



EUROPE



Statoil's Noralf Steinsland, VP Exploration in Norway & Barents is presented the Macquarie "Golden Hammer" by Mark Wilson.

In a vote between Statoil and Africa Oil for "Explorer of the Year 2012", 62% of the audience chose Statoil

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11 January 2013

Explorers Conference

Filling in the gaps

2013 more a "follow-up" story than "basin-opening".

- On Monday 7th January we hosted the 4th Macquarie Oil & Gas Explorers Conference at the Andaz Hotel in London. This document summarises our key takeaways from each of the 20 companies which presented across the 6 regional sessions. Audience opinion to polled questions is also included.
- We suggest investors use this qualitative view on exploration plans alongside Macquarie's more recent 2013 look-ahead pieces: [European E&P "Roll on 2013"](#) and [Canadian International E&P "2013 Outlook"](#)

Barents a key focus in 2013 – and a key "follow up" play

- 2012 saw fewer "basin-opening" events than 2011 although success onshore Kenya by Tullow Oil and Africa Oil was the notable exception. The true test in 2012 has been follow-up success (probably best illustrated by unsuccessful appraisal of Zaedyus offshore French Guiana). A theme of 2013 work programs is the predominance of follow-up campaigns rather than new plays.
- Norway is at the forefront of this dynamic with the Barents Sea shaping up to have one of its most active years of exploration. Up to 10 Barents Sea exploration wells will be drilled in 2013 by our presenting companies (Statoil – 8, Lundin – 1, Faroe – 1) with additional wells in the region being drilled by ENI. Additionally, the Utsira High area of Norway could see up to 6 exploration wells by Lundin alone as the company seeks to follow up on previous success

Kurdistan interest apparent, investors voting with their feet

- Despite the politics, Kurdistan operators continue to attract the attention of investors with standing room only during these presentations. We believe the recent commencement of crude oil exports directly to Turkey to be significant in moving towards a more permanent export solution while perhaps increasing exploration activity ex-Kurdistan is causing new investors to consider the likes of DNO and Genel Energy.

Sell or develop? No "one size fits all" solution

- A theme we kept returning to was the question of monetisation of discoveries and longer term strategic goals for E&Ps – i.e., should production growth (from exploration success) be the fundamental goal of a company. For some companies this strategy suits, e.g. Lundin's goal of being a leading full-cycle E&P. For others the value of a company is weighted more to exploration (Tullow Oil) and investors would rather see the company (partially) monetise discoveries ahead of development to fund further exploration elsewhere.

Galp's presentation stood out for exploration catalysts

- Galp's 2013 exploration programme includes at least seven high impact E&A wells in both established core regions (Brazil and Mozambique). For more details see [The exploration wildcard in 2013](#). In smaller cap companies, exploration programs with multiple high impact potential for 2013 would be Salamander Energy, Faroe Petroleum and Petroceltic.

Macquarie Explorers Conference agenda 7 Jan 2013, Andaz Hotel, London

Great Eastern Room		Bishopsgate & Chancery Room	
Agenda is subject to change		Agenda is subject to change	
08.45	BREAKFAST & WELCOME ADDRESS Charles Lesser, Division Director, European Energy David Fass, CEO Macquarie EMEA		
09.05 09.30 09.55 10.20	<u>Barents Sea / Norway</u> Statoil Lundin Petroleum Faroe Petroleum Bridge Energy	09.05 09.30 09.55 10.20	<u>Kurdistan</u> WesternZagros Resources DNO International Genel Energy
10.45	BREAK	10.45	BREAK
11.00 11.25 11.50	<u>SE Asia</u> Coastal Energy Salamander Energy Premier Oil	11.00 11.25 11.50	<u>MENA</u> Petroceltic International TransGlobe Energy Mediterranean Oil & Gas
12.15 12.30	LUNCH Lunch speaker – Dr Adam Law Principal Geoscientist, ERC Equipoise	12.15	LUNCH For details of the Small Cap Open Desk Sessions see overleaf
13.15 13.40 14.05 14.30	<u>Frontier Atlantic</u> Galp Energia Noble Energy Providence Resources Cairn Energy	13.15 14.05	<u>Small Cap Open Desk</u> FX Energy, San Leon Energy and United Hydrocarbon International Chinook Energy, Gran Tierra Energy and Max Petroleum
15.00	BREAK	15.00	BREAK
15.10 15.40 16.10	<u>Central / East Africa</u> Tullow Oil Hyperdynamics Africa Oil	15.10	<u>Small Cap Open Desk</u> Argos Resources and Rockhopper Exploration

In the pages below we provide (in alphabetical order) one-page summary for companies that presented at our Explorers Conference.

Africa Oil

AOI CN, Not rated

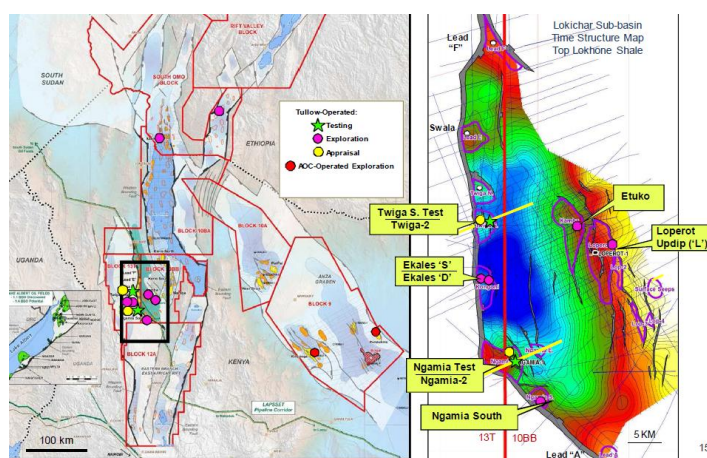
Lokichar basin: 2 well tests, up-dip appraisals and 4-5 exploration wells in 2013 (300-500mmb commercial target)

Sabisa-1 the big catalyst in 1Q13. 12.6bnb of gross prospective resource in South Omo and Block 10BA

The play-opening story of 2012. Now what is “the size of this thing”?

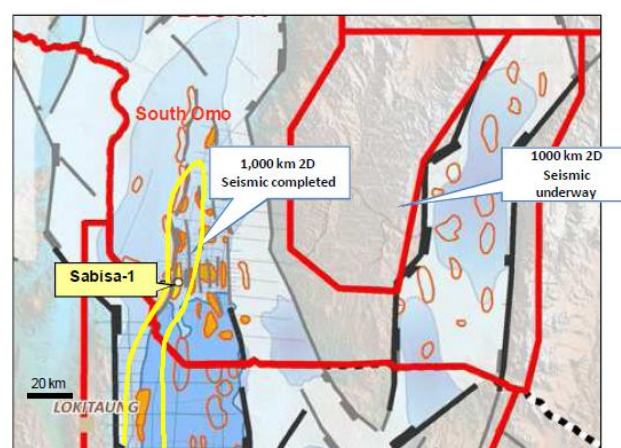
- Keith Hill, CEO of Africa Oil was the final presenter of the day and emphasised the aim in 2013 (and beyond) to determine “the size of this thing”. A program was outlined that aims to establish commerciality in the locale of the 2012 discoveries and extend the play through exploration into additional basins within the Kenya/Ethiopia Rift system.
- Lokichar basin dominates spend and activity in 2012.** The majority of the presentation focused on the current “Southern String of Pearls” discoveries in the Lokichar. The primary reservoir at both Ngamia-1 and Twiga-1 (now renamed the Auwerwer Sandstone from Upper Lokhone) will see 3 zones flow-tested in both wells. However, the current testing (at Twiga) is attempting to flow from the deeper, low-porosity fractured clastic formation. The next drilling in this area will be the Ekales prospect (formerly Kongoni) which would be the third Southern string of Pearls prospect and considered very low-risk as it lies in between Twiga and Ngami. Following testing of both wells, “up-dip” drilling of both Twiga and Ngamia is planned for later in 2013 as well as drilling in the east of the Lokichar basin at the Etuko prospect (formerly Kamba) where prospect sizes are seen as larger (~200mmb) and the Lower Lokhone sandstone is considered to be the primary target (vs. the Upper Lokhone now the primary reservoir target in the west of the Lokichar basin).
- The high-impact catalyst well – Sabisa – the Northern basin opener.** At the Northern end of the tertiary rift system a hydrocarbon source is yet to be proved, hence the Sabisa-1 well which is about to spud (start) on the South Omo Block in Eithiopia is a key 1Q13 well.

Fig 1 Lokichar 2013 (potential) work program, Kenya



Source: Company data, January 2013

Fig 2 Sabisa-1 aims to open up a Northern basin



Source: Company data, January 2013

- But Paipai the next drilling result – low CoS emphasised.** Mr Hill had hoped to be able to announce a Paipai result by now but drilling is still on-going at this well which targets an older (Cretaceous) play in the Anza basin to the east of the Tertiary play discussed above.
- Expects to exit 2013 with US\$75m.** Africa oil raised US\$232m 2012 (at C\$7.75/sh)

Fig 3 Key catalysts – A very busy program with high impact events

Event	Country / Region	Expected timing	Comments	Riskd value	Unriskd value
Paipai	Kenya,	Jan 13	First drilling news, Low CoS (~15%), Block10A, AOI 30%,	n.a.	n.a.
Twiga flow testing	Kenya	Jan/Feb 13	3 zones in Upper Lokone sands the important news, Block 13T, AOI 50%	n.a.	n.a.
Sabisa	Eithiopia	Late 1Q13	Northern extent of Lake Turkana, seeking to establish a hydrocarbon source in the undrilled Northern area. South Omo, AOI 30%	n.a.	n.a.

Source: Company data, Macquarie Research, January 2013

Bridge Energy

BRDG LN / BRIDGE
NO, Not Rated

80% of attendees
would invest in this
size of exploration
company

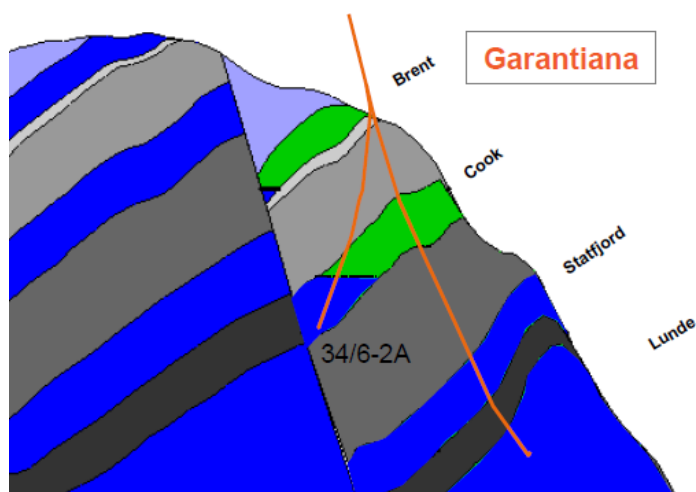
2 discoveries in
Norway during 2012,
both seeing follow
up drilling

Hercules (south of
Norway) is seen as
material prize

3 out of 4 in 2012. Exploring in Norway, producing in UK

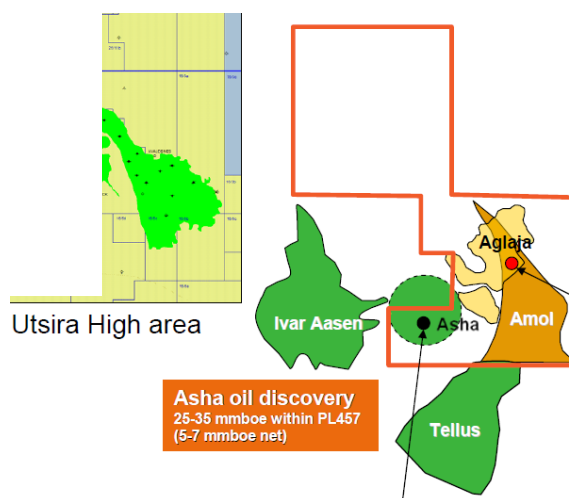
- Mr Alfred Kjemperud, Managing Director, Norway, discussed 2012 in the context of 3 out of Bridge's 4 exploration wells discovering oil (and cost carried on the Geite dry hole). In 2013/2014 the company is planning 6 further E&A wells (5 in Norway) and Mr Kjemperud seemed confident rigs will be accessible for small companies via slot consortiums.
- Nibbling at the Utsira High.** The Asha discovery on PL457 (20% WI) is estimated at 25-35mmboe. PL457 lies just north of Lundin's PL338 (Edvard Grieg) license and east of Det Norsk's PL001B (Ivar Aasen). Connectivity of Asha with Ivar Aasen appeared uncertain from Bridge's presentation. Another well on the PL457 block is planned 2013 targeting the dual stacked Amol (50mmboe) & Aglaja (10mmboe) gross prospects.
- Following up Garantiana discovery.** Norway also saw the 4Q12 Garantiana discovery (20% WI) in the Cook fm. (one of three targeted). The well was successfully sidetracked and flow tested at 4.3kb/d with gross resources estimated at 25-75mmb. Two follow-on E&A wells (Garantiana N and Angulata) are planned in 2013/14. Development options include a tie-back (25-30mmb required) with existing nearby infrastructure (<30km away) and a standalone FPSO (~50mmb required based on the nearby Knarr FPSO project).
- Mjøsa in 2013 but likely the big prize is Hercules in 2014.** A well at Mjøsa (~190mmboe, 7.5% WI, "significant" carry, Norwegian Sea) is planned for 2H13 targeting a stacked play. The Hercules well (~310mmboe, 30% WI) is on a terrace W of the Mandal High in Norway's SNS with a main pre-drill risk of quantity of the sand deposited. Farm-out is "possible" before drilling in mid-2014.

