The deep gas developments have been slow to recover after the political changes it the country. In the long term I think the quality of the resource will win out, but in the short term we see it as a slower area of activity with less immediate upside.

In Colombia and Peru especially, there are security concerns about operating in certain deep jungle locations. Is Estrella affected by this, and if so, how do you mitigate the risk?

Operating in remote areas are always a challenge, but these are the types of challenges that we thrive on. It all comes down to being a responsible player in these markets. Working with communities, hiring locally, working inside the framework plans of our customers and the governments is imperative. We have an internal group that is dedicated to maintaining our security standards. We are also very careful about our counterparty in our contracts, choosing to work only with those E&P operators that share our philosophy on social responsibility and security concerns.

You have an eye on geothermal operations as a source of energy. What do you predict for this market in Latin America and worldwide? How important an energy source could it become?

Geothermal is the story of the tortoise in a race with the hare. It competes with the oil sector for the same resources, but has slowly and consistently shown growth over the last 30 years worldwide. The business is just starting to gain traction in south America, but over the next 10 years I expect it to grow substantially across the Andean region. It will never replace fully conventional supply, but with average "up" times of more than 95%, geothermal is the best renewable energy source out there in terms of longevity and is uniquely suited to act as a baseload power supply.

Where do you want Estrella to be in five years' time, and what are the main obstacles that could prevent that?

Our vision is to set the standard of excellence by which all other service companies in Latin America are measured. We want to be known for providing world-class equipment and services always within the culture of each market in which we work. We want to be the go-to reference for quality in the market. In five years time, we hope to have 40-50 drilling rigs, be in the top three directional drilling companies and be the major player in integrated projects.

How do you enjoy spending your spare time?

Family time is always a priority for me. Travelling around the region as much as I do, I don't get as much time with my kids as I would like. Soccer, skiing, baseball, squash and pretty much any other sport with a ball where my competitive streak can overcome any lack of competence.

Finally, a question we always ask, what three luxury items would you take to a desert island? (NB: You may NOT choose a boat, satellite phone,* Practical Raft-building for Dummies, *etc!)

Full digital copy of the Library of Congress – I never get tired of reading and learning; a live satellite feed into Maple Leaf Gardens to watch the hockey – whenever they actually stop fighting and get back to work; a Zamboni to clean off my ice rink on the island. I guess I am going to have to go for an Arctic desert island to keep the ice hard enough to skate on.

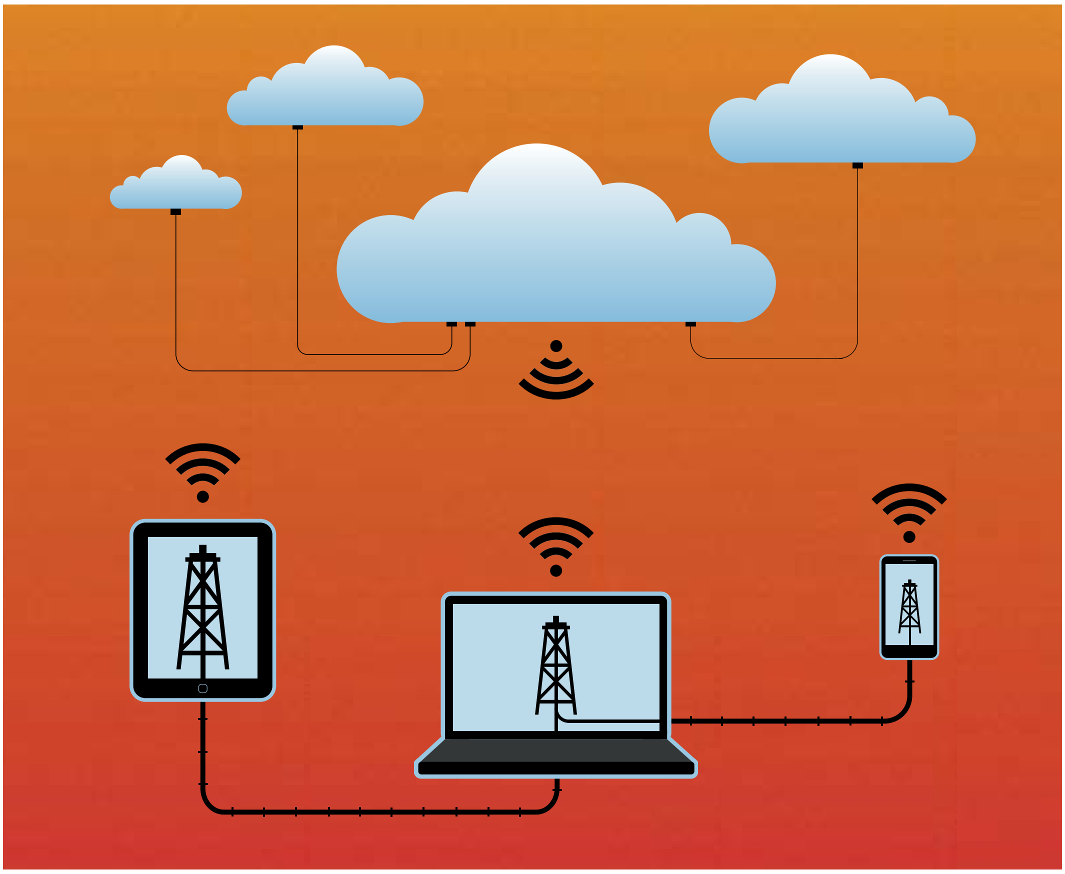
On the UKCS the average discovery in 2009 and 2010 was 20-23 million barrels. Hurricane discovered over 200 million barrels, twice. Now we have 2C Contingent Resources of around 450 million barrels, owned 100%.

www.hex-plc.com

Hurricane
Basement Reservoir Experts

Chris Walcot – Progressive

The forecast in oil and gas is clear with a touch of cloud



Thanks to its many commercial benefits and the world of possibilities, cloud computing is becoming a popular model for the IT-savvy business that has growth on its agenda.

Yet, although being among the sectors that stand to gain most from cloud technologies, the adoption rate within oil and gas is slower than other sectors. This is largely because of sensitivities around data security; safeguarding trade secrets and protecting intellectual property, but are these perceived threats real or just a hang-up from the past? What specific advantages could oil and gas companies gain from the implementation of a cloud-based IT system? And, how might cloud work in practice?

What is cloud computing?

In general terms, cloud computing refers to any hosted technology that provides software and IT infrastructure as a service. This can range from relatively simple software systems accessed via the web that provide very specific functions, right the way through to vast computer networks with secure data storage and remote desktop virtualisation. The range is vast, making cloud computing a seemingly difficult concept to grasp without a very specific scope or circumstantial requirement.

"Public cloud" relates to hosted software that is provided through a browser on a user-by-user basis with some online storage and sharing capabilities. This type of software is typically referred to as software as a service and includes services such as Google Drive, Windows Azure, Microsoft Office 365, or Salesforce.

"Private cloud" is provided to a single company and is more akin to traditional IT infrastructure, hosted in a data centre and placed behind a firewall. A private cloud is effectively your technology, or technology that is leased to you, and referred to as infrastructure as a service.

"Hybrid cloud" is often described as a combination of public and private clouds. Oil and gas has some specific requirements and there seems to be a more suitable hybrid cloud model for the sector.

The hybrid cloud more suited to oil and gas

Migrating the day-to-day business function of a company's IT to a cloud-based solution is comparatively straightforward. However, with the value of exploration companies being largely tied up in geological and geophysical data and the interpretation expertise of specialists, oil and gas companies have additional requirements for powerful processing of large data files and high utilisation rates of expensive human resources.

Although there are solutions being developed to serve very large files through cloud-based systems, the technology is in its infancy and does not suit the demanding nature of oil and gas – yet. Data processing and graphical modelling requires workstations with very powerful processing capabilities and powerful graphics cards. This is not standard IT equipment and falls outside of the usual scope of a cloud-based system.

The logical solution is to continue to maintain high-power workstations under the operational control of the specialists that need them, while seamlessly integrating the software of the workstations with the cloud system for all other functions. This results in a true hybrid, not two systems running independently of each other with a convoluted link, but two systems that appear to operate as one.

This hybrid model addresses the very real concerns of oil and gas companies and gives them the very best of both worlds.

Oil and gas companies stand to benefit more than most

There are endless benefits to implementing a cloud based system, many of which centre around less waste and less hassle, but as a results operational characteristics, oil and gas companies stand to benefit more than most.

The cost of implementing new technology can be expensive, sometimes prohibitively so. Once done, there can be a reluctance to continue to invest or renew in line with technological advancements, resulting in out-of-date kit or legacy files and legacy software that hinders progress. Cloud systems make better use of technology, sharing infrastructure among multiple users and offices, offering a greater level of scalability and reducing the ongoing cost of implementation and continual development.

Cost of entry to the cloud is very low and typically based on a pay-as-you-go system in which charges directly relate to specific requirements and usage. Oil and gas companies, especially smaller independents, benefit from a sophisticated and robust IT infrastructure for very little outlay, transparent operational monthly costs and less impact on the balance sheet.

> ***Cloud networks maximise productivity, providing a platform for real-time collaboration across your entire workforce and network of consultants***

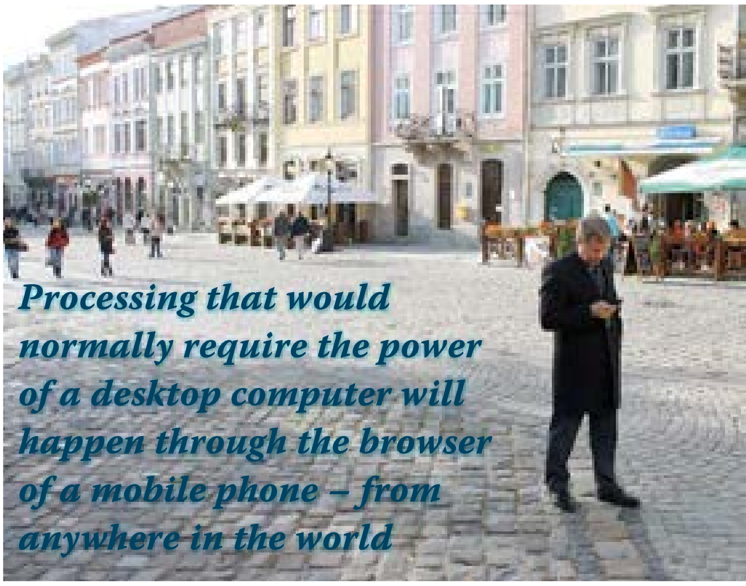
Professional cloud systems are not only hosted, but also managed and benefit from dedicated and centralised support. Hardware upgrades, software upgrades, hands-on technical support can all be provided at the drop of a hat, enabling oil and gas companies to respond quickly to operational developments and third-party requests. No longer will a company be at the mercy of on-the-ground IT consultants and their busy schedules.

By nature of the industry, oil and gas companies often have a requirement to link multinational offices. A centralised system gives staff immediate access to the information they need, when they need it. Traditionally, companies would try to manage some level of file versioning, whether it be through checking-in and checking-out files or appending a version number to a file name. Although these manual processes are a good work around, they are hard to manage across multiple locations and increase the chance of human error, duplication or data loss. Having a centralised file server with a place for everything and everything in its place eliminates file management frustrations.

Knowledge transfer and collaborative working is vital to the efficient utilisation of expensive human resources. Cloud networks maximise productivity, providing a platform for real-time collaboration across your entire workforce and network of consultants. >

CREDIT: ANDY PLOWMAN

< Oil and gas companies also have the requirement to share sensitive files among stakeholders, whether they be remote teams, suppliers, investors and especially joint venture partners. Having a shared space on your network with controlled permission-based access gives oil and gas companies the ability to share sensitive files without risk or hassle of transferring them via email or through the internet.



Remote working is now the norm for many oil and gas company principals, either working from multiple offices, home or on the road. Having the entire company network at your fingertips is the difference between feeling connected and feeling slightly out of touch. The ability to access files securely on the fly through any internet-enabled device is a huge benefit to transient oil and gas staff. Accessing files on mobile phones or tablets gives stakeholders a level of connectivity not feasible until now. Travelling with sensitive files contained on your laptop is a potential security risk and recovery proves far more costly than if the files were securely locked down within your own private cloud.

The storage of sensitive files and data is only perceived to be safe behind the locked doors of an office, until the day the office is ransacked, burnt down or flooded. With multiple offices, often in inhospitable regions around the world, the potential risk is magnified. Placing storage in the cloud negates the need to manage and maintain on-site storage and complicated back-up solutions. Professional cloud-based solutions are hosted in secure data centres behind firewalls, completely eradicating the worry of file storage and file security. Recovering from a localised catastrophe is as simple as getting a new device, connecting to the internet and signing yourself back into your virtual desktop.

Private cloud infrastructure is inherently secure. Hosted in very tightly controlled data centres, behind dedicated firewalls. The level of access security can be customised with authentication for the network, authentication for each application, or even the addition of individual PIN-codes and key fobs. Cloud is arguably more secure than traditional networks and desktops.

Software sharing is also possible in a private cloud. Some software creates files that are easy to share, but larger more complex software like finance systems or customer relationship management solutions store the information within the platform. Hosting software within the cloud increases the reach of that software to anyone that needs access. This opens up the whole world of expert consultants that can assist with operational activities.

The forecast for oil and gas IT

Early adopters will see the benefits, reap the rewards, free up time, be more productive, open their operations to expert consultants and gain a significant competitive advantage. As comfort grows around hosting IT in the cloud, opportunities to extend the benefits will be recognised and we'll see companies continue to invest until our devices are simply portals.

Remote working will no longer be a painful inconvenience to have to contend with, but will provide a sense of freedom that will enable people to focus their attention on their expertise without IT getting in the way.

Information and knowledge silos will be a thing of the past. Everyone will have access to everything they need, when they need it. Employees that leave will no longer walk away with all of the company's knowledge and experience.

Processing that would normally require the power of a desktop computer will be executable through any internet-enabled device and even the browser of a mobile phone – from anywhere in the world. Results of which will be immediately accessible to anyone you wish.

Complete control will literally be in your pocket and with you always. And this vision of the future is all technically a reality of today.

The forecast for IT in the oil and gas sector is clear with a touch of cloud.

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CREDIT: RADIOKAFKA/SHUTTERSTOCK.COM

Shale is reshaping the energy landscape

Prospects are looking brighter as the economic clouds start to lift. Markets have moved noticeably higher, reflecting optimism about the world's outlook. The US finally appears on the verge of picking up steam, and had 3% growth in the third quarter. There is still some risk of stumbling, especially if we get another partisan cliff edge stand-off. But more confidence and more jobs are clear, partly fuelled by a surfeit of low-priced gas.

The year of the dragon was, as expected, a lively one. But China, after the mysteries of its leadership transition, is still growing at close to 8% and using its rising economic strength to buy any resources it needs from holders short of investment. Asian economies are still growing much faster than those in the Organisation for Economic Co-operation and Development (OECD). Both power and influence continue to flow east. South Korea wowed the world with PSY's catchy and trendsetting *Gangnam Style*, an entertaining parody of a posh part of Seoul. In the UK, we had lots of excitement with a great Olympics.

After triple dips, much of maturing Europe looks likely to keep austerely moving sideways for the first part of 2013 before starting to recover. The north is still doing rather better than the south. Panic over the euro has given way to calls for reform – a realisation that 7% of the global population, producing 20% of global GDP, cannot support 50% of global social spending for ever. The year of the snake started on 10 February. What might it bring?

> ***At night, the shale boom is now visible from space. Companies producing shale liquids are flaring enough gas to power both Chicago and Washington … a waste with air quality and climate consequences***

Innovation, investment and good access are unlocking new supplies

In energy, 2012 brought growing recognition of the remarkable success of US oil shales and the resulting surge in North American supply. Only four or five years ago, the US worried about growing dependence on energy imports and mainly its rising dependence on oil from its friends in the Middle East. Now, all of a sudden, the US, powered by its shale, looks set to overtake first Russia and then Saudi Arabia to be the largest producer of liquids in the world.

First, shale gas grew from 2% of US gas supply to 37% in 10 years. Now, US oil is already up 25% from 2008, driven by the 2.4mmb/day of tight oil it is producing. The Bakken alone has grown tenfold from 0.1mmb/d just five years ago. And the International Energy Agency expects US output to rise a further 30% to more than 11mmb/day by 2020. BP now projects that the Americas region will soon surpass the Middle East and will provide 65% of liquids supply growth to 2030.

What has driven this great shale success? Higher prices for seven to eight years stimulated access to the risk capital for a step-change in field techniques, combining better horizontal and multi-lateral drilling with multi-stage hydraulic fracking in more efficient onshore operations to raise supply – first of gas and now oil – reshaping The US's energy landscape. And there is more to come, from shales such as the Eagle Ford and Monterrey, and from Canada.

At night, the shale boom is now visible from space. Companies producing shale liquids are flaring enough gas to power both Chicago and Washington. Triple the flaring in five years puts the US just behind Russia, Nigeria, Iran and Iraq – a waste with air quality and climate consequences. With so much, US prices have fallen. At $2-3/mcf last year, gas was well below cash costs for many dry gas producers, and six or seven times cheaper than oil for the same energy. Pipeline bottlenecks are now causing US oil to sell at $20-$35 below Brent, hitting key margins hard.

Can shale go global? There are plenty of shales holding hydrocarbons around the world. One key will be finding rich enough shales at the right depths, pressures and with enough natural fractures and brittleness. These do occur in many places, from China, Argentina, Australia and Colombia to Poland, Russia, France and the UK. Crucially, landowners in the US have a big incentive to allow access, as they own the minerals below their land, unlike most countries. Economic development will also depend on having a robust, competitive and low-cost service sector for good drilling and fracking operations – the US has more than 1,800 rigs – sensible supportive regulation and pipelines in the right place to get the oil or gas to consumers. Access and economics will drive where and when.

China, with outside help and if it can find effective ways to frack in its desert regions, may start realising its huge shale potential. This could, in time, have a very big, positive impact on its energy imports. North America's shales are already changing the global energy balance. Much will depend on how sustainable shales prove to be, how attitudes to fracking evolve, how far basin sweet spots extend and how much is at what cost. Where costs, prices and policies make it doable, shale momentum will grow, offering energy users more supply from more places.