Fig 4 Garantiana finds oil in the Cook formation



Source: Company data, January 2013

Fig 5 PL457 discovery and regional setting



Source: Company data, January 2013

Long term UK
production target
weighted to SNS

- UK for production growth.** Current focus remains on near-term production growth with Bridge targeting a 2016 rate of 10kboe/d (vs. 1.2kboe/d 3Q12A) from organic developments (predominantly UK SNS Vulcan gas hub). Bridge will shortly add <0.5kboe/d from its Cormorant E (i.e. the 4Q12 Contender discovery).

Fig 6 Key E&A drilling catalysts in 2013

Event	Country / Region	Expected timing	Comments	Riskd value	Unriskd value
Amol&Aglaja (PL457)	Utsira High	End-2013	Primary target: Amol - a Tellus analogue (L Cret & basement play)	n.a.	n.a.
Angulata / Garantiana N	Norw. North Sea	2H13	Up to four stacked targets (each). Discovery could support FPSO dev	n.a.	n.a.
Mjøsa	Norwegian Sea	2H13	Classic tilted mid-Jura fault block. Risk: seal integrity (regional erosion)	n.a.	n.a.

Source: Company data, Macquarie Research January 2013

Cairn Energy

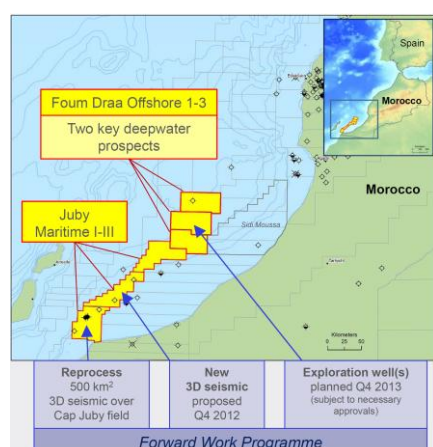
Catalysts emerging at the end of 2013 and into 2014

**CNE LN,
Outperform, TP
350p**

**Return to Greenland
drilling in 2014 (at
the earliest).
Relinquishment of
West Disco Block
suggested**

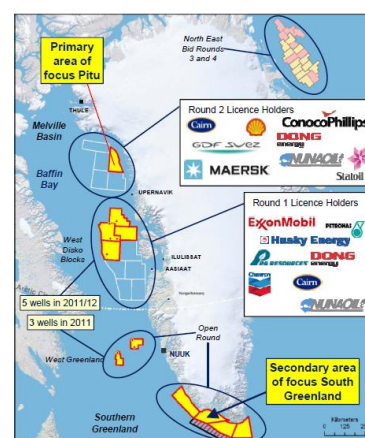
- Dr Mike Watts, Deputy CEO, presented a company very much post its transition phase but not yet ready to discuss in detail the prospects to be targeted in the next phase of exploration drilling in Morocco and Greenland plus the confirmed forward UK & Norway drilling plan. Cairn illustrated its view of a current trading value in line with its liquid asset value (in our view; 286p, split 50:50 between the 10% holding in Cairn India and cash).
- Morocco – key high-impact region – may see late 2013 drilling.** The acquisition of Nautical and a farm into San Leon's / Serica's adjacent acreage provided Cairn with an entry position into Morocco. Cairn now has 6 contiguous offshore blocks (across two permits: Fom Draa and Juby Maritime), where a 2-3 E&A well deep water drilling campaign is shown to commence in 2H13 (although "subject to permitting" so slipping into 2014 would be no surprise).
- Greenland a 2014 event at the earliest.** There was some indication of encouraging data from the Pitu Block Regional Shallow Borehole programme that has been completed; we continue to believe drilling remains a 2014 event at the earliest with Pitu becoming the "primary area of focus" for Cairn in Greenland. South Greenland area is now a "secondary area of focus" for the company and in particular the Disco West area may see relinquishment due to a step change in technology needed to image beneath the volcanics.
- Corporate news to focus on farm-ins/outs, not acquisitions.** Cairn is not currently actively pursuing further acquisitions in 2013, however asset transactions are expected to take place; we would expect in North Sea and Southern Greenland.

Fig 7 Morocco – Cairn acreage



Source: Company data, January 2013

Fig 8 Greenland– Cairn acreage



Source: Company data, January 2013

- Funded from cash and liquid assets.** With ~US\$1.5bn of net cash at YE12E and US\$905 of development capex requirements to YE15E for Catcher (30% WI), Kraken (25% WI) and Skarvfjell (20% WI), the residual CAIR holding should provide cushion including for Statoil's recent FID on Mariner (implying US\$420m capex for Cairn's 6% WI).

Fig 9 Key catalysts in the next six months

Event	Country / Region	Expected timing	Comments	Riskd value	Unriskd value
Kraken appr. & expl ST	UK NNS	1H13	160mmb heavy oil field (pre-FDP). 25mmb upside not in TP. Firm well	13.0p	21.7p
Skarvfjell appr	Norw North Sea	2013	Two wells planned. Testing downdip of the 2012 discovery	7.3p	15.5p

Source: Company data, Macquarie Research 2013

Coastal Energy

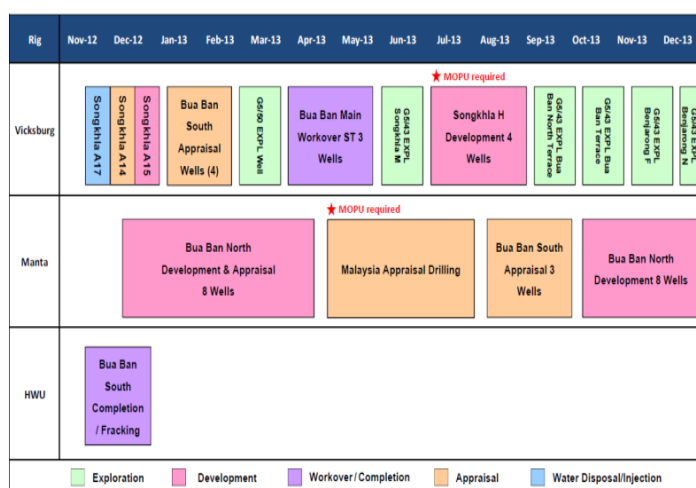
Transitioning from explorer to developer?

**CEN CN,
Outperform, TP:
C\$25.00**

**Bullish guidance
provided by Coastal
in December
estimates 2013
production to
average 33,000
boe/d**

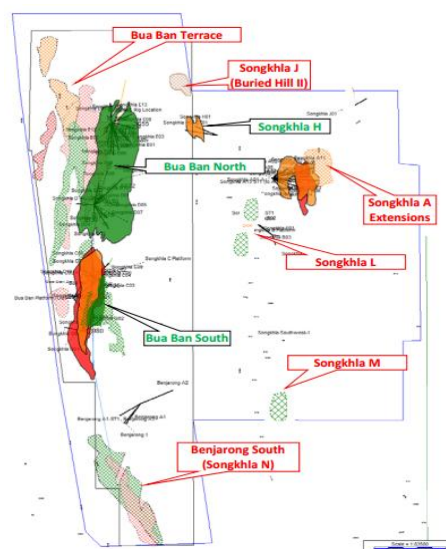
- Coastal was represented at our conference by Jerry Moon, the company's VP of Business Development. With the recent introduction of a second drilling rig at Bua Ban North, the emphasis will be on appraisal and development in 2013, although key exploration wells are planned for block G5/50 in 1Q13, and G5/43 in 4Q13.
- Coastal guiding to a strong 2013.** Bullish guidance provided by Coastal in December estimates 2013 average production at 33,000 boe/d, as they look to benefit from additional production from the Malaysian service contract. Should Coastal continue to meet its production targets, we believe the company will remain a subject of M&A interest.
- What to do with all that cash?** With the company forecasting FCF of US\$200m in 2013, investors are wondering how Coastal plans to deploy its excess cash. Mr. Moon was asked about the potential for a continuation of the share buyback, but given that the company has published a 2P NAV of ~C\$21.00/sh, it does not believe it would be accretive to buy back shares in the market. Coastal reportedly remains on the lookout for expansion opportunities in southeast Asia, particularly in Malaysia and Indonesia.

Fig 10 Drilling timeline



Source: Company data, January 2013

Fig 11 Prospective Songkhla Basin



Source: Company data, January 2013

- Addition of second rig to speed up 2013 drilling.** The addition of a second rig offshore Thailand will speed up appraisal drilling at Bua Ban North for the first half of the year, followed by a move to the KBM cluster offshore Malaysia, to begin appraisal drilling. We anticipate the results of an exploration well on block G5/50 scheduled for March 2013, we value the prospect at C\$2.18/sh unrisks.

Fig 12 Key catalysts in the next six months

Event	Country / Region	Expected timing	Comments	Riskd value	Unriskd value
G5/50 exploration well	Offshore Thailand	1Q13-2Q13	After completing 3-D seismic over the Songkhla basin and G5/50, Coastal looks to drill an exploration well targeting ~25.0 mmbbl unrisks recoverable (P50)	C\$0.26/sh	C\$2.18/sh
Bua Ban North development & appraisal	Offshore Thailand	1H13	With the addition of the Manta rig, Coastal will drill 8 development and appraisal wells at Bua Ban North	C\$0.83/sh	C\$2.92/sh

Source: Company data, Macquarie Research, January 2013

DNO International

Looking to expand the exploration hopper

**DNO NO,
Outperform, TP:
kr12.70**

**DNO to focus on
adding exploration
to its development
projects**

**Maturing a multi
million boe prospect**

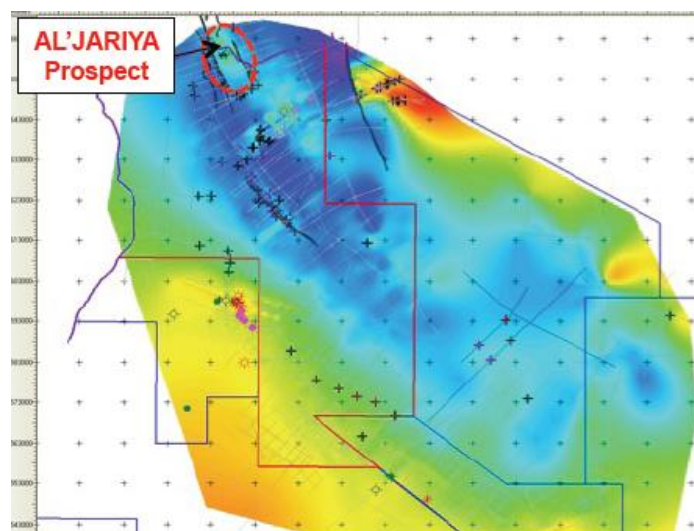
- DNO's Exploration Director Tore Liloe-Olsen provided an overview of the company's ongoing Exploration and Appraisal activities in Kurdistan and the less well known areas of Yemen, Oman, UAE and Tunisia.
- **Now to add exploration activity:** The most interesting takeaway from the presentation in our view was not asset-specific but more strategic. Having established a large resource base, DNO is now explicitly looking to add further exploration potential to the portfolio. And, while the audience would rather see development projects added (63% vs 37%) we believe that one of the reasons the stock continues to trade at a 17% discount to our Core NAV is due to the lack of exploration upside within the portfolio and we would therefore welcome further exploration based news-flow.
- **Tunisia appears to be the primary area of focus:** In particular, Tunisia was described as an attractive area and where DNO would like to see its footprint expanded. With a strong balance sheet (we estimate cash of ~US\$230m for FY12e) and two existing early-stage permits in the country with oil potential (Hammamet Offshore and FKIRINE onshore), we believe that DNO is well-positioned to follow through with this objective.
- **Oman emerging as having greater production and exploration potential:** The recently acidized West Bukha-4 well offshore Oman surprised to the upside and suggests potentially more oil than in DNO's existing model, which could pave the way for further development wells in 2013. DNO may also re-drill the Al'Jariya prospect onshore Block 31 in 2013. The prospect, which we believe to hold some multi million boe of potential, was originally drilled in 2008 but abandoned prior to the primary Shuaiba formation due to encountering a HP/HT zone.

Fig 13 DNO is looking to add to its Tunisian acreage



Source: Company data, January 2013

Fig 14 Al'Jariya is being matured for drilling



Source: Company data, January 2013

Fig 15 Key catalysts in the next six months

Event	Country / Region	Expected timing	Comments	Riskd value	Unriskd value
Tawke 17 (Deep)	Kurdistan	1Q13	It will be the first well to test the Jurassic and Triassic formations below the producing Cretaceous formation	kr0.8	kr3.3
FY12 results	n.a.	12 th Feb	We expect DNO to provide greater guidance on 2013 exploration targets with 540mmboe of net unriskd resources within the portfolio	n.a.	n.a.