There are now more then 1,800 drilling and fracking rigs operating in the US

CREDIT: PENN STATE OUTREACH

As well as shale growth, innovative exploration, also led mostly by the independents, is opening other new or deeper basins, adding significant new resources from Ghana westwards to Guyana, Brazil, the Falklands, Angola pre-salt, east Africa, the Med, Norway, Ireland, Black and Caspian seas, China, Malaysia and more – with an increasing share of gas. The majors now at last look likely to increase their exploration spending this year. Some of the more internationally focused, resource hungry international and national oil companies (INOCs) may follow. More exploration for gas is in the plans, as is more drilling and development of gas shales. So gas resource estimates are growing.

More gas in more places

Gas is much more widely distributed than oil – in reservoirs or shales, is much lower cost – though less so in Asia – and emits much less carbon than either oil or coal. Cheap gas has given US industries such as steel, aluminium, glass, plastics and petrochemicals, a real cost advantage in both energy and feedstock.

The effects of US shales, as well as already creating more than 1.7 million new jobs in the US, are likely to have a global impact. More gas is being used for power and transport, including LNG (liquefied natural gas) bunkering for ships. Even if few US molecules make it to Europe, cheaper, more available gas and LNG cargoes have already driven both gas and coal prices down here.

Gazprom may, after all, lower its contract prices – they are around three and a half times the US's $3.4/mcf now. And Russian president Vladimir Putin has suggested Gazprom should also now pay more attention to shale gas – just after it has invested billions in bringing on more Arctic gas.

Asian prices are five times the US's, and attracting cargoes to Europe from far afield may get tougher. LNG markets may tighten until 2014, when new projects come on and then supply is set to grow even faster than demand for gas – mainly in China, India and the Middle East. This new supply, including any from the US, is then likely to lower prices and differentials. If so, some new marginal projects will suffer.

Also this year, Japan plans the first production test of gas from deep water hydrates – a potentially huge resource in the long term. >

< *Some big energy challenges*

Overall energy demand is driven by rising incomes and more people. The global population has now passed seven billion and is still climbing. So energy continues to shift east, and by 2035, almost 90% of Middle East oil exports are likely to go to Asia. Oil prices have risen again, driven by recent events in Algeria, Mali, Syria, Egypt, Libya, Iraq, intensifying sanctions against Iran, Palestine's position and the risk of more quasi-religious extremist threats since the Arab Spring.

Given all the instability, will the US – already only importing 12% of its oil from the Gulf – still be so interested in playing global policeman once virtually energy independent, as it has craved for so long? The US economy will still feel the effects of global oil prices and outbreaks of volatility, so it is likely to stay geopolitically engaged.

How long will current prices last? It will depend on events, political choices, economic growth, OPEC's real spare capacity and spending needs, mature field decline rates and how non-OPEC marginal costs move. With more non-OPEC supply now than expected, prices may fall in the near term. But low-cost oil from Iraq may not grow as fast as hoped. Exxon recently decamped to the north, where Kurdistan hopes to raise exports. Brazil's deepwater projects may yet be delayed. Low prices brought about key US bottlenecks and no export policy may dampen its boom.

The investment case for successful, oil-focused exploration and shale-led independents looks stronger. The best have a clear focus on material plays in the right places, with good people fully engaged

Policy makers face critical choices in stimulating more growth and in investing to ensure there will be enough affordable energy – in ways that minimise damage to our environment, as overcrowding in urban areas rises. Green concerns have, not surprisingly, slid down their agenda. But all three goals should be possible. In the UK, we need to renew our power plants to keep the lights on later this decade. We already import half our gas from Norway – a third of our entire energy needs – and we now plan a new power interconnector from them, too.

Simple energy efficiency has enormous potential to reduce demand and solve many of our big energy challenges. Significant benefits are within reach. Already economic improvements, with four-to-five-year pay backs, could halve the growth in energy needed, potentially saving all the oil currently produced by Russia and Norway combined. Less energy use means less cost, less geopolitical strife and less pollution. But this needs a kick-start. New US fuel efficiency standards will help there, where very low tax makes demand more sensitive to price. The effect is more muted where governments subsidise oil to avoid unrest – oil gets more hand-outs than renewables now. Overall more effective, less wasteful use of energy makes both economic and environmental good sense.

Investing in growth

More surprises, in the same vein as the US shale revolution of the last few years are certainly in store, as are unexpected changes in policy or key economic drivers and breakthroughs in technology. In the near term, there looks to be more oil, gas and coal supply than was expected. So prices might fall for a bit – down towards or even below the marginal cost of supply. If this occurs, majors, INOCs and larger independents seeking growth are likely to take advantage of the window to acquire key assets, before prices start rising again. Pro-active first movers in the right areas, buying the best assets will add most value. But effective delivery of projects is getting harder.

For some of the majors, the investment case remains rather lacklustre. Despite more development and exploration spending, their production and reserves are flat or declining. Refining is shifting to Asia, even as cheaper US crude helps margins. Big gas projects are costing a lot more. Drilling and developing in more difficult areas, as companies are finding in the Arctic, often takes more capital and more time – and so also end up with lower margins. Hence more deals. And those with the expertise to open up new shale plays will be in demand.

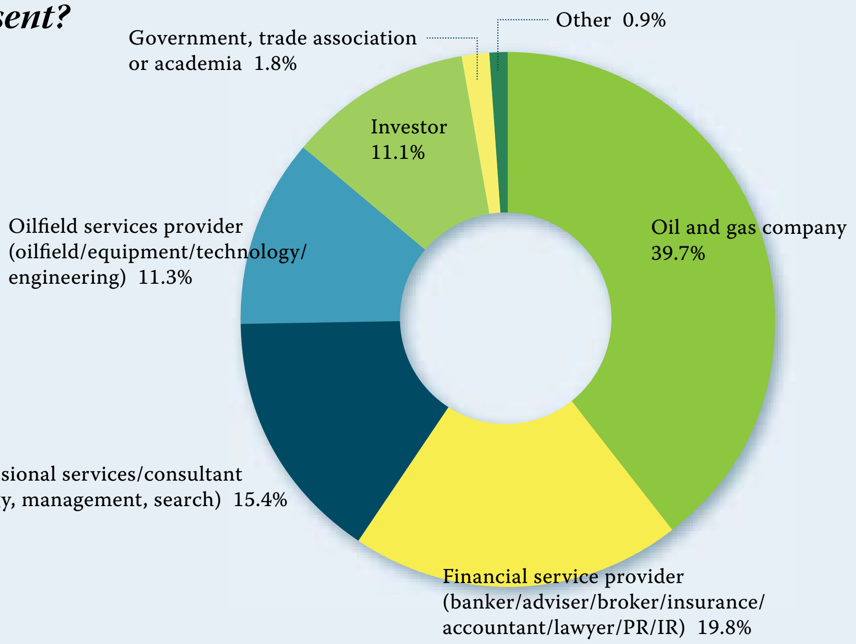
The investment case for successful, oil-focused exploration and shale-led independents looks stronger. The best have a clear focus on material plays in the right places, with good people fully engaged. More awareness of the key drivers of the energy environment will help inform decisions on where to participate and which capabilities and technologies to strengthen and develop to build competitive advantage. As you progress your objectives in 2013, keep your priorities and goals clear, build on your successes and have a great year ahead.

Hugh Ebbutt is senior consultant at Marakon

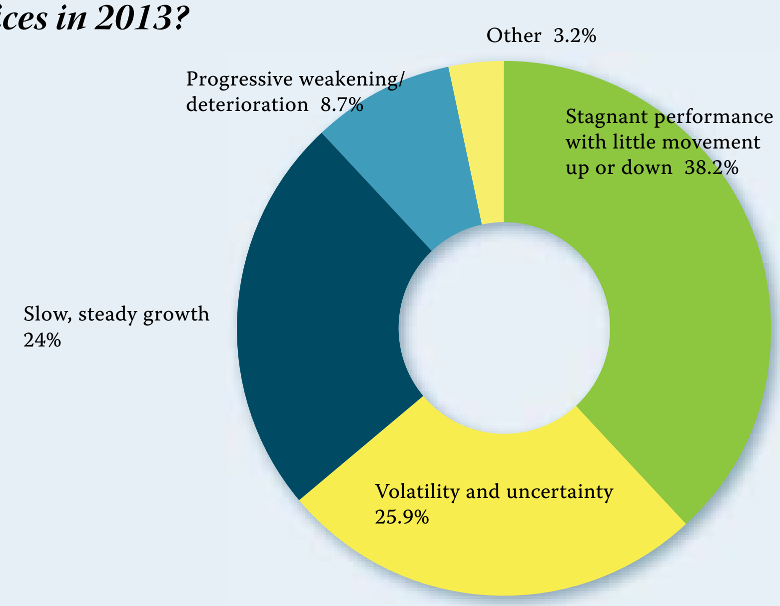
THE 2013 OIL COUNCIL SURVEY

More than 2,000 members took part in this year's survey, the reuslts of which reveal some divided opinions

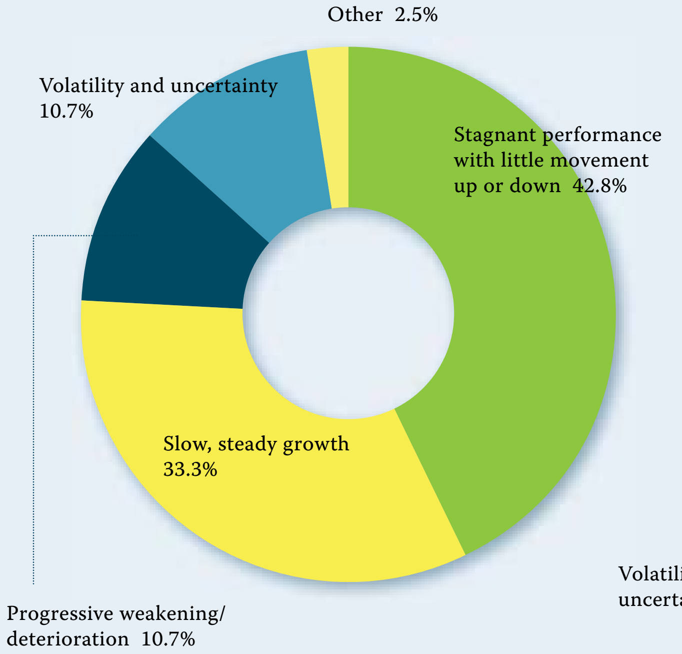
What type of organisation do you represent?



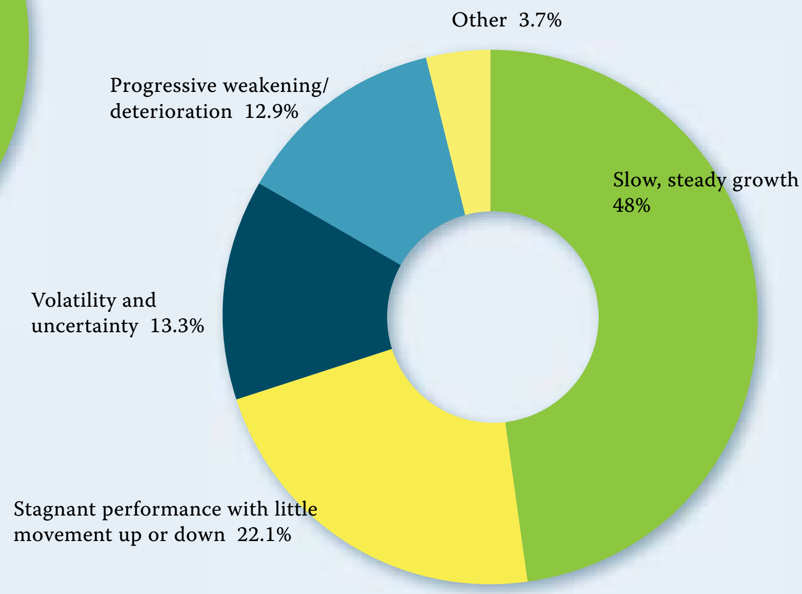
What do you expect to happen to oil markets/prices in 2013?



What do you expect to happen to US gas markets/prices in 2013?



What do you expect to happen to Asian gas markets/prices in 2013?



What are you bullish, bearish, or uncertain about for 2013?

	Bullish	Bearish	Uncertain
Asian national oil companies	**65.8%**	12.2%	22%
Investor sentiment towards oil and gas	**60%**	20.1%	19.9%
African independents	**59.4%**	15%	25.6%
Chinese economic growth	**53.8%**	19.8%	26.4%
Chinese shale	**49.9%**	19.5%	30.6%
African national oil companies	**45.9%**	22.2%	31.9%
US LNG exports	**40.1%**	30.5%	29.4%
UK unconventional gas	34.4%	**37.4%**	28.2%
US gas-focused independents	33.3%	**41.1%**	25.7%
World economy	29.2%	29.7%	**41.1%**
Argentinian shale	28.9%	33.9%	**37.2%**
Current US energy policy	27.6%	29.4%	**43%**
Eastern European shale	27%	**42.9%**	30.2%
Morocco/Namibia becoming major oil and gas province	24%	31.1%	**45%**
Arctic becoming major oil and gas province	19.9%	**43.9%**	36.3%
Global banking system	15.1%	**50.8%**	34.1%
Falklands becoming major oil and gas province	10.8%	**46.2%**	43%
The eurozone	8.7%	**65.1%**	26.2%

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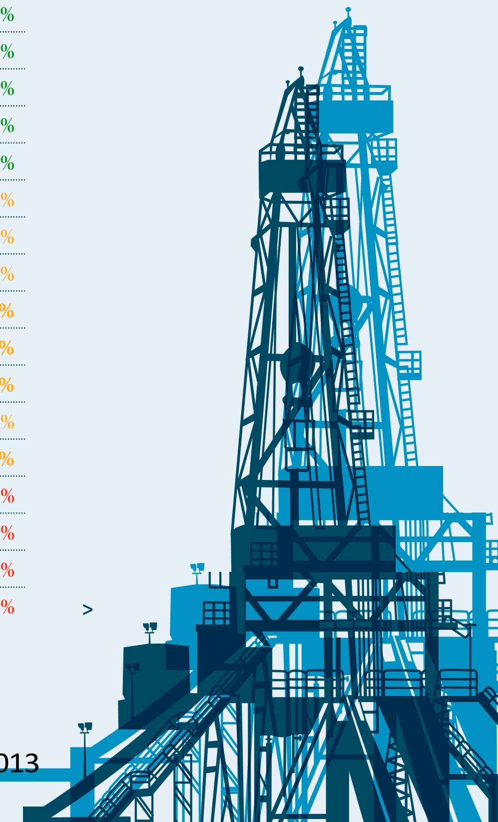
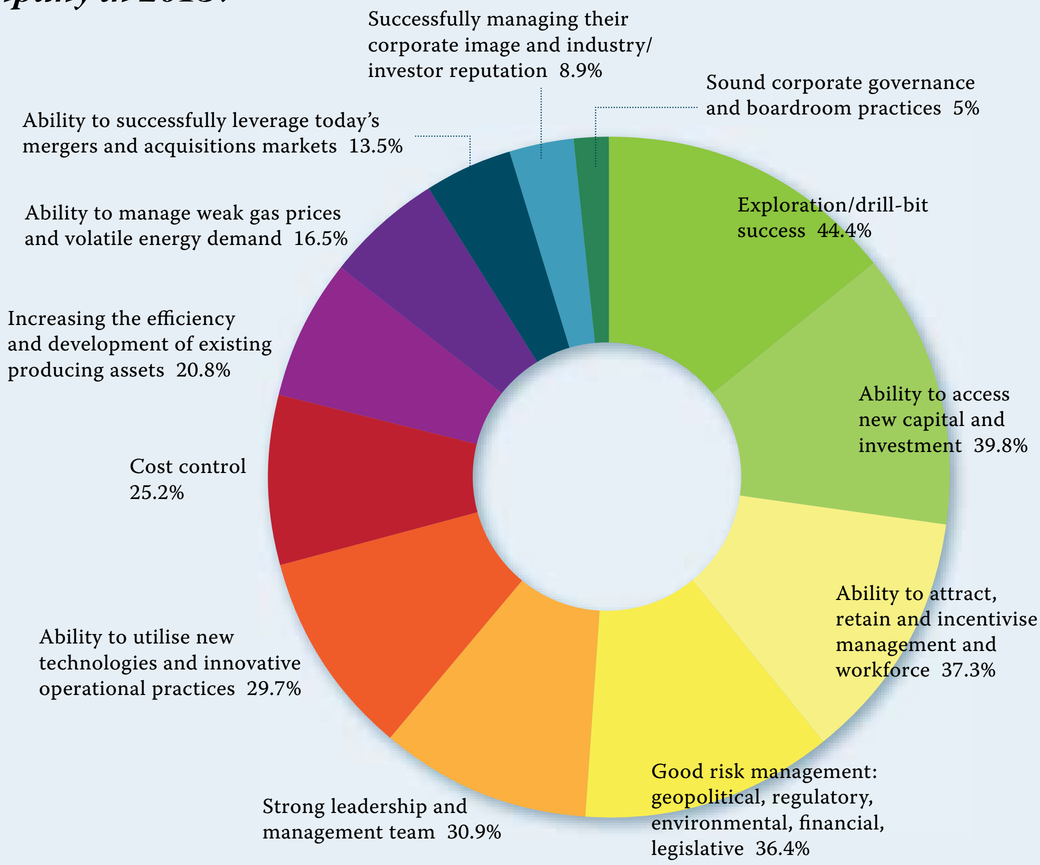
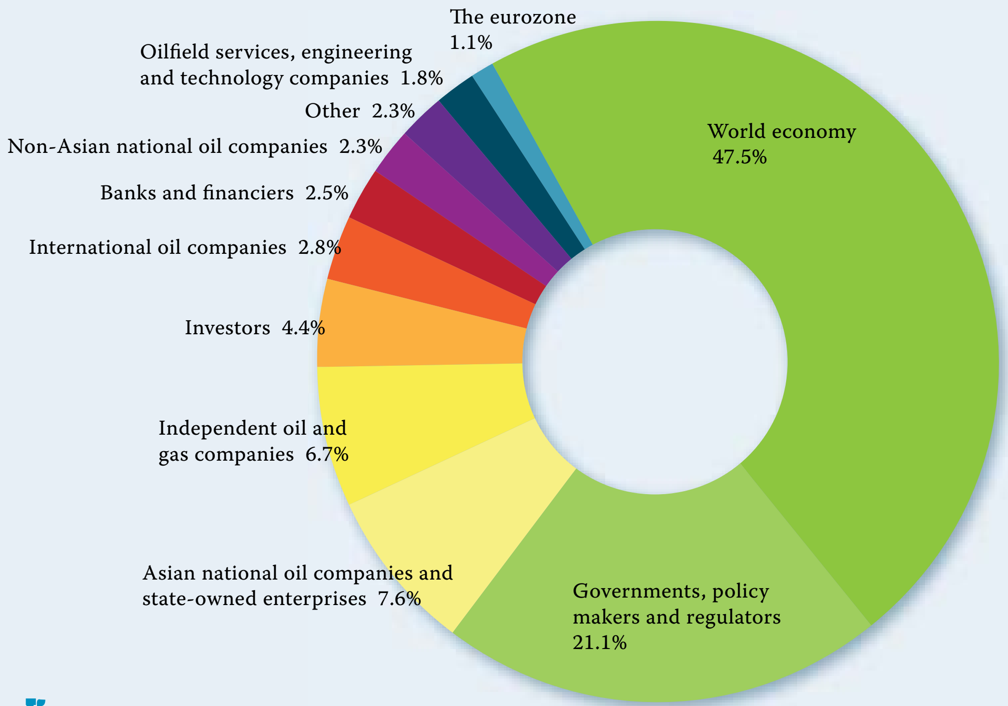