Source: Company data, Macquarie Research, January 2013

Faroe Petroleum

**FPM LN,
Outperform, TP
158p**

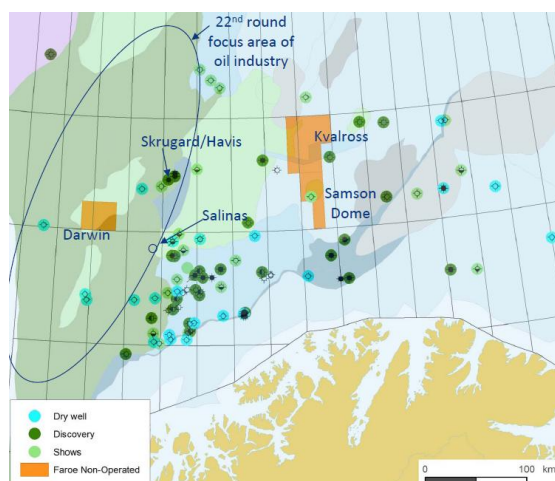
**Darwin the frontier
(Barents) well
discussed**

**With Butch follow-
on significant.
(chase oil around
the salt dome)**

Keeping the emphasis on (Norwegian) Exploration

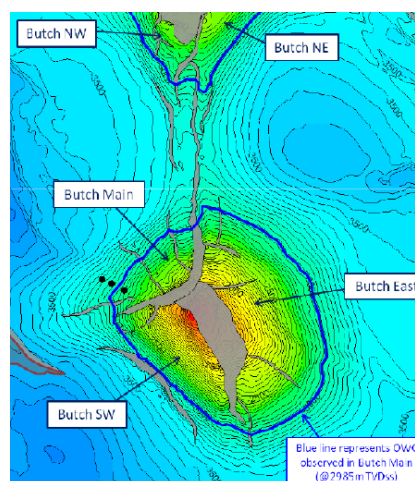
- Helge Hammer, COO, emphasised Faroe's history of monetising commercial discoveries illustrating Maria in Norway (2011) and (possibly forgotten by some) the UK Breagh gas discovery (2009). The company is focussed on winning license round acreage to keep the exploration pipeline full, principally in Norway where Faroe's G&G team has experience and a track record leaving it "among the best positioned companies" for new licenses in Norway (a country that saw significant corporate activity for small-cap explorers in 2012).
- **Frontier exploration in Norway – Barents Sea: Darwin.** Expected to spud in early 2013, Faroe farmed in with a 12.5% WI (for a carry) in Aug 2012 to Talisman's Darwin prospect (operated by Repsol) in the Barents Sea. Mr Hammer discussed the potential for Darwin (to the west) to have the same hydrocarbon source as the Havis/Skrugard discoveries (to the east) with the principle risk/uncertainty at Darwin being reservoir presence/quality.
- **Discovery follow-on in Norway – Butch.** The near-term E&A drilling campaign also includes two wells at Butch in 2H13, which could see the 40mmb 2012 discovery (we carry 30mmb in our Core NAV) increase to 150-200mmb standalone development in the case of success. Even without these two wells, Faroe would expect a slight Butch resource estimate increase in its report to the NPD in February.

Fig 16 Norway map – Barents sea



Source: Company data, January 2013

Fig 17 Butch SW and Butch East map



Source: Company data, January 2013

- **Big results in 1Q13.** In terms of near term results Faroe, is "nearing the reservoir" on the UK WoS North Uist well and in the Halten Terrace area of Norway (where the Maria discovery is located) the Rodriguez well is also drilling.
- **A note on production.** Faroe expects FY12 production to be 7.2kboe/d (vs. 7.0-8.0kboe/d guidance at 18 Sep 2012) and sees "2013 production expected to increase relative to the 2012 level". A production target is not used as the ultimate goal for Faroe (a 40kboe/d goal was discussed last year) but maintaining a well financed business model is a priority.

Fig 18 Key catalysts in the next six months

Event	Country / Region	Expected timing	Comments	Riskd value	Unriskd value
N Uist	UK WoS	end-Jan	Dual target (N Uist – Jurassic, 721mmb/boe / Cardhu – Palaeocene, not in our numbers). Targets are both above the expected volcanic section	12.9p	116.8p
Rodriguez South	Norw. Sea	end-Jan	Halten Terrace. Maria analogue. Independent of T-Rex and Cooper	18.8p	56.2p
Darwin	Norw Barents	2Q	Dual target (Palae & Cret). Veslemøy High. Multiple follow-ons	10.6p	76.4p

Source: Company data, Macquarie Research, January 2013

Galp Energia

**GALP PL,
Outperform,
TP €16.00**

The exploration wildcard in 2013

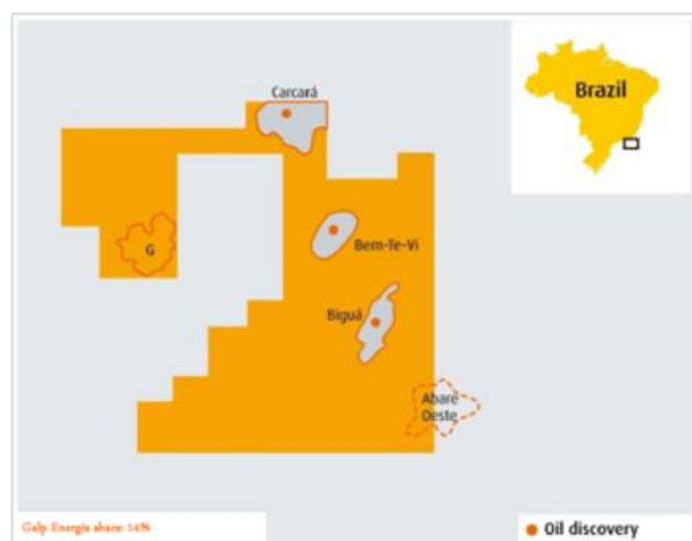
- Roland Muggli, Galp's Head of Exploration, outlined a 2013 exploration programme including at least seven high-impact exploration and appraisal wells in both established core regions as well as in new, potentially transformational frontiers.
- **Sustaining production +300kbde.** We expect Galp to continue to expand into new Upstream opportunities as management seek to ensure production holds over 300kbde post-2020. This strategy has already introduced a new dynamic to the exploration suite offering potentially material resources while lowering the overall risk profile of the portfolio.
- **Brazil remains core.** Galp will be drilling a minimum of three exploration wells in Brazil in 2013. This campaign has the potential to confirm commercial developments within pre-salt Santos basin discoveries (BM-S-24) while also potentially unlocking new frontiers in the Potiguar basin. We also expect clarity on the resource potential at BM-S-8.
- **New plays in emerging basins.** We expect the Area 4 consortium offshore Mozambique will target the liquids potential to the south of the licence in 2H13. The three-well 2013 work programme offshore Namibia will be targeting 8bn bbl of gross recoverable resources. The Walvis basin is largely unknown. Recognising the potential upside, we retain a degree of caution on this high-risk programme (Macq. est. €0.43/sh risked; +€6/sh unrisked).

Fig 19 Galp exploration portfolio



Source: Company data, January 2013

Fig 20 BM-S-8 schematic



Source: Company data, January 2013

- Galp's exploration strategy continues to evolve as group production and cashflows grow. With the ENI overhang starting to clear (now 8% post exercise of Amorim options) and material exploration catalysts through 2013, we continue to believe Galp represents one of the most compelling risk-reward opportunities in the sector.

Fig 21 Key catalysts in the next six months

Event	Country / Region	Expected timing	Comments	Risk value	Unrisked value
Lula West	Brazil, BM-S-11	1Q13	Testing connectivity of the Lula field to the Iracema field	n.a.	n.a.
Ararauna	Brazil, BM-POT-760	2Q13	Frontier deepwater exploration, bn bbl potential	€0.01/sh	€0.20/sh.
#1	Namibia, PEL23	2Q13	Frontier exploration, recent farm-in, bn bbl potential n the Walvis basin	€0.11/sh	€2.16/sh.

Source: Company data, Macquarie Research, January 2013

Genel Energy

**GENL LN, Neutral,
TP: 850p**

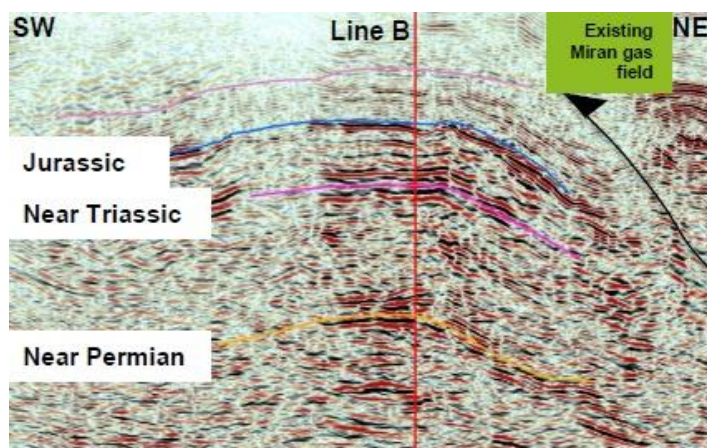
**Miran Deep success
could more than
double resources**

**Somaliland could
hold 500-600mmb
fields**

Kurdistan exploration remains in focus

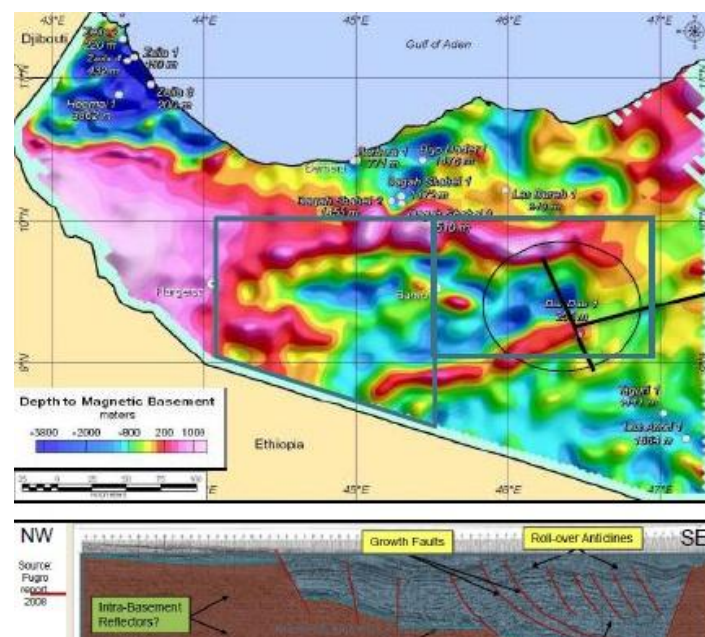
- John Hurst, Genel's COO for Africa, gave us an overview of the company's opportunities in the MENA region. While 100% of Genel production (and of our 795p Core NAV) still comes from Kurdistan, 2013 should see the initial testing of exploration acreage acquired in North and West Africa.
- Miran consolidation looks well timed...** Genel detailed an emerging deeper play at Miran PSC where management see potential of 4tcf of prospective gas resources in deeper Triassic and Permian formations (against 3.5tcf gas in existing discoveries). Further maturation is required to bring this potential to a drill-ready state, but an exploration well is pencilled in for 2H13.
- Chia Surkh -10 likely to complete by late Feb:** The Chia Surkh PSC in Kurdistan saw the Middle East's first exploration well (back in 1903) and Genel is currently drilling back to back exploration wells on the PSC. The company is encouraged by recent 2D seismic over the PSC and we expect that this Tertiary play (which we believe based upon regional analogues should deliver a light crude) to become an important part of the portfolio.
- Somaliland perhaps the most exciting new area?:** Genel detailed plans to undertake a committed 7-well offshore programme during 2H13 – 1H15 (2 x Malta, 4x Morocco and 1x Cote D'Ivoire); however, our sense was that Somaliland was what was really driving the excitement within the exploration team. Exploration drilling is unlikely until 2H14; however Mr Hurst discussed the possibility for early discoveries to hold 500-600mmb.