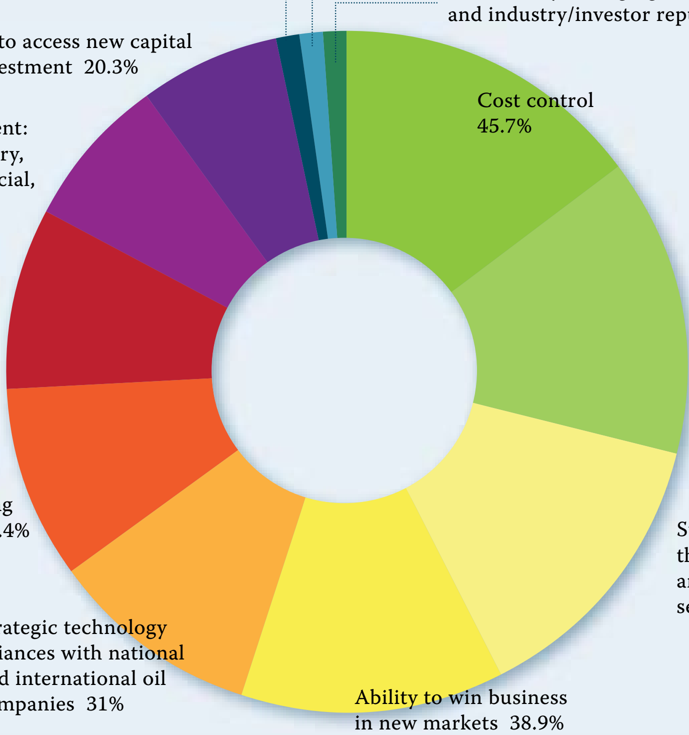
Which three qualities will be most important in determining the success of an oil and gas company in 2013?



Who/what will be most influential in determining the landscape of the oil and gas industry in 2013?

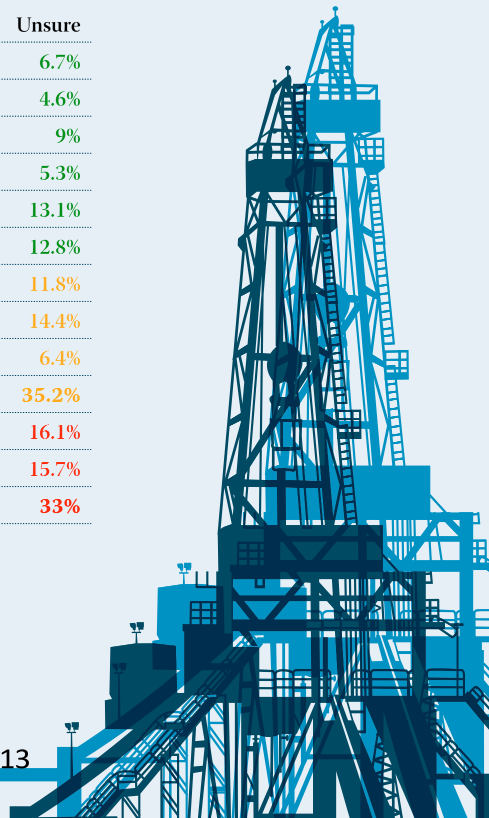


Which three qualities will be most important in determining the success of an oilfield services/engineering company in 2013?



In comparison to 2012, what will the industry see more, less, or the same volume of, in 2013?

	More	Less	The same	Unsure
National oil companies and sovereign wealth funds acquiring foreign assets	**63.4%**	6.2%	23.7%	6.7%
Consolidation among independents	**62%**	6.5%	27%	4.6%
Mergers and acquisitions – corporate level	**54.6%**	10.4%	25.9%	9%
Disposing by majors and large-caps of non-core assets	**53.3%**	11.3%	30.1%	5.3%
Resource nationalism	**50.3%**	14%	22.5%	13.1%
Acquisition and disposal deals – asset level	**45.2%**	8.1%	33.9%	12.8%
Private equity investments	**38.9%**	15.7%	33.6%	11.8%
Conflict in the Middle East	38.3%	10.9%	**36.4%**	14.4%
World-class exploration successes	27.4%	24.4%	**41.8%**	6.4%
Shareholder revolts	25.2%	11.7%	28%	**35.2%**
Debt lending	24.6%	23.7%	**35.6%**	16.1%
Initial public offerings	23.4%	25.5%	**35.4%**	15.7%
De-listings	19.9%	17.3%	29.8%	**33%**

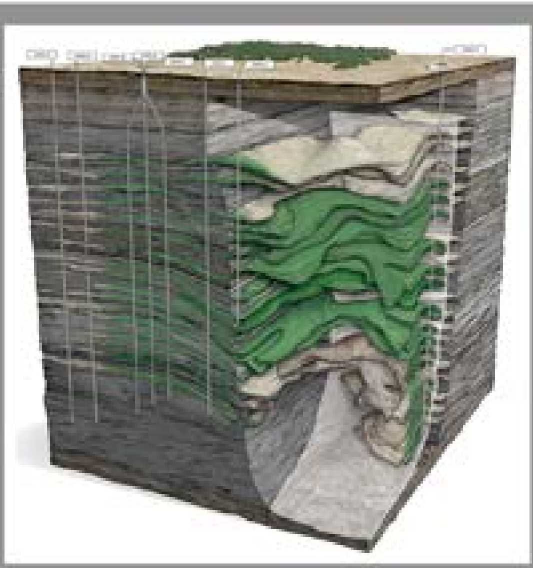


www.martresources.com

Working with local partners to unlock the potential of Nigeria's marginal oil & gas fields

Mart Resources, Inc. (Mart) is an international oil and gas company focused on production and development opportunities in the highly prolific **Niger Delta region of Nigeria**.

Mart was one of the first foreign oil companies to establish ventures with local Nigerian operators under the indigenous and **marginal field program.**



Umusadege field production zones & wells

The Umusadege marginal oil field *in Delta State* ***is Mart's core strategic asset*** *and is being developed in partnership with Midwestern Oil and Gas Plc and Suntrust Oil. Since initial production of 2,250 bopd (on re-entering UMU-1 in 2008),* ***the field now produces from 6 wells at daily production rates in excess of 12,000 bopd.*** *Further near term development and exploration drilling is planned to maximise the potential of the Umusadege field and surrounding areas.*

All enquiries, please contact: info@martresources.com

ON THE SPOT

What excites you most about the independent oil and gas sector in 2013 and what risks will present the greatest obstacles to growth? p32-35

Q What excites you most about the independent oil and gas sector

Jon Clark
Partner, mergers and acquisitions, Ernst & Young

This year faces many of the same challenges as the start of 2012. The uncertain economic outlook is unlikely to be resolved in the short term. However, I expect the sector to continue to demonstrate its resilience in M&A terms, as the key drivers remain the same.

I am excited by the high levels of exploration activity that we continue to see across the sector – from relatively new to mature basins. There is renewed interest in the North Sea with 2012 seeing a number of significant deals and record applicants for the UK's 27th licensing round. There are clearly exploration opportunities here for independents and also opportunities to balance their portfolios with producing assets

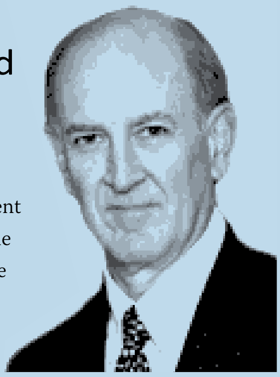
I expect the significant discoveries in east and west Africa to generate M&A activity in the region, as plans to develop existing and new finds take shape.

The US unconventional boom shows no signs of slowing down, and interest is building in China, South America and Europe. Unconventional developments could fundamentally change the global demand picture, and it will be fascinating to watch the impact on the developing liquefied natural gas (LNG) market. The independent sector has a key role to play in determining whether unconventionals can be as game changing in other geographies as they have been in the US.

Capital is on every company's agenda, whether seeking to raise it, invest it, or preserve what is currently in place. Funding conditions for both debt and equity remain challenging, and, although there is capital available, I continue to expect cash constraints, coupled with cost escalation, to be significant hurdles for many of the independents. Those at the larger end of the scale with stronger balance sheets may benefit.

The financing challenge is currently greatest at the development stage of the life cycle, where the potential returns are typically lower than for exploration, but the execution risks remain considerable. Those companies with significant internal resources can manage this by applying their own equity. However, those without such resources may need to pursue a transaction-based approach.

Doug Glass Partner, Akin Gump Strauss Hauer & Feld



There are several factors that could indicate that 2013 will be a boom year for the independents. First, the recent "relatively" stable oil price regime, which is critical to the ability of the independents to raise capital, appears to be continuing. Second, since the super-majors and majors are concentrating their efforts on larger and larger projects, this leaves considerable leeway for the independents to jump into smaller and mid-sized projects that are open for exploration and are less competitive. Third, the continued opening of new frontiers in emerging markets gives more nimble independents attractive, while somewhat more risky, opportunities.

On the downside, there remain many obstacles to growth for the independents, including questions on whether the capital markets will come back to mid-2000 levels. Also, a lack of infrastructure in frontier areas where some independents operate constrain their ability to quickly turn exploration success into cashflow, and turnaround times are crucial. And while new regulation of oil and gas activities affects everyone, the impact on independents is disproportionate because of their leaner staff and less diverse portfolios. Finally, there continue to be competitive challenges for experienced staff, and high costs due to the sustained demand for oilfield services.

But, we continue to see new start-ups in the independent space and the lure of a big find is irresistible. Thus, the playing field always seems to have its share of risk takers in the independent space, some of whom will, no doubt, walk away with big prizes.

David Pilling
Head of oil and gas, Nedbank Capital

What excites Nedbank – as an African bank – about 2013, is the wealth of opportunities likely to present themselves as expected oil prices and innovative independents drive projects forward.

In west Africa, we look forward to seeing the Ghana story extend beyond Jubilee, the continued restructuring of the sector in Nigeria leading to more independent players, and the emerging developments in the offshore from Cameroon all the way down the coast to Angola. East Africa should continue evolve with recent onshore oil and significant offshore gas developments making steady progress to approval.

Challenges and risks to be managed include the need to balance a skills shortage with the necessary requirements of local content, and also the changing and turbulent political situation in a number of key countries, especially in north Africa. All in all the year ahead promises, like 2012, to be an active one for both funders and companies.

Jim Rice and **Cliff Vrielink**
Partners, Sidley Austin (Houston)

Excitement is not necessarily a good thing in the context of business planning, whether in respect of the independent O&G sector or any other industry. We prefer stability, and that is what we anticipate. The global oil price appears to have reached a steady level, sustained over the last couple of years, and while there is always some downside risk based on demand dynamics, assuming the European debt crisis does not materially worsen, and the rate of growth in the Chinese and other developing economies does not slow precipitously, the prevailing market price appears to be something that development and M&A plans can be built around with some degree of confidence.

The US independent E&P sector benefits even more by these and other conditions. These companies have ready access to risk-friendly capital, and some may be able to finance assets through a master limited partnership (MLP), a very attractive option for investors in a yield-starved world. The worst-case scenario for the impact of Dodd-Frank (illiquidity in the commodity price hedging markets) has not come to pass. The massive domestic shale plays, entering into the onset of what will be a decades-long development phase, offer a huge inventory of low-geological risk investment opportunities, where efficiency and technological savvy can produce attractive returns. There is an entire industry – almost wholly financed now through the robust MLP markets – providing infrastructure for the transportation and treating of product. Finally, owing to a variety of factors, the West Texas Intermediate-Brent oil price differential may commence a contraction back toward historical norms.

Of course, the industry will face significant challenges in the year ahead. For the US independent, the pervasive depressed state of the natural gas market for the producer will cause operators to continue to divert capital away from dry gas toward liquids. However, since a large percentage of US natural gas production is associated with liquids production, it is not apparent that this shifting alone will have any meaningful effect on prices. The promise of help for commodity prices from the large-scale export of LNG – which faces significant opposition from certain members of Congress and domestic operators – is, at best, a few years off. And, for the shale operator, the spectre of overzealous regulation of hydraulic fracturing activity, and of massive waves of class action seeking recompense for the putative deleterious effects of fracking, is of concern.

Alison Baker Partner, PWC

What will 2013 hold for independent oil and gas companies? Well, it is six years since the commodity credit crunch and, as we enter another year, some of us remain cautiously optimistic:

- **Growing activity in shale gas and development of shale oil reserves, alongside new exploration finds in east Africa, provide huge opportunities.**
- **Volatility measures on the equity markets have returned to 2007 levels, but equity funding remains at some of the lowest levels for years.**
- **A new normal is emerging which means a continued fight for access to capital for the independents. Cash is king. One of the first questions funders are asking is: "How close is your project to producing cashflows?"**

Many CEOs are pooling resources, as demonstrated by the recent Petroceltic/Melrose tie-up or the innovative deal Bowleven and Petrofac announced at the end of 2012. Others will look to build a balanced portfolio of cash-producing assets alongside blue-sky exploration licences.

This year promises to hold highlights for some – standing out from the crowd and delivering on promises is even more important in what remains a challenging macro-economic backdrop.

Al Gress Vice-president, business development, TransGlobe Energy

Independents, especially small caps, are nimble. And as a result, I continue to see companies in this space continuing as trend setters in the oil and gas sector, as we can bob and weave our way through circumstances much better than the majors, allowing us to capture opportunities throughout the globe. This size type does fit the continuing reality of the subsurface, as the larger conventional reserve pools are becoming harder and harder to find – especially those in still reachable locations.

I see 2013, buoyed with the continued high commodity price, full of opportunities for independents to take commensurate risk to chase new exploration targets and bring back mature and smaller fields to life. Time for national oil companies (NOCs) to step out of the way and let more entrepreneurial companies create mutual value creation for the host countries and the company.

The biggest risk to growth continues to be money. The financing windows especially for smaller cap independents will remain tight, as in 2012. Many investors have de-risked petroleum, now seen with limited upside running room – the lipstick has worn off. That mentality needs to change, forget the value players, the majors et al. Do not solely chase the unconventional oil project financing model. It simply does not excite nor provide exceptionally high returns. Let's get back to exploring and exploiting again – and the independents will take us there. Now that's exciting! >

Q What excites you most about the independent oil and gas sector

Kevin B. Fisher (pictured) and **Steven R. Tredennick** Partners, Paul Hastings

Our energy clients are highly focused on the pricing environment for oil, natural gas and natural gas liquids and the opportunities – and potential pitfalls – that environment presents.

The shale revolution in the US over the past few years has been a complete game changer. With the huge increase in the supply of natural gas in the past few years, prices have plummeted. As a result, those companies that own almost exclusively natural gas assets have been experiencing stress in the market. Conversely, those companies that have a much higher proportion of their assets in oil or are otherwise well hedged have fared extremely well.

As a result of this imbalance in the market, many of our energy clients are highly focused on opportunistic acquisitions – the chance to pick up some valuable assets on the cheap – or divestitures – selling off assets in order to live to fight another day.

Among the regulatory issues that our exploration and development clients will continue to monitor in the coming year are the legislative efforts around imposing new environmental regulations, especially those pertaining to fracking, on exploration and production activities. Given the nature of these potential regulations, that could have an impact on the costs associated with production.

As the current pricing environment is expected to continue throughout 2013, we expect to see many energy firms this year actively engaged in acquisitions and divestitures, in an effort either to capitalise on their current strengths or shed weaker assets to escape pricing stress.

Kimberly Wood Partner, Vinson Elkins

The global expansion of the gas markets, in particular the continued development of unconventional gas, coupled with increased investment in LNG facilities is an area to watch with interest in 2013.
In 2012 we saw LNG plants in the US designed to be net importers of gas with regasification capabilities, applying for permits to install liquefaction equipment to allow for the export of excess gas resulting from the US shale gas boom. Reports state that global LNG demand has doubled over the past decade and that global LNG capacity is expected to roughly double again by 2020. Furthermore, we have seen increased interest in floating LNG platforms, and with Shell's Prelude due to come online in 2017, LNG continues to be an exciting area to watch.

Looking regionally, Africa in 2013 will continue to be an exciting destination of choice for those who seek new opportunities. However, political instability presents a significant obstacle to growth, as does the availability of financing. As economies crawl out of recession, finding an investor will continue to be a challenge in 2013. This will, however, present opportunities for international and national energy companies, and will help maintain M&A activity in the oil and gas sector as a whole.

Emma Wild Head of upstream oil advisory, KPMG

At KPMG, we are really excited about two things. First: the prospect of seeing the independents continue to drive exploration success in new plays in the same way that Ophir, BG, and Anadarko have done in Mozambique and Tanzania; Noble Energy has in Israel; and Tullow Oil in French Guyana. The independents tend to have a greater country risk appetite than the majors and this, combined with an astute management, should result in another exciting year for exploration, particularly if high commodity prices prevail.