Fig 22 Miran Deep could be a 2H13 spud



Source: Company data, January 2013

Fig 23 Somaliland acreage is larger than Kurdistan



Source: Company data, January 2013

Fig 24 Key catalysts in 2013

Event	Country / Region	Expected timing	Comments	Riskd value	Unriskd value
Tawke 17 (Deep)	Kurdistan	1Q13	It will be the first well to test the Jurassic and Triassic formations below the producing Cretaceous formation	13p	59p
Chia Surkh 10 and 11	Kurdistan	1Q13	First exploration well on the licence (spudded 7 Oct). Targeting Lower Miocene through to Palaeocene (TD 2,500m). Followed by CS 11	2p	20p
Taq Taq Deep	Kurdistan	3Q13	To spud in 1Q13, will target Jurassic oil and Triassic gas prospectivity in a less complex geological environment than Tawke (clearer seismic)	27p	118p

Source: Company data, Macquarie Research, January 2013

Hyperdynamics

HDY US, Not Rated

HDY entered 2012 as one of the most anticipated West Africa exploration stories

Post Sabu-1, retains 37% WI in 25,000sqkm license "largest in West Africa"

Had their high %WI shot with Sabu. A future remains with Tullow

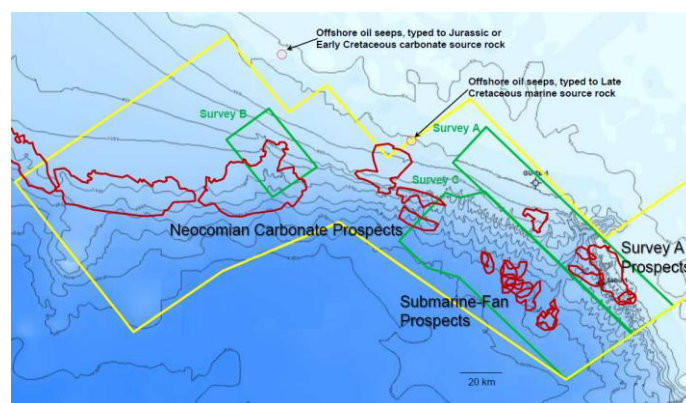
- Ray Leonard, CEO of NYSE-listed Hyperdynamics, presented after Tullow Oil during the afternoon's Africa session. Hyperdynamics have recently completed a deal to farm-out 40% (and Operatorship) of its West African, offshore Guinea Exploration Block to Tullow.
- Feb 2012 saw Sabu-1 well finds non-commercial oil, culmination of ~2 yrs' work.** Mr Leonard outlined the work Hyperdynamics had done since he joined in Jul 2009. Strengthening the Board to facilitate moving forward participation in its offshore Guinea exploration block and building the finances and technical team to drill (at 77% WI with Dana Petroleum at 23%) the exploration well required. Ultimately, Sabu-1 found non-commercial oil in multiple sand layers over a large gross interval (1,300ft) of Upper Cretaceous age formations. Following this result, the company initiated a farm-out process in mid 2012 to "sell or farm-out approximately half of its interest to an experienced oil and gas company that would also serve as operator of the project going forward".
- Completes sale of 40% WI and Operatorship to Tullow Oil on 31 Dec 2012.** Hyperdynamics received farm-in value of ~US\$101m for a 40% share (US\$27m cash and up to US\$37m carry on 2 wells (37% of up to US\$100m gross costs).

Fig 25 HDY's offshore Guinea block, West Africa



Source: Company data, January 2013

Fig 26 Shallow, Deep fan plays and Carbonate plays



Source: Company data, January 2013

Unlikely to see any catalysts until Tullow has reviewed all data

- Tullow "the perfect partner".** Mr Leonard emphasised that multiple companies, some larger than Tullow, were interested bidders but based on criteria of: 1) financial strength 2) expertise, 3) regional exploration success & 4) deepwater rig access, Tullow is the best West African Operator/Partner available. (87% of the conference audience agreed).
- Forward plan – Evaluation of multiple plays – drilling in 2014?** The block has also seen new 3D seismic data acquired during 2011/12 and interpretation of that is ongoing. With the block lying at the intersection of the Transform margin fault, Mr Leonard pointed to both shallow and deep water fan plays and (giant) Carbonate prospects to the North.

Fig 27 Key catalysts – low on near term catalysts

Event	Country / Region	Expected timing	Comments	Risked value	Unrisked value
Interpretation of new data	Guinea	1H13	Analysis of 3D seismic data and Sabu-1 logs will continue through 2013	n.a.	n.a.
Exploration drilling	Guinea	By April 14	"Initiate new drilling program in the deep water and use best efforts to spud by April 1 2014"	n.a.	n.a.
				n.a.	n.a.

Source: Company data, Macquarie Research, January 2013

Lundin Petroleum

Building to a full-cycle E&P Norwegian Oil & Gas Company

**LUPE SS,
Outperform, TP
Skr 175**

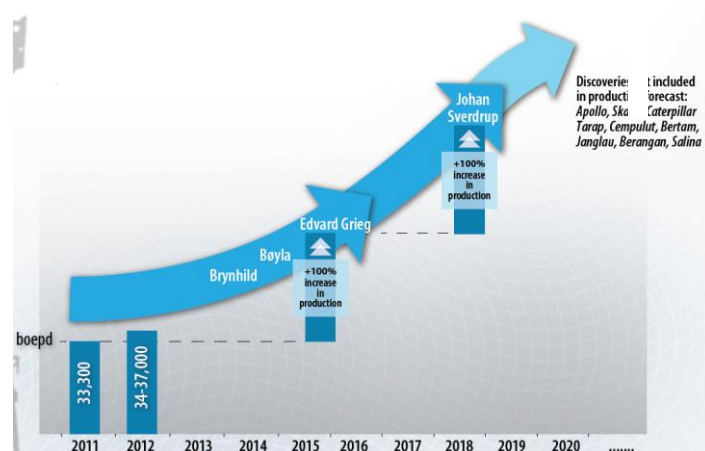
**Lundin no seller of
material
discoveries. Aiming
for full cycle
producer/operator**

**Currently 1Q13
timing for JS update
stands (LUPE CMD
12 Feb)**

**Luno II the gateway
to the south (of
Utsira High)**

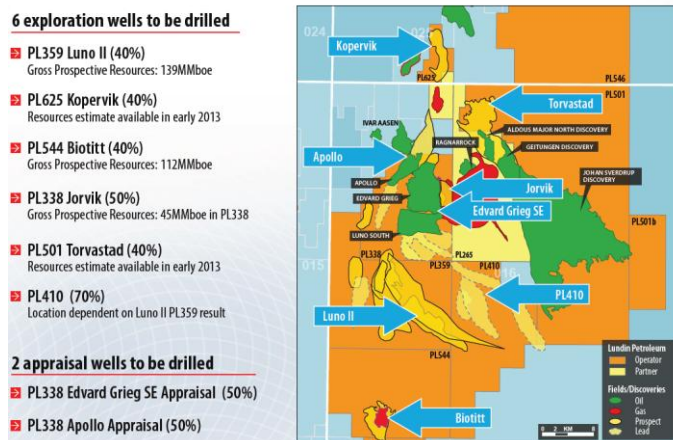
- Mr Torstein Sanness, Managing Director Norway, outlined Lundin's longer-term strategy to build a "full cycle capability" oil and gas business with Norway as its "centre of gravity". Mr Sanness emphasised the value placed by the Norwegian authorities on the ability of a company not just to discover hydrocarbons but also to move forward discoveries into development and full production, Lundin's track record makes it a leader in this regard:
- Proving development operator capability in 2013.** Lundin already has a track record in the E&P space of delivering production to guidance. Mr Sanness illustrated a 14.5% production CAGR from 2008-2011 and emphasised how 2013 will see Lundin prove its Norwegian development Operator capability, first with Brynhild (90% WI, first oil 4Q13) and continuing with Edvard Grieg (50%, first oil 4Q15) now in full development mode.
- Johan Sverdrup development update timing** – In response to questions on Statoil possibly delaying a resource update for the JS field until 4Q13, Mr Sanness said Lundin's plan to update gross resource range for the field in 1Q13 still stands currently. Reminder PL501; LUPE 40% 800-1,800mmb gross and PL265; LUPE 10% 900-1,500mmb gross.
- 2013 exploration looking to encircle the Utsira High.** Lundin's 2013 drilling includes 6 exploration wells at the Utsira High. The first up is Luno II in the Southwest of the Utsira High which, at 139mmb gross is not so impactful as a standalone (simply due to Lundin's success over recent years) however, success at Luno II would lead to follow on drilling to the east in PL410 (70%) and potentially a 3rd Utsira High development area.

Fig 28 Aiming for (funded) production growth



Source: Company data, January 2013

Fig 29 Utsira High 2013 E&A wells



Source: Company data, January 2013

- Lundin seen by 65% of the audience as a differentiated exploration expertise** offshore Norway. We would however, note that the presentation clearly focused on the traditional Norwegian North Sea areas rather than the Barents Sea (1 well in 2013).

Fig 30 Key catalysts in the next six months

Event	Country / Region	Expected timing	Comments	Risked value	Unrisked value
Johan Sverdrup appraisal and resource est. update	Utsira High	1Q/ongoing	Drilling ongoing on PL501 (sidetrack and last 2012 wells). 4 further appraisal wells in 2013. Resource updates could slip to 3Q13.	Skr 97.5	Skr 131.1
Ogna / Carlsberg	Norway SNS	1Q/2Q	2 wells (back-to-back) : 1 st Ogna – 4 fault-bounded compartments	Skr 1.5	Skr 7.0
Luno II	Utsira High	2Q13	Jura/Tria targets on the Southern flank of the Utsira High; additional fractured basement play. Main risks: sand presence and lateral seal	Skr 2.0	Skr 5.7

Source: Company Data, Macquarie Research, January 2013

Max Petroleum

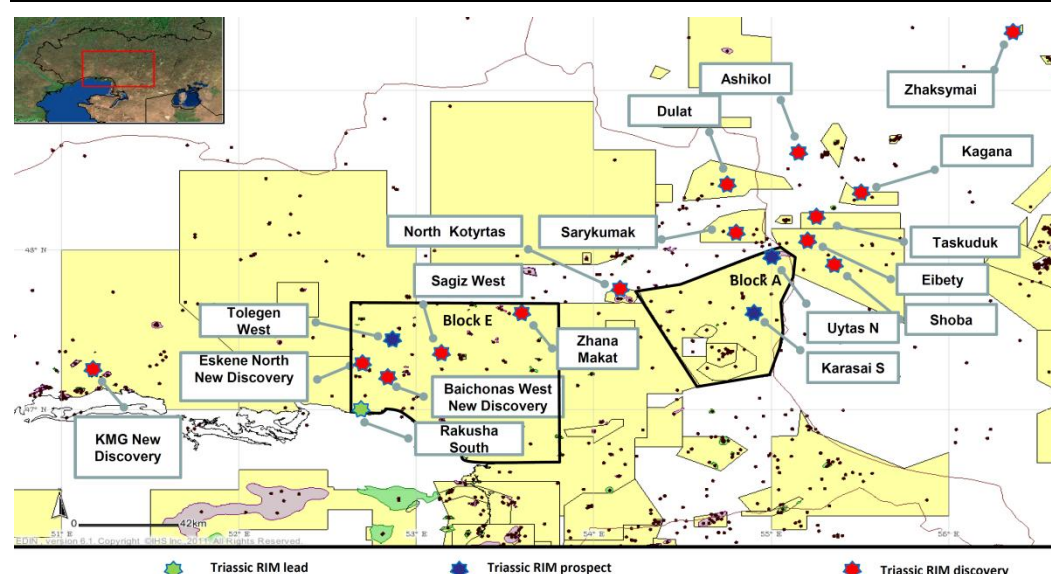
Some light at the end of the tunnel

**MXP LN, Neutral,
TP: 4p**

**Max is planning to
drill at least 3
exploration wells
before licence
expiration on Mar 13**

- Max's President Michael Young met investors during one of our Small Cap Open Desk, highlighting how 2013 will look for Max following the debt restructuring announced on 27 Nov 12 and ahead of exploration licence expiration in Mar 13. This allows management to refocus attention from financing concerns back to day to day operations, we think the activity in the next months will be centred around on 3 key fronts:
 - ⇒ **Post-salt exploration.** Max is planning to drill at least 3 exploration wells before licence expiration on Mar 13, following the Eskene North discovery announced on 31 Dec 12, targeting over 30mmb unrisked prospective resources.
 - ⇒ **Post-salt appraisal and development.** With the aim to increase production and reserves, the company is planning to bring ASK into Trial Production Period in early 2013, Borkyldakty into Full Field Development (allowing for exports) and do further work at Zhana Makat, East Kyzylzhar 1, Baichonas West and Uytas
 - ⇒ **Pre-salt exploration.** The work here is focused on seeking regulatory approval to complete NUR-1 (and potentially other pre-salt targets). A success on this front would allow to Max to focus on the ways to obtain financing to complete the well (US\$12-20m needed based on company estimates)

Fig 31 Triassic Rim Discoveries and prospects around Max's acreage



Source: Company data, January 2013

- As discussed in our "[Russians to the rescue](#)" note following the announced restructuring, we remain Neutral on Max ahead of delivery of the planned work programme for 2013 and with the company trading at a slight premium to Core NAV. However, short term catalysts can provide material unrisked upside as outlined below.