Second, we think there will be significant deal activity in the UK North Sea on the back of the numerous tax changes announced throughout 2012. The government's efforts to stimulate activity by offering incentives for small and brownfield developments, as well as providing the much-awaited certainty over decommissioning, has started to filter through and, together with the sustained high oil price, has made investment a lot more attractive – even in smaller fields.

In terms of obstacles to growth – again, we see two major issues. For a start, realising shareholder value relative to asset value is an ongoing situation. Generally, a mid-cap's market capitalisation is suppressed compared with its asset value, suggesting a need for them to better articulate their portfolio value to the market. Our analysis suggests that market capitalisations in the mid-cap space are, on average, 44% lower than their asset values.

Second, traditional bank funding has become far more risk averse since 2008 and companies struggling to build diverse portfolios may also struggle to access funding. The repercussions are that companies may need to seek alternative sources of funding, such as through wealthy "family offices" or sovereign wealth funds. We may also see increased consolidation through mergers and acquisitions as a result.

Greg Turnbull
Partner, McCarthy Tetrault

Every year in the oil and gas sector is dynamic and 2013 will be no different. A number of the factors that the independents do not control reached some resolution in 2012. The presidential elections in the US and the transition of power at the highest level in China were concluded and new mandates obtained. Foreign investment rules in Canada were clarified and three multi-billion oil and gas transactions were approved.

Now business can be done again in a greater frame of certainty. I believe that the northern portion of the Keystone XL pipeline will be approved by President Obama before the summer and Canada and the US will work together to provide greater oil access to markets. I see the growth of LNG exports from North America as an exciting, game-changing factor, the effect of which will be felt for years. I am excited by ongoing technological changes that are unlocking huge reserves of oil in the Canadian oil sands, and in shale oil and gas formations throughout the world.

However, obstacles to growth abound and oil prices could undergo substantial downward revision unless geopolitical tensions continue. The industry has to continue to protect and communicate its "social licence" to operate. The environmental industry continues to attack growth in the energy sector and the industry as a whole has a mandate to continue to clearly communicate the benefits of lower energy costs to the economies of the world. Given the amount of misinformation about hydraulic fracturing, to name one – including the recent involvement of Hollywood in vilifying the industry – this will continue to be an ongoing obstacle in 2013.

The importance of natural gas as a transportation fuel will continue to increase, given its lower price and clear increase in supply as a result of technological developments. Existing pipeline operators will be subject to greater public scrutiny, but will also reap the benefits of reduced competition, given the difficulties of installing new pipes in western democracies.

The LNG market will experience greater competition and Asian economies will be the beneficiaries of rapid increases in supply from Australia, the Middle East and, ultimately, North America. Merger and acquisition activities will increase and in the second half of the year, capital markets may return to appreciate the importance of the energy industry as a principal driver of worldwide economies. The scramble to control reserves and resources around the world will continue and result in increasing tensions between countries over territorial jurisdictions and offshore boundaries.

Through it all, resilience, creativity, endurance, patience and perseverance will all be characteristics required of successful oil and gas companies and the individuals who run them.

Charles Dewhirst
Leader of natural resources practice, BDO

Last year brought an enormous surge in North American oil production due to unconventional oil reserves in the Canadian oil sands and the US shale formations. In 2013 and beyond, this could represent a game-changing phenomenon for US energy policy. To put this in perspective, the National Petroleum Council predicts that tight oil from the US shale formations and crude from the Canadian oil sands could double the level of North American oil production to 22.3 million barrels per day by 2035. Projections suggest US oil production alone will eclipse that of Saudi Arabia as early as 2020. Oil production from the shales, such as the Eagle Ford in Texas and the Bakken in North Dakota, is expected to reach 3 million barrels per day by 2020, or almost 30% of the current North American total for oil production.

However, federal energy policy may pose a challenge to the continuing development of the US's domestic oil production. Although the Obama administration has pointed to a bright future for America's energy industry, many see a disconnect between the president's predictions and recent Environmental Protection Agency (EPA) announcements, which hint at tighter federal regulations in 2013 to mitigate perceived issues with water contamination, water usage, fracking-induced earthquakes and greenhouse gas emissions attributable to fracking.

A variety of tax incentives for oil companies have been at risk over the last few years, as well, among them the Intangible Drilling Costs deduction, Percentage Depletion, the Domestic Production Deduction, and an extension of the amortisation of geological and geophysical (G&G) expenditures from 24 months to potentially seven years or more.

Despite these challenges, we anticipate opportunity to prevail, and we expect the industry to continue its forward trajectory in the coming year.

Rick Roberge
Principal, energy practice, PWC

The most exciting ongoing challenge in the US in the independent O&G sector will be the continuing development of the shale resource plays. As more knowledge is learned from each and every well, it is apparent that the estimates of the size and quality of this resource continue to be understated. However, the costs to develop this resource also continue to rise, and with persistent low natural gas prices, most independents face funding gaps to develop their shale opportunities.

Capital will be available – both debt and equity, including private equity – however the price of public equity could be expensive. The result may be a further round of major consolidation.

Carl Grenz Executive vice-president, international, Endeavour International

How did you come to be in the oil industry?
I joined the oil industry in 1975, working for Shell UK as a young electrical engineer based in Norway when building the Brent condeeps (concrete deep-water structures). I later transferred into operations. However, this formative experience was tremendous and I consider it a great privilege to have been involved in the early stages of the North Sea's oil and gas industry.

What is your proudest work-related achievement to date?
In the mid 1990s I played a leadership role in a team that transformed a severely underperforming asset in the Irish Sea to a high-performing asset delivering nameplate capacities, i.e. 70,000 barrels oil per day and 340 million cubic feet of gas per day. The effort involved the re-engineering of offshore facilities, organisational restructuring and establishing work practices to foster team performance culture in all aspects of the business. This was arguably the hardest period of my career but a very proud and satisfying experience nonetheless.

Where do you see the greatest opportunity in today's oil and gas markets?
The North Sea is still a fantastic petroleum system, even though it is now very mature. The UK still needs a vibrant oil industry to preserve jobs, develop transportable technologies, provide security of energy supply and income to the Exchequer.

The large oil companies are progressively exiting the arena, handing over assets and smaller new developments to the independent oil companies. The government and industry working together must quickly solve the issues of infrastructure access and decommissioning security to facilitate this transfer, otherwise I fear there will be an accelerated and early demise of the North Sea oil industry.

Where do you see the greatest challenge?
See above.

What was the wisest advice you ever received from a mentor?
Stay calm. Don't sweat the small stuff. Work hard. Work with honesty and integrity.

What advice would you pass on to a recent graduate wishing to work in your line of business?
First, I would say do come and join this industry. It still has so much to offer in terms of opportunity, skills and variety – and travel. Don't specialise too early.

What's the one interesting fact about you that no one would suspect?
I once played in a rock band that was the warm up act for the great Emerson Lake and Palmer at Leeds University in the 1970s.

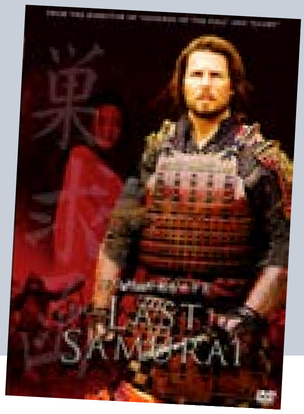
How do you prefer to spend your spare time?
I love to play my guitars and learn to play the piano. I love the theatre and cinema too.

Favourite holiday destination?
Probably Bora Bora (pictured) – so tranquil and beautiful.

All-time favourite book?
Anna Karenina. This book is a rich mosaic of characters, culture and society. I find Russia a fascinating place.

All-time favourite film?
Fascinated by the Orient – and Japan in particular – including martial arts and culture, it would have to be *The Last Samurai*.

What three luxury items would you take to a desert island? (NB: you may NOT choose a boat, raft, yacht, satellite phone, or* Practical Raft-building for Dummies *etc!)
My Gibson acoustic guitar, a long, sharp and sturdy knife and a photograph album containing pictures of the people I love.



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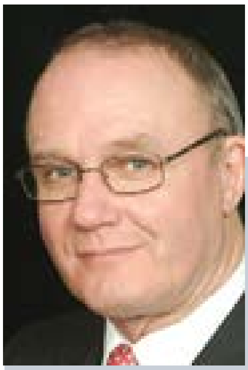


Martin Lovegrove
Former chairman, global energy, Citi

How did you come to be in the oil and gas industry?
As I was starting out on business life in 1971, North Sea oil was being discovered and I felt this was worth focusing on. Right place, right time.

What is your proudest work-related achievement to date?
Building a first-rate advisory team in Harrison Lovegrove, the legacy of which continues today, proving the point that no one is irreplaceable.

Where do you see the greatest opportunity in today's oil and gas markets?
There are more companies in the world today that are struggling for one reason or another. Some offer opportunities to do something with.

Where do you see the greatest challenge?
Getting the long-term economics of LNG (liquefied natural gas) right. They are long and highly capital-intensive projects, but how will global gas prices shape up?

What was the wisest advice you ever received from a mentor?
Know what you don't know.