Fig 32 Key catalysts in the next six months

Event	Country / Region	Expected timing	Comments	Riskd value	Unriskd value
Tolegen West	Kazakhstan	1Q13	Post salt (shallow) Triassic Rim 4-way closure prospect (Block E). To be drilled before licence expiration on Mar 13. 8mmb Pmean	0.1p	1.7p
Karasai South	Kazakhstan	1Q13	Post salt (shallow) Triassic Rim 4-way closure prospect (Block A). To be drilled before licence expiration on Mar 13. 12mmb Pmean	0.4p	3.0p
Uytas North	Kazakhstan	1Q13	Post salt (shallow) Triassic Rim 4-way closure prospect (Block A). To be drilled before licence expiration on Mar 13. 11mmb Pmean	0.4p	2.3p

Source: Company data, Macquarie Research, January 2013

Mediterranean Oil & Gas

MOG LN, Not Rated

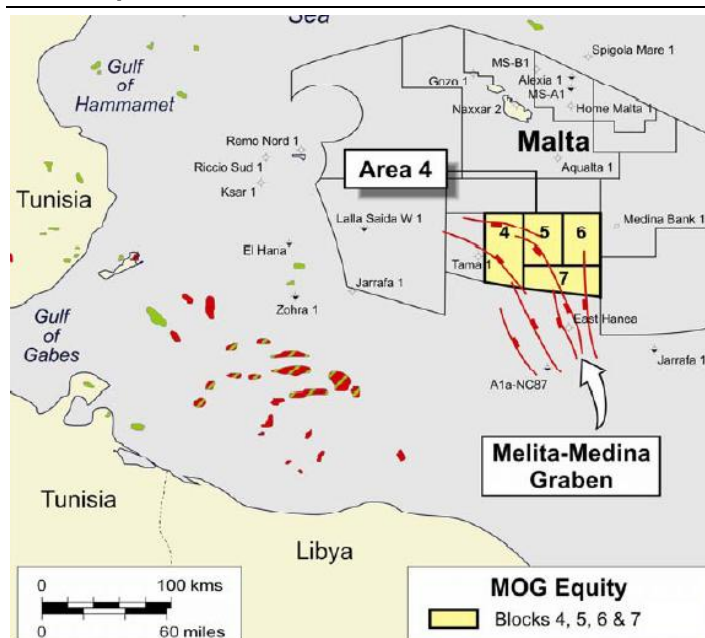
Making strides in the Med

**High impact drilling
scheduled to
commence offshore
Malta in 2H13**

**Securing drilling
permits the near
term priority
offshore Italy**

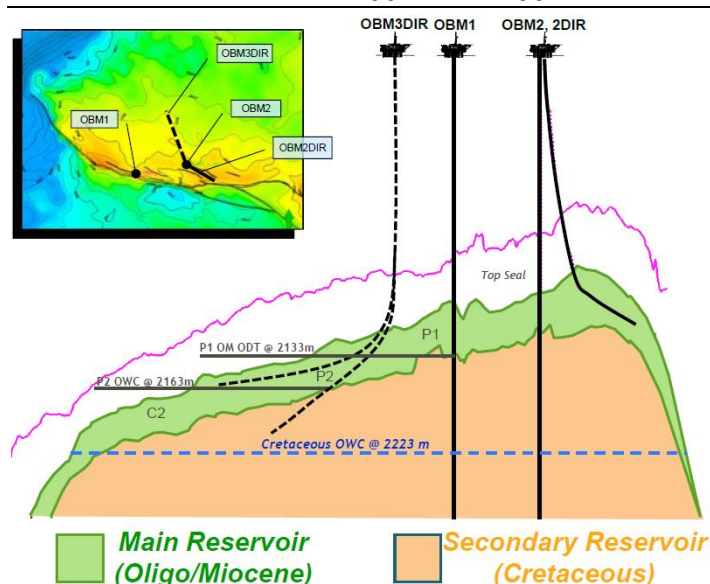
- Mediterranean was represented for the first time at our Explorers Conference by CEO Dr Bill Higgs. In 2012 the company farmed out a 75% stake (retaining 25% WI) in its Area 4 licence offshore Malta to Genel Energy in exchange for two fully funded exploration wells and US\$10m in cash.
- Testing frontier exploration acreage offshore Malta:** Dr Higgs explained that Mediterranean would remain operator of Area 4 during the exploration well on the 108mmboe Hagar Qim prospect which should spud in late 2013. We understand from the company that current risking for the well is 1/10 as this is an unproven basin with hydrocarbon generation uncertain however if proved the CoS for prospects could increase towards 1/3.
- New leads, new areas:** Mediterranean also described how they are currently maturing a deeper Jurassic lead within Area 4 while detailing that the Area of Mutual Interest signed with Genel to cover offshore Malta, Tunisia and Libya could lead to other material prospects entering the portfolio. If they are material for Genel with an 80% WI then they would be material for Mediterranean with a 20% WI.
- Moving Ombrina Mare closer to development:** The key event (dependent upon permitting) in 2013/4 for the Ombrina Mare heavy oil discovery offshore Italy would be the drilling of an appraisal well to flow test the Cretaceous formation (5-10mmb prospective) and also determine the OWC in the Oligo-Miocene to increase the current proved reserves above the current estimate of 12mmb. Success would lead to the application for an RBL to help finance a full field development.

Fig 33 Area 4 is the only acreage offshore Malta with an undisputed maritime border



Source: Company data, January 2013

Fig 34 The OBM3DIR appraisal well can only be drilled once Environmental approval is approved



Source: Company data, January 2013

Fig 35 Key catalysts in the next six months

Event	Country / Region	Expected timing	Comments	Risked value	Unrisked value
Ombrina Mare	Italy	3Q13	Receipt of production concession award by the Italian Government. Following approval MOG will drill appraisal well to increase 2P reserves	n.a.	n.a.
Malta Area 4	Malta	2014	To spud 4Q13 targeting Haqar Qim exploration prospect, a structural 4-way dip closure with a stratigraphic component	n.a.	n.a.

Source: Company data, Macquarie Research, January 2013

Noble Energy

**NBL US,
Outperform,
TP: US\$128**

**Clear strategy and
tangible success
metrics**

**Discovered 2.8bn
boe in last 5 years.**

**Targets 1.5- 2.0bn
boe by 2017**

**12bn boe net
unrisked
prospective
inventory: 43% in
Nicaragua & the
Falklands**

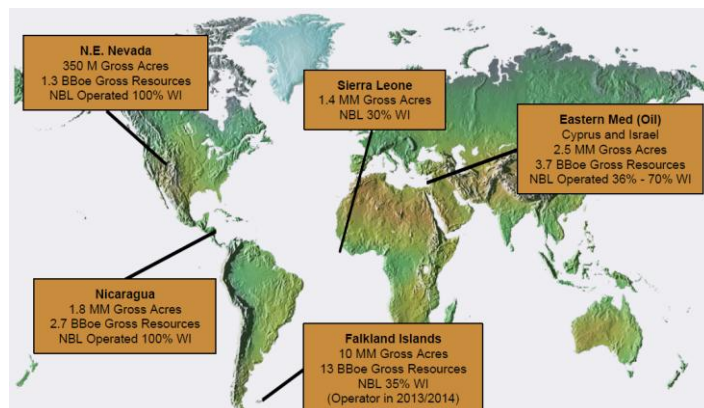
Looking for a déjà vu: Embarking on the next exploration journey

- Ms Susan M. Cunningham, SVP Exploration and Business Innovation, presented a focused company looking to more than double production to ~540kboe/d by 2017 and to add at least one new core area (to the current five) in the next 2 years through “industry-leading” exploration. Noble believes its organizational strength (people-focused) and a disciplined financial strategy would enable the execution of its 5-year CAGR guidance on key metrics (Reserves, Production, and Cashflow; at 21%, 18%, and 24%, respectively).
- Massively outperformed its own targets.** Since 2007, Noble has discovered 2.8bn boe net vs. its 5-year target a of 1bn boe. In 2012, Noble set out on a journey to discover another 1.5-2.0bn boe by 2017. The current net risked exploration portfolio is made up of 3.7bn boe with 1.4bn boe (~38%) to be targeted in the next two years mostly in new plays.

New Ventures (conventional): Nicaragua, Falklands, E Med (Mesozoic oil), Sierra Leone

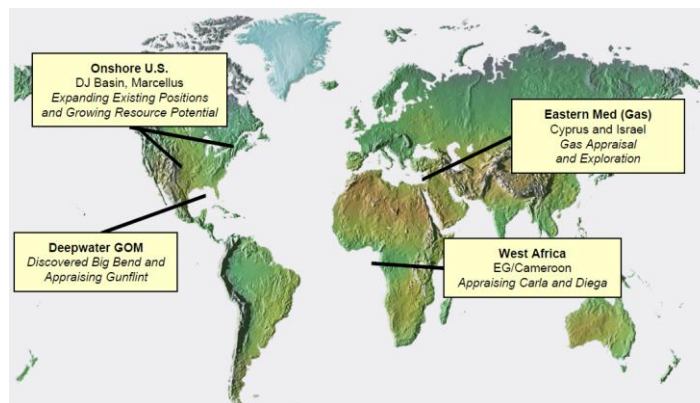
- In Nicaragua**, Noble is chasing carbonate and clastic plays across 1.8m acres in two lease blocks (100% WI) with multiple 3D identified oil prospects and leads for a 2.7bn boe gross resource (23% of net unrisked prospective inventory).
- In the Falklands**, Noble believes Scotia was not optimally positioned (2D seismic) and is targeting exploration drilling in 2014 with 3D seismic acquisition ongoing (first results in mid-2013 focusing on the Cretaceous). The Top 10 targets contain 7bn bbl gross unrisked potential (2.45bn bbl net at 35% WI, or 20% of the net unrisked prospective inventory).
- In Israel**, exploration-wise, Noble is most notably planning to test a deeper Mesozoic oil play below the Leviathan gas field with “running room” in case of success.

Fig 36 New Venture Exploration Catalysts



Source: Company data, January 2013. * Resources shown are unrisked

Fig 37 Core Area Exploration Portfolio



Source: Company data, January 2013. * Resources shown are unrisked

**30x current
production from
discoveries in last 5
years**

- Monetizing past success.** Noble has sanctioned 9 projects (750mmboe) with 6 pending with the goal of 25% of 2014 production to come from last five years' offshore discoveries, including Aseng and Alen in Eq Guinea, Galapagos in the US GoM and Tamar in Israel – all onstream by early 2014. The 2.8bn boe discoveries since 2007 represent 30x current production with 50 years of production potential from discovered unbooked resources.

Fig 38 Key E&A drilling catalysts in 2013

Event	Country / Region	Expected timing	Comments	Risked value	Unrisked value
Paraiso	Nicaragua	Mid-2013	210-1,220mmb (P75-P25). 25% CoS. Seeking an up 50% farm-out		
GoM exploration drilling	US GoM	2H13	Up to three wells planned: Troubador, Sailfish, Yunaska		
Leviathan Deep	Israel (E. Med)	Late-2013	155-1,140mmboe (P75-P25). 25% CoS. Play opener		

Source: Company data, Macquarie Research January 2013

Petroceltic International

PCI LN, Outperform,
TP: 9p

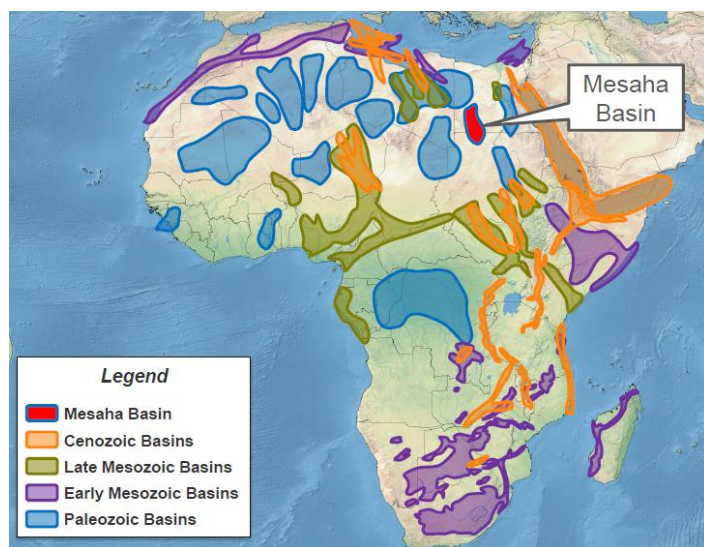
*Proving a working
hydrocarbon would
be a good result at
Mesaha-1*

*The Black Sea is
very much the focus
of 2013 exploration
drilling*

Infinitely more exploration in 2013 than 2012

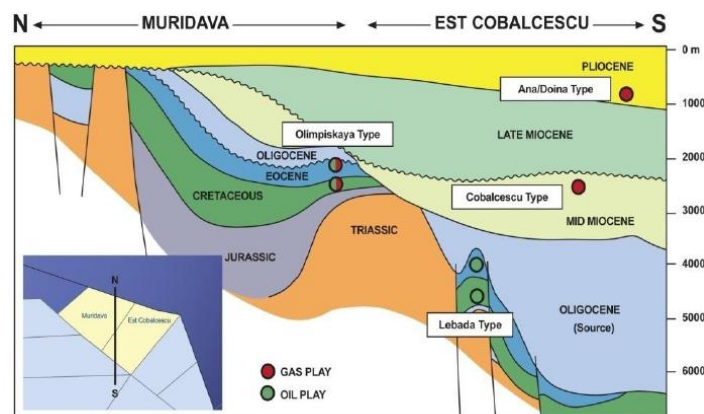
- Petroceltic's CEO Brian O'Cathain presented exploration opportunities within the portfolio, the majority of which have entered following the completion of the Melrose Resources merger. Having not drilled a single exploration well in 2012, the level of interest in Petroceltic in 2013 we believe will be much higher.
- Mesaha-1 should complete in February:** Petroceltic played down the possibilities of the Mesaha-1 exploration well in southern Egypt encountering commercial hydrocarbons with proving a working hydrocarbon system perhaps the best that can be expected. However, with a net cost of <US\$5m, and significant follow on potential in this undrilled basin, this is the sort of exploration drilling we believe could over the medium to long term transform the company.
- Building out in the Black Sea:** On a nearer term time scale the exploration activity is very much focused on the Black Sea, namely Bulgaria and Romania. The Kamchia-1 exploration well in Bulgaria (April spud) is seen as a low risk, easy to monetise prospect which can extend the Galata trend further north and de-risk a further 7 structures. Following on from this, Petroceltic will drill an exploration well in both the Muridava and Est Cobalcescu blocks, blocks that have historically been underexplored due to a maritime border dispute with Ukraine.
- Financing and farm-outs other 2013 events:** Mr O'Cathain explained that Petroceltic is engaged in negotiations to refinance its US\$300m HSBC facility and is hopeful of a larger facility being concluded in 1H13. Farming down a further 18.375% WI in the Algerian Ain Tsila development during the year also remains a key priority, an event which should rebase the market's valuation of the asset ahead of a lengthy development time table.

Fig 39 Mesaha is an untested basin



Source: Company data, January 2013

Fig 40 Multiple play types possible in Romania



Source: Company data, January 2013

Fig 41 Key catalysts in the next six months

Event	Country / Region	Expected timing	Comments	Riskd value	Unriskd value
Mesaha-1	Egypt	1Q13	Spudded Nov-12. Undrilled sedimentary basin containing tilted fault block geometries and intra-basin highs. To target Paleozoic aged sands	0.1	1.2
Kamchia-1	Bulgaria	2Q13	To spud Apr-13. If successful, potential for a low-cost tie-back to the Galata production facilities	0.1	0.9
Muridava/Est Cobalcescu	Romania	3Q/4Q13	1 well on each licence. Shallow-water targeting proven exploration plays (under explored due to oil maritime boundary dispute)	0.3	3.5

Source: Company data, Macquarie Research, January 2013

Premier Oil

**PMO LN,
Outperform, TP
574p**

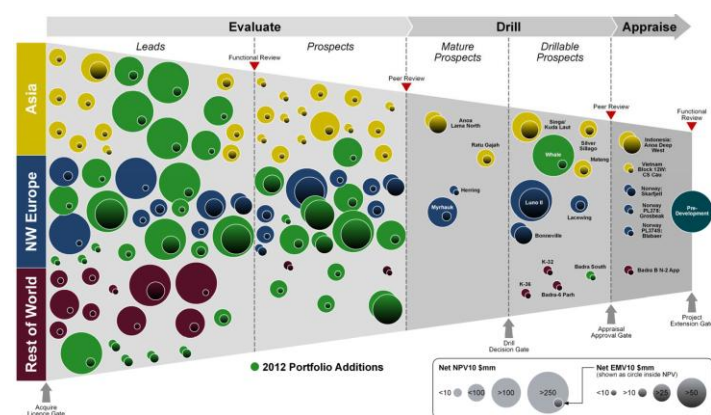
**Ca Voi (Vietnam):
2013 potential play
opener and the only
new geography in
SE Asia**

**Throwing the net
wide on material
new geographies
before zooming in**

Some interesting new ventures talk...new regions possible

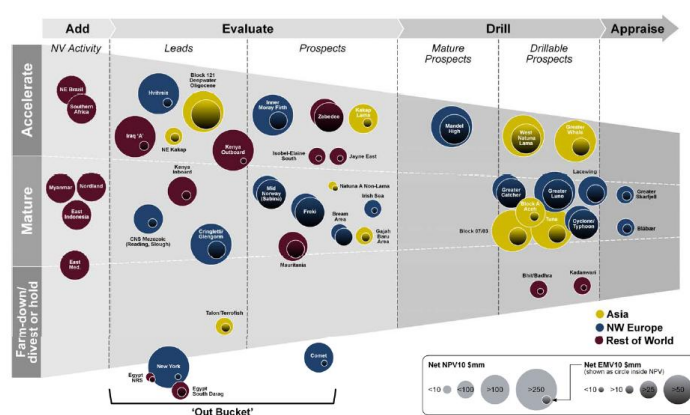
- Dr. Andrei Belopolsky, Exploration Manager New Ventures, discussed Premier's longer term exploration strategy of building up leads and prospects from a grassroots level with a strategy of targeting known geologies (rift or frontal fold belts) in existing or new areas. Premier is shifting focus towards "high-impact prospects" with "significant follow on potential" through prioritization of opportunities (accelerate, mature, or drop)
- 2013 wells to watch – Ca Voi the pick.** Near-term however, while drillable prospects remain multiple, they are not particularly material with the higher-impact leads and prospects taking time to mature. In 2013 Premier will drill four "wells to watch" (Luno II, HPHT Lacewing, Ca Voi – all in early 1H13 and Kuda Laut in mid-2H13). We carry these four wells at just 11p/64p in our 570p target price with Luno II contributing 7p/21p.
- Existing skills into existing geographies: SE Asia and the North Sea.** In SE Asia Premier is focusing on known areas: Anoa Deep, Ca Duc (gassy nearby analogue to Chim Sao) and Kuda Laut (gassy) and Singa Laut (oily) in the Tuna block where two wells in 2011 (Belut Laut and Gajah Laut Utara were uncommercial). Kuda Laut is a well to watch which targets Miocene intervals shallower than 2011 wells. Separately, the Ca Voi exploration well is an Oligocene play opener in the shallow waters of Block 121 offshore Vietnam with potential boundary issues with China existing over the DW part of the block.
- Existing skills into new geographies: Kenya, Iraq, Falklands, Inner Moray Firth.** While Premier's New Ventures exploration team is "accelerating" access to NE Brazil and Southern Africa, the exploration team is also evaluating and maturing multiple leads and prospects. The Mandel High (Norway's SNS) appears to be the high-impact area where Premier is focusing its next-phase exploration drilling with Inner Moray Firth, Kenya Outboard, Iraq and DW Block 121 standing out among the leads & prospects funnel crowd.

Fig 42 The exploration funnel getting bigger...



Source: Company data, January 2013

Fig 43 New Ventures focus - NE Brazil and S Africa



Source: Company data, January 2013

Fig 44 Key catalysts in the next six months

Event	Country / Region	Expected timing	Comments	Riskd value	Unriskd value
Huntington first oil	UK CNS	1Q13	5 risers to be hooked up and first oil to take PMO to 75kboe/d	51.5p	54.3p
Luno II	Utsira High	2Q13	Jura/Tria prospects on the flank of the Utsira High; additional fractured basement play. Main risks: sand presence and lateral seal	0.5p	5.5p
Lacewing HPHT	UK CNS	1Q/2Q13	Triassic prospect, part of the "push the plays deeper" strategy	7.4p	21.1p
Ca Voi	Vietnam	2Q13	Oligocene shallow-water play opener	2.9p	29.1p

Source: Company data, Macquarie Research January 2013

Providence Resources

PVR LN, Not Rated

Multi-year Irish E&A program underway

Dunquin to spud in 1Q13 - the biggest Irish exploration well for years

Central to an Irish renaissance in exploration

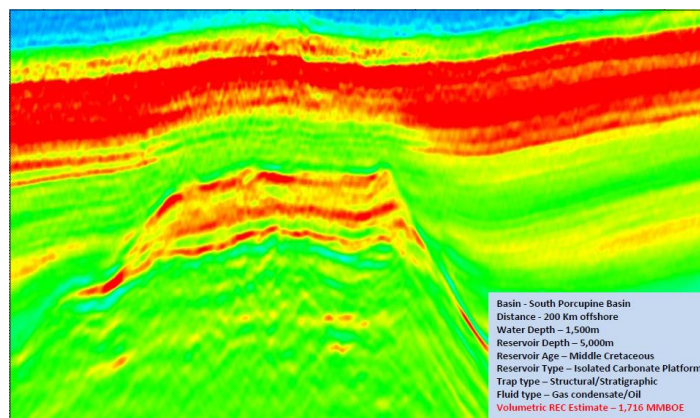
- Technical Director John O'Sullivan presented Providence's Irish focused asset portfolio highlighting the company's strategy of acquiring initial high acreage, doing pre-drill studies and bringing in farm-in partners in the following 3 to 4 years, ahead of drilling. The company involvement continues in 2012 in "Ireland's largest concerted drilling programme" which from 2011 – 14 will see up to US\$500m gross spend by participants covering 6 basins offshore Ireland and involves companies up to the size of ExxonMobil.
- In 2013 Providence is planning to drill 2 exploration wells: Dunquin prospect for which an LOI for a rig was signed in Sep 12 and the Dalkey Prospect (Kish Bank Basin), following a site survey planned in 1Q13. Providence will also drill an appraisal well on the Spanish Point gas condensate field (Porcupine Basin).
- Dunquin, in the South Porcupine basin, lies 200km offshore the SW coast of Ireland in 1,500m water depth. The target is seen as an isolated carbonate platform at approximately 5000m reservoir depth. The Exxon-operated well (also ENI, Repsol and Sosina) is seen as possible 1,7bnboe of recoverable hydrocarbon prospective resources.
- Additionally, study work will continue at the Barryroe oil field, with a CPR expected in 1Q13. The CPR is expected to increase the current 280mmb recoverable resources estimates (1,043mmb oil in place in the Middle and Basal Wealden sands) thanks to the inclusion of further 778mmb oil in place from the Purbeckian and Lower Wealden sands.

Fig 45 Irish focused player



Source: Company data, January 2013

Fig 46 Dunquin prospect (Carbonate platform)



Source: Company data, January 2013

Fig 47 Key catalysts in 2013

Event	Country / Region	Expected timing	Comments	Riskd value	Unriskd value
Barryroe CPR	Ireland	1Q13	The company expects an upgrade to current 280mmb recoverable resources (1,043mmb OIP) due to the inclusion of further 778mmb OIP	n.a.	n.a.
Dalkey Island prospect	Ireland	2H13	To spud 1Q/2Q13. Providence operated (50% WI) in partnership with Petronas. 250mmb unriskd prospective resources	n.a.	n.a.
Dunquin prospect	Ireland	2H13	To spud 1Q13. Exxon operated (PVR 16% WI) with other partners being ENI, Repsol and Sosina. 1.7bn boe unriskd prosp resources	n.a.	n.a.
Spanish point prospect	Ireland	2H13	To spud 1Q/2Q13. Chrysaor operated (PVR 32% WI). 100mmb unriskd prospective resources	n.a.	n.a.

Source: Company data, Macquarie Research, January 2013

Salamander Energy

Demonstrating there is more to this story than Gulf of Thailand

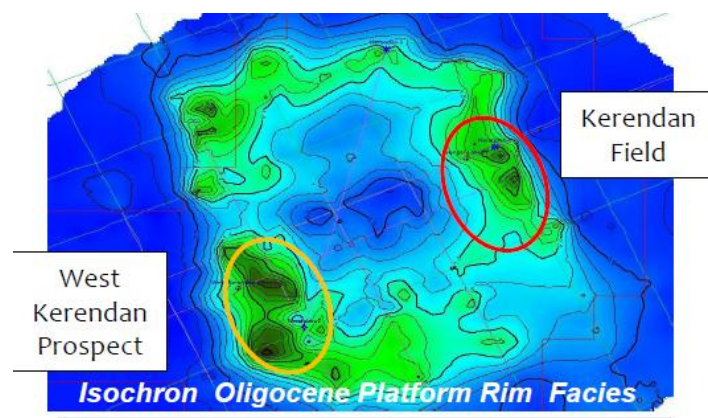
**SMDR LN,
Outperform, TP:
240p**

**Onshore East
Kalimantan could
see further acreage
additions**

**Running room in
Gulf of Thailand
appears to be the
greatest pull for
investors**

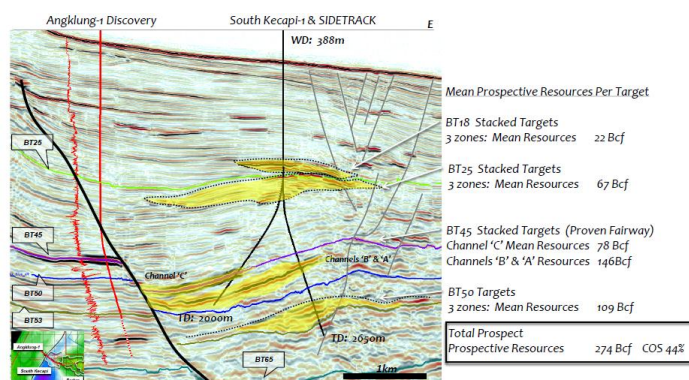
- Salamander's CFO, Dr Jonathan Copus, ran through the three key exploration areas of the company, all of which will be tested in 2013: Offshore Gulf of Thailand and both onshore/offshore East Kalimantan.
- **Keeping the running room:** Dr Copus pointed out that previous high risk exploration campaigns had largely been funded by farm-outs. However there had been a deliberate decision with the existing exploration campaigns to retain higher equity interest to ensure that the company maximised any follow on potential. This was seen as appropriate given the lower risk nature of this year's exploration campaign.
- **Greater Kerenden seen as a "sleepier" asset:** Dr Copus believes that the market is yet to appreciate the value of onshore East Kalimantan. This however may change with i) a further GSA signed for outstanding gas resources of 160 bcf ii) exploration drilling commencing in 1Q 2013 which will test ~900bcft of prospective resource at the West Kerenden/Sungai-Lahei prospects and iii) award of the two Joint Study Blocks which have recently come up for award.
- **More exploration value being placed on Gulf of Thailand:** While near term exploration attention focuses on the offshore North Kutei acreage and a four well drilling campaign targeting >400mmboe of prospective resources, 71% of the audience believe that success in the Gulf of Thailand would be a more important driver of the share price, suggesting to us some support even in the event of disappointing well results in the North Kutei. Salamander is fully intent on drilling at least 6 exploration prospects in the Gulf of Thailand in 2013 although Environmental Permitting for the southern part of the license (where Salamander sees the most attractive prospects) remains outstanding given its closer proximity to tourism destinations. Until this is secured, we believe it unlikely that Salamander would pursue a second jack-up rig for the region.