What advice would you pass on to a graduate who wishes to work in your line of business?
Be willing to work hard, taking a long-term view, have integrity and look after others. They are the most important attributes one can have.

What's the one interesting fact about you that no one would suspect?
I have no degree, and my first job was being a filing clerk at Barclays Bank.

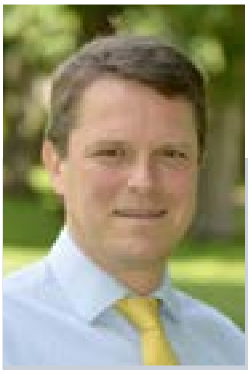
How do you prefer to spend your spare time?
Being well away from cities and people other than my family, dogs and close friends, ideally walking around my dairy farm.

Favourite holiday destination?
Any truly remote area where wildlife roams and where I can see the stars – they remind one how insignificant one is.

All-time favourite book?
I am not the best of readers.

All-time favourite film?
Local Hero.

What three luxury items would you take to a desert island? (NB: you may NOT choose a boat, raft, yacht, satellite phone, or* Practical Raft-building for Dummies *etc!)
A good-quality hunting knife, a magnifying glass and my Zeiss binoculars.



Mike Lakin
Managing director, Envoi

How did you come to be in the oil industry?
My father always encouraged us to find a career in something we might be good at, we would enjoy doing for more than 40 years and that would earn enough to bring up a family and hopefully be comfortable. I was at school in the 1970s and was inspired by a documentary I saw about the North Sea oil boom. I loved geography at the time which subsequently led to a geology degree at Cardiff with the sole aim of a career in the industry. Nearly 30 years on and I'm still at it!

What is your proudest work-related achievement to date?
That's a difficult one. It either has to be successfully catching the oil charged core of the Singleton-1 oil discovery well in the Weald Basin of southern England over Christmas 1987 as young operations geologist with Carless Exploration. Otherwise, the successful divestment by Envoi of exploration interests for Shell and Chevron offshore Denmark in 2008, or more recently the divestment of a material interest in Blake's appraisal and development assets in Georgia.

Where do you see the greatest opportunity in today's oil and gas markets?
Based on the global exploration and production (E&P) history over the last 30 years, this has to be the willingness and ability to explore where most other companies are not, but based on good geology and the use of new and evolving technologies.

Where do you see the greatest challenge?
As a paradox to the last answer, in the near to medium term, it has to be how the industry fills the massive 19-year geotechnical staff, skills and experience gap in the industry's E&P sector left by the years of low oil price between 1984 until its recovery in 2003.

What was the wisest advice you ever received from a mentor?
Hard work, honesty and patience that is perhaps best encompassed in the adage about "the overnight success that takes 15 years".

What advice would you pass on to a recent graduate wishing to work in your line of business?
Because it seems to be working for me … I would have to pass on the same advice I was given in the answer above: hard work, honesty and patience.

What's the one interesting fact about you that no one would suspect?
I used to play the violin and even led the orchestra at school … albeit that is more than 30 years ago now!

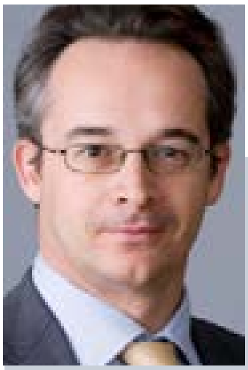
How do you prefer to spend your spare time?
With my young family and our friends, preferably away in the countryside or on the coast somewhere. I love a hands-on building or renovation project, if and when I get the chance, which is not very often.

Favourite holiday destination?
France, where we have a 13th century gatehouse into a bastide in the Dordogne.

All-time favourite book?
Band of Brothers by Stephen E. Ambrose.

All-time favourite film?
The Shawshank Redemption.

What three luxury items would you take to a desert island?
A tablet with all my music, films and books on it – if that can be classed as one item – a fishing rod and a case of vintage port.



Duncan Rushworth

Vice-president, business development, Svenska Petroleum Exploration

How did you come to be in the oil and gas industry?
I was interested in geology at high school, studying it at O level and A level and then reading geology at university as my first degree. The move into the industry in a technical role seemed a natural progression.

What is your proudest work-related achievement to date?
Being part of the management team that has developed Svenska Petroleum since 2007. At that time the company had no exploration portfolio and a few tail-end producing fields. Helping transform the company to one with a track record of exploration success, reserve growth and a pipeline of development assets has provided us all with an enormous sense of achievement.

Where do you see the greatest opportunity in today's oil and gas markets?
Geographically, it has to be Africa for its under-explored nature and huge potential.

Where do you see the greatest challenge?
Management of above-ground risks, specifically maintaining a productive relationship with host governments.

What was the wisest advice you ever received from a mentor?
Perception is reality … self awareness is a powerful skill.

What advice would you pass on to a graduate who wishes to work in your line of business?
Never pass up on any learning opportunity, you will always be surprised how the information or knowledge gained will prove to be useful.

What's the one interesting fact about you that no one would suspect?
I understand more of the Swedish language than even my Swedish colleagues realise.

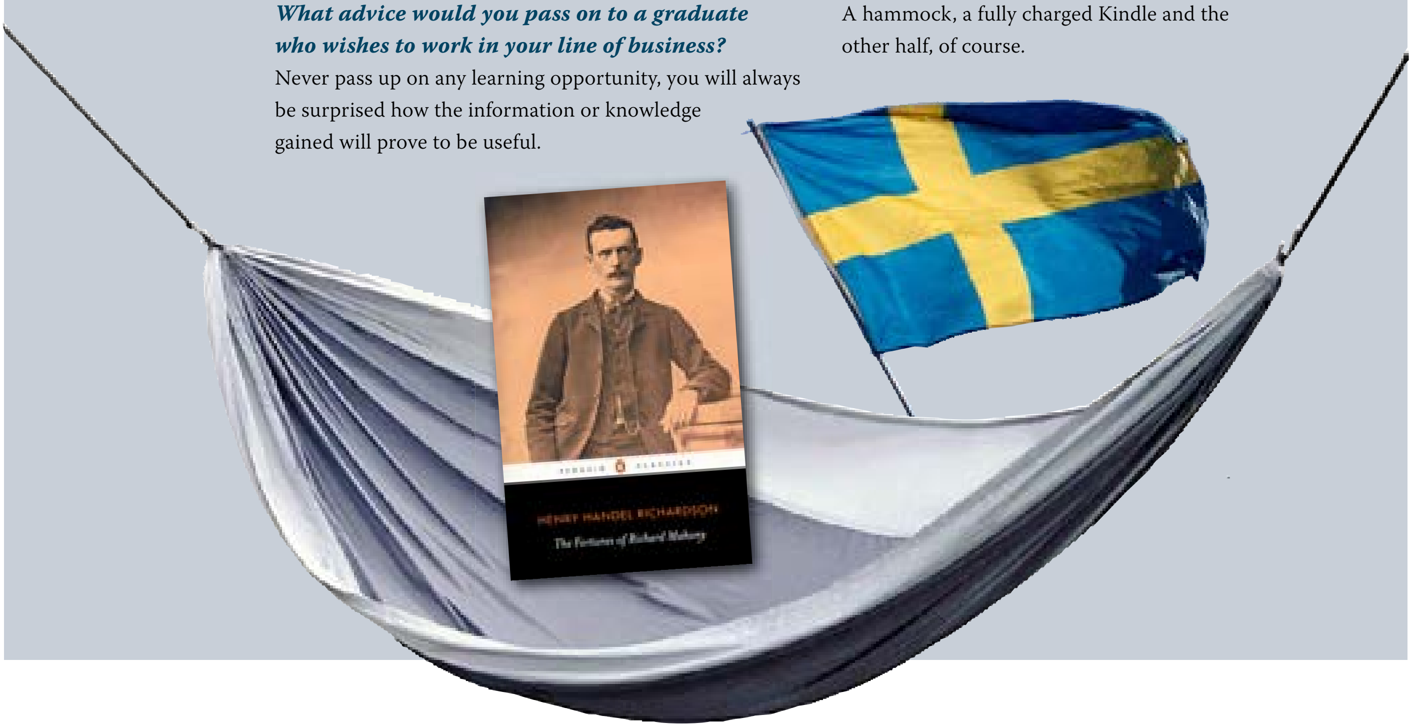
How do you prefer to spend your spare time?
As a break from all the business-related travel, we do a good deal of travel for leisure. Having accumulated enough air miles for a trip to the Alpha Centuri and back, we often try to use them for exploring Europe when we do have some down time.

Favourite holiday destination?
It can be either be complete relaxation in the summer house in Sweden, a short break in Paris or a longer visit to Malaysia or Thailand.

All-time favourite book?
The Fortunes Of Richard Mahoney by Henry Handel Richardson. This is great Australian literature, which isn't a contradiction in terms, but in this case is a little-known classic.

All-time favourite film?
The Godfather Part II – the exception that proves the rule for sequels.

What three luxury items would you take to a desert island? [NB: you may NOT choose a boat, raft, yacht, satellite phone, or Practical Raft-building for Dummies etc!)
A hammock, a fully charged Kindle and the other half, of course.



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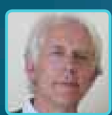

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CEO, Discover Exploration

Robert Sirleaf
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