Fig 48 Salamander believes that Greater Kerenden has greater value than is being reflected by the market



Source: Company data, January 2013

Fig 49 The South Kecapi exploration well will be the first test of the North Kutei since Angklung in 2010



Source: Company data, January 2013

Fig 50 Key catalysts in the next six months

Event	Country / Region	Expected timing	Comments	Riskd value	Unriskd value
South Kecapi	Indonesia	Jan/Feb	Sand content is seen as the major risk. The initial well will target four distinct sand channels.	1p.	42p.
West Kerenden/Sungai-Lahei	Indonesia	1Q	A 335bcf prospect at the same Upper Berai Limestone interval as the Kerenden gas field and a deeper 580bcf in the Tanjung sandstone.	7p.	23p.
1st Gulf of Thailand expl. Well	Thailand	2Q	Salamander is planning at least 6 wells in GoT during 2013 with prospect sizes between 20-90mmb. We reflect a 56mmb target.	12p.	66p.

Source: Company data, Macquarie Research, January 2013

Statoil

**STL NO, Neutral,
TP Nkr 160**

**7-well operated
Barents Sea
program in 2013**

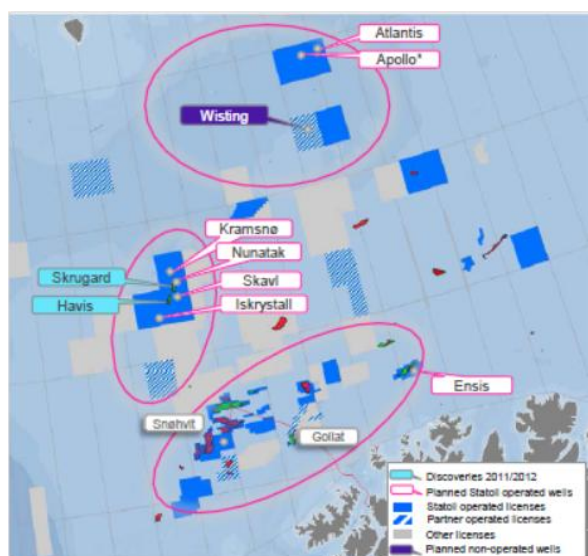
**4 wells in the region
of the 400-600mboe
Skrugard-Havis**

**And a clear Arctic
long term
commitment**

Back-to-back in the Barents in 2013.

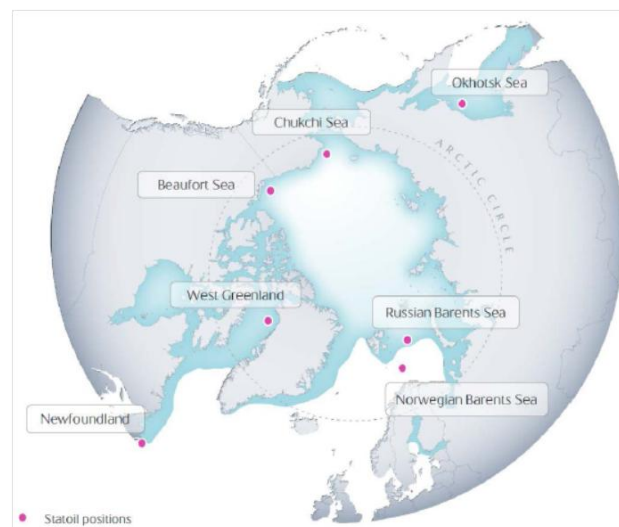
- Noralf Steinsland, VP Exploration Norway, kicked-off the conference with a deep-dive into Statoil's Barents Sea portfolio. While the growth in Statoil's exploration and appraisal activity (US\$3.5bn gross spend in 2012) has largely been focused outside of Norway in recent times, the Barents will be an area of critical importance through 2013.
- Back-to-back drilling.** In the coming weeks Statoil will commence a 7-well continuous drilling programme in the Barents. Initially, efforts will focus on step-out potential around the 400-600mboe Skrugard-Havis discoveries in PL532 (Statoil 50%; Macq est. Nkr2-3/sh; 2014e FID). Pre-drill guidance on target sizes has not been disclosed however we note Statoil believes it has already drilled the most material prospects on the licence.
- Testing the Hoop.** On completion at Skrugard, the West Hercules semi-sub rig will move North to the frontier Hoop area. The exploration well at Apollo (PL615; Statoil 35%) is one of Statoil's high-impact exploration wells in 2013 (>100mboe net to STL or >250mboe gross).
- Growing the Arctic portfolio.** Management has secured interests in a number of prospective Arctic regions over the last 18months. These moves will ensure the Arctic exploration pipeline remains well stocked in the medium-to-long term with the company clearly believing it has a technical edge operating in harsh Arctic conditions.

Fig 51 Barents Sea exploration in 2013



Source: Company data, January 2013

Fig 52 Well positioned for Arctic exploration



Source: Company data, January 2013

- Statoil continues to construct an enviable upstream portfolio and the 2020 growth trajectory is well-defined. However, the company's reserve life of sub-8 years is ~30% below peers. Statoil trades on 9.2x 2013E earnings, a 15% premium to the sector. Further exploration success could render concerns on these matters void but we would seek a more attractive entry point before turning positive on this stock.

Fig 53 Key catalysts in the Barents

Event	Country / Region	Expected timing	Comments	Riskd value	Unriskd value
Nunatak	Norway, PL532	2Q13	Step-out expl./appr. of Skrugard-Havis, expected to spud in Feb-13	n.a.	n.a.
Apollo	Norway, PL615	3Q13	Frontier shallow water exploration, a "high impact" exploration well	Nkr0.1-0.2/sh	Nkr1-2/sh

Source: Company data, Macquarie Research, January 2013

TransGlobe Energy

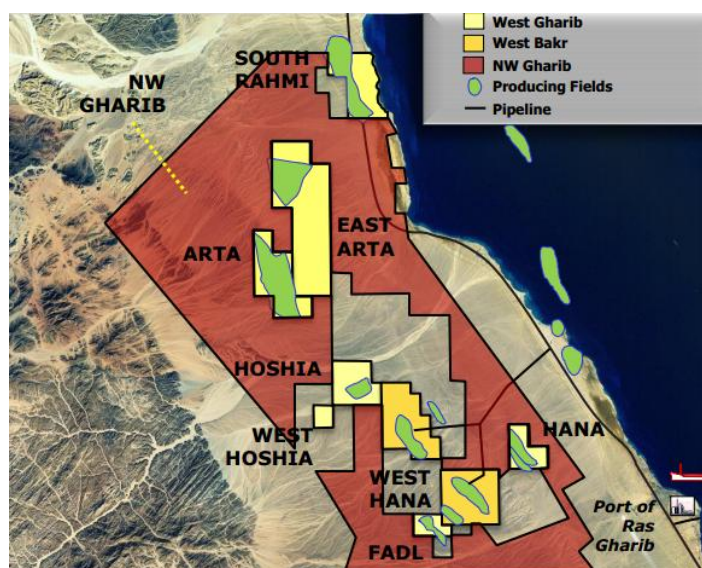
Staying on path to 40,000 bbl/d

**TGL CN,
Outperform TP:
C\$17.25**

TransGlobe is currently drilling the Al Azayem-1 prospect at South Mariut, where the company is targeting a massive structure with an estimated 236 mmbbl

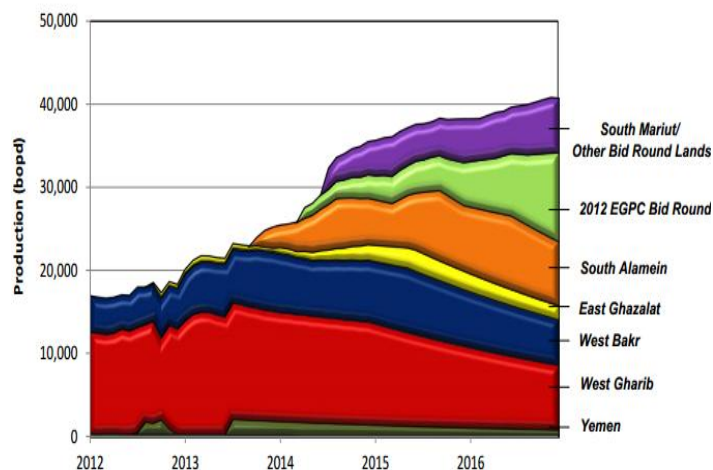
- TransGlobe's Chief Executive Officer Ross Clarkson presented at our Explorers Conference on Monday. 2012 was a very important year for TransGlobe as it expanded its land base considerably through the EGPC bid round, setting the stage for years of growth to come. 2013 will prove to be a significant year for TGL as we look for the stabilization of the Egyptian government as a key driver of the stock's performance in 2013.
- Targeting top quartile production growth.** Should TransGlobe meet its mid-point of 2013 production guidance (22,500 bbl/d), it would achieve 29% YoY production growth, while spending 80% of its estimated cash flow. The cashflow surplus provides TransGlobe with flexibility in case we see a delay in receivables as in 2011/12.
- 2012 EGPC bid round results sets up TGL for the long term.** The success at the 2012 bid round increases TransGlobe's land base by over 800k acres and provides a key piece to the company's road map to a 40,000 bbl/d production profile. While we won't see production or reserve additions in 2013, the blocks will strengthen the company's long-term growth visibility.
- High Impact exploration well results expected imminently.** TransGlobe is currently drilling the Al Azayem-1 prospect at South Mariut, where the company is targeting a massive structure with an estimated 236 mmbbl of gross petroleum initially in place. Results are expected shortly as the 90 day well commenced on 10 October 2012.
- Overhang of Egypt country risk.** TransGlobe continues to be weighed down by recent political headlines in Egypt. If the market can stomach the civil/political unrest (which has had no affect on TransGlobe's operations) and the overhang is removed, investors in TGL will surely benefit.

Fig 54 West Gharib & West Bakr



Source: Company data, January 2013

Fig 55 TransGlobe's Road to 40,000 bbl/d



Source: Company data, January 2013

Fig 56 Key catalysts in the next six months

Event	Country / Region	Expected timing	Comments	Riskd value	Unriskd value
Al Azayem-1	Egypt	1Q13	The 90 day drilling program started on Oct.10/2012 targeting 236 mmbbl of gross PIIP	C\$0.92	C\$4.88

Source: Company data, Macquarie Research, January 2013

Tullow Oil

**TLW LN,
Underperform, TP
£10.25**

**Priodontes result
likely in April for
next "Jubilee-like"
Cingulata fan
system target**

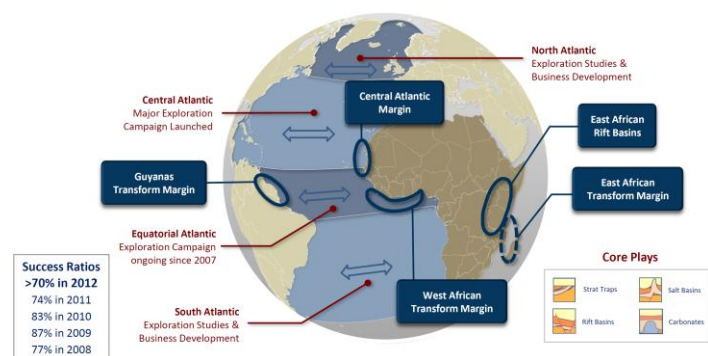
**Sabisa a key Kenya
well. Paipai impact
played down**

**Mauritania the new
play-opener for 2013**

Key events in all major basins – Mauritania a “new” frontier for 2013

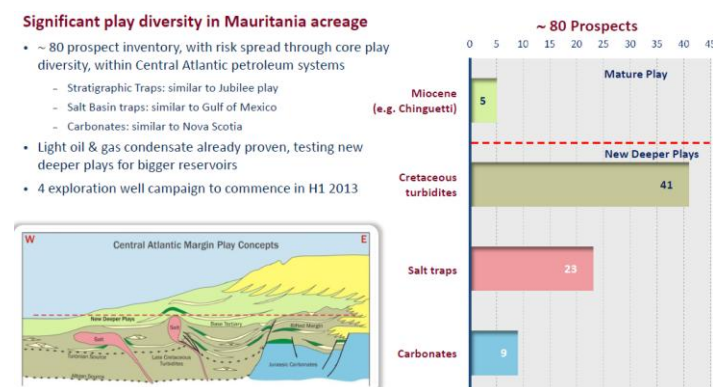
- Angus McCoss, Exploration Director, reflected on an E&A success rate of over 70% for 5 straight years from a focus on “good old-fashioned [conventional] oil.” (Macq estimated a 33% commercial success rate in our [2012 review](#)). This focus continues in 2013 across 4 key plays with Tullow hoping that Mauritania can be the “new 2013 exploration story”.
- Priodontes (French Guiana) a 90-day well and located lower than local sealing fault.** Tullow’s play-opening Zaedyus-1 discovery in 2011 saw the company win the “Golden Hammer” at our Jan 2012 Explorers Conference. However, the follow up well, Zaedyus-2, was dry in an up-dip appraisal location. Mr McCoss focused on fan geometries in the Cingulata fan system, stressing that the Priodontes well location is high in the apex of the fan but not as high as the Zaedyus-2 non-commercial well, i.e. Priodontes should be below the local fault sealing oil migration to the top of the Zaedyus fan.
- Sabisa location (Kenya) influenced by Uganda success.** The Sabisa location has been chosen with regard to Tullow’s successful experience in the Pliocene formations of the deltaic system north of Lake Albert in Uganda. See our Africa Oil page for more on Kenya.
- 4-well Mauritania exploration campaign commences 1H13.** Tullow “hopes [Mauritania] to be the 2013 [exploration] story” by targeting deeper and older formations than the “low net to gross” Miocene-age ones previously focused on. Cretaceous turbidites form the majority (~41) of the ~80 prospects Tullow has identified in its Mauritania acreage.

Fig 57 Tullow core areas – huge in size, yet focused



Source: Company data, January 2013

Fig 58 Mauritania in 2013 – deeper prospectivity



Source: Company data, January 2013

**W of Nile targets
~0.5bn bbl (~50% of
the “yet to find”)**

- Wrapping up Exploration in “mature” areas.** In Uganda we expect news on W of Nile drilling ahead of licence expiry on 3 Feb and in Ghana Tullow is to drill the final DW Tano exploration well (Sapele-1) before focusing on TEN sanction and farm-out

Fig 59 Key catalysts in the next six months

Event	Country / Region	Expected timing	Comments	Risked value	Unrisked value
Twiga, Ngamia flowtest	Kenya	Jan/Feb 13	9 flow tests in total: 5 at Twiga starting with the tight fractured play-type	65.3p	187.2p
Sabisa-1	Ethiopia	Late 1Q13	Northern extent of Lake Turkana, seeking to establish a hydrocarbon source in the undrilled Northern area. South Omo, AOI 30%	9.2p	251.6p
Priodontes-1	Fr Guiana	Apr+	2 nd fan in the Cingulata system; location below the Zaedyus apex fault	30.6p	94.9p
W of Nile exploration	Uganda	1Q13	Omuka-A: potential play opener in the W of Nile outlet from Lake Albert	6.1p	25.9p
Sapele-1	Ghana	1Q13	Targets downdip & younger lobe in the Jubilee fan system	12.7p	39.8p
TEN sanction/farm down	Ghana	1H13	Limit capex exposure easing funding concerns. Provide a value readx.	102.0p	127.7p

Source: Company data, Macquarie Research, January 2013

WesternZagros Resources

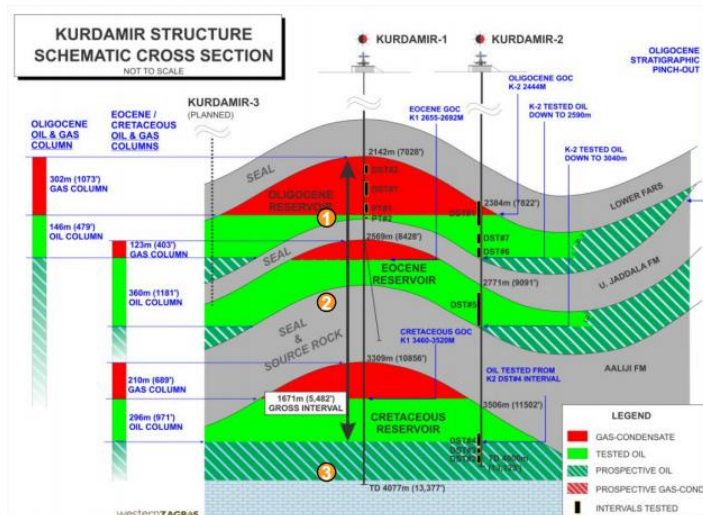
Getting more active every year

**WZR CN,
Outperform TP:
C\$2.15**

**The company now
moves to the
Kurdamir-3 well
which will prove to
be the key 2013 well
event for
WesternZagros.**

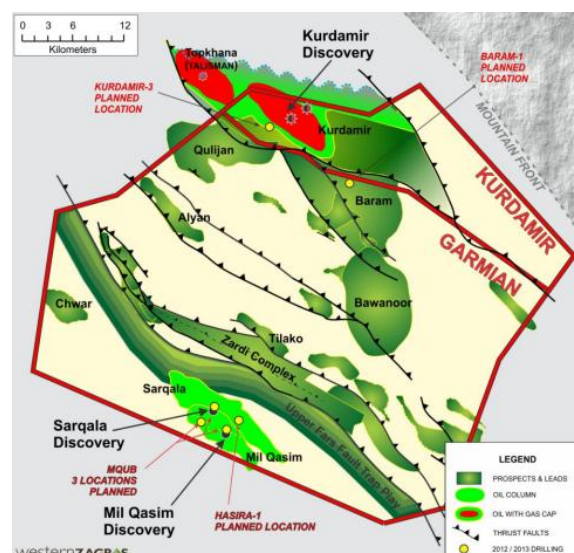
- WesternZagros Chief Financial Officer Greg Stevenson presented at our Explorers Conference on Monday. 2013 will be notable for the volume of activity being undertaken by the company, which we believe has previously been viewed as a “one well at a time” story.
- 2012 success sets up an exciting 2013.** 2012 proved to be a transformational year for WZR as it partnered with oil giant Gazprom Neft in the Garmian block and proved up the massive Kurdamir structure. The Kurdamir-2 well tested three intervals in the Oligocene structure, flowing ~6,500 bbl/d of oil and 26.5 mmcf/d of gas. The company now moves to the Kurdamir-3 well, which will prove to be the key 2013 well event for WesternZagros.
- Contingent resource estimates almost certainly going up.** We anticipate an updated resource estimate of the Kurdamir discovery, which will almost certainly increase contingent resources. Conversion of prospective resource into contingent would be supportive of valuation, as these barrels are valued more highly in M&A scenarios.

Fig 60 Kurdamir Structure



Source: Company data, January 2013

Fig 61 WesternZagros blocks in Kurdistan



Source: Company data, January 2013

- Kurdamir-3 will be key event in 2013.** With the objective to further define the Kurdamir structure, WesternZagros will spud the Kurdamir-3 well in February 2013, with drilling expected to carry on into 2Q13. We will once again see activity on the Garmian block as WesternZagros will commence a shallow well drill program targeting the Upper Bakhtiari of the Mil Qasim discovery. In 2H13, we will see WZR target the high impact Baram prospect (292 mmboe/d of prospective resource, unrisks).

Fig 62 Key catalysts in the next six months

Event	Country / Region	Expected timing	Comments	Risked value	Unrisked value
Kurdamir-3	Kurdistan	1H13	WesternZagros anticipates a spud date in February as the company looks to further define the Kurdamir structure	C\$1.12/sh.	C\$1.53/sh
Mil Qasim Shallow wells	Kurdistan	1H13	Shallow drilling of the Upper Bakhtiari targeting 21 mmboe (mean) of prospective resource	C\$0.04/sh	C\$0.25/sh
Updated Kurdamir resource estimate	Kurdistan	1H13	WesternZagros will provide an updated contingent and prospective resource estimate of the Kurdamir discovery.	-	-

Source: Company data, Macquarie Research, January 2013

Audience participation feedback

Explorer of the year: Statoil

We polled the audience for the 2012 “Explorer of the year” asking if Statoil’s Havis (Norway), Pao de Acucar (Brazil) and Block 2 (Tanzania) discoveries were more impressive than Africa Oil’s rift play openers onshore Kenya. Statoil was the winner: **62% Statoil** / 38% Africa Oil (52 votes polled)

The E&P success dilemma: To sell or not to sell?

We also asked the audience whether exploration companies should sell or develop their discoveries with the majority of the investors believing E&P companies should sell: **64% Sell** / 36% Develop. Interestingly, when asked at the company specific level this response was not replicated. Investors preferred Petroceltic and Africa Oil to hold and develop assets in Algeria and Kenya respectively with only Tullow being prompted by a majority of voters to divest prior to development.

Below we present the voting button feedback for all sessions during the day.

BARENTS SEA / NORWAY

Statoil

- Should Statoil spend more or less of its upstream budget on non-conventional opportunities?
- **69% Less** / 31% More

Lundin Petroleum

- Do you see Lundin as having “differentiated” exploration expertise offshore Norway?
- **65% Yes** / 35% No

Faroe Petroleum

- Are Faroe’s exploration assets sufficiently material to interest you?
- **74% Yes** / 26% No

Bridge Energy

- Would you invest in this size of Norway-focused exploration company?
- **70% Yes** / 30% No

KURDISTAN

WesternZagros Resources

- Does WesternZagros offer sufficient exploration upside to outweigh Kurdistan political risk?
- **72% Yes** / 28% No

Genel Energy

- Should Genel return cash to shareholders or continue build out its portfolio?
- **70% Continue build out** / 30% Return cash

DNO International

- Do you prefer DNO to add further exploration or development projects?
- **63% Development** / 37% Exploration

SOUTH EAST ASIA (SE ASIA)

Coastal Energy

- Do you now see Coastal more of a developer or an explorer?
- **66% Developer** / 34% Explorer

Salamander Energy

- Which exploration asset is more important: North Kutei (Indonesia) or G4/50 (Thailand)?
- **71% G4/50 (Thailand)** / 29% North Kutei

Premier Oil

- Is the attraction of Premier primarily strategy or valuation?
- **61% Valuation** / 39% Strategy

MIDDLE EAST AND NORTH AFRICA (MENA)**Petroceltic International**

- Should Petroceltic exit Algeria entirely?
- **56% No** / 44% Yes

TransGlobe Energy

- Is Egypt too unstable to be investable?
- **68% No** / 32% Yes

Mediterranean Oil & Gas

- Do you think a large gas discovery offshore Malta would be monetisable?
- **64% Yes** / 36% No

FRONTIER ATLANTIC**Galp Energia**

- Which country will see the first LNG export: Mozambique or Tanzania?
- **76% Mozambique** / 24% Tanzania

Noble Energy

- Should Noble allocate more capital to development or exploration?
- **74% Exploration** / 26% Development

Providence Resources

- Do you have a bullish or bearish view towards offshore Ireland as a hydrocarbon province?
- **69% Bullish** / 31% Bearish

Cairn Energy

- Where would you prefer to see Cairn spending more money: Greenland, Morocco or Other?
- **50% Morocco** / 34% Greenland / 16% Other

CENTRAL / EAST AFRICA**Tullow Oil**

- Would you rather Tullow sold or developed its discoveries?
- **65% Sell** / 35% Develop

Hyperdynamics

- Was Tullow the best Guinea farm-in partner even if all majors or higher bids were considered?
- **Yes 87%** / No 13%

Africa Oil

- Should Africa Oil sell or develop its Kenya discoveries?
- **59% Develop** / 41% Sell

Macquarie Euro Oil & Gas Research Coverage

09 January 2013

Company	Ticker	Rating	Price as of	Target	Div. yield	Exp. return	Mkt Cap \$bn	Analyst
04-Jan-13								
European Integrated								
1 BG Group	BG/ LN	Neutral	1028p	1300p	1%	28%	56	Jason Gammel
2 BP	BP LN	Outperform	446p	570p	4%	32%	139	Jason Gammel
3 Eni	ENI IM	Outperform	€18.9	€21.0	5%	16%	89	Marc Kofler
4 Galp	GALP PL	Outperform	€12.4	€16.0	2%	32%	13	Marc Kofler
5 OMV	OMV AV	Neutral	€28.4	€26.5	4%	-3%	12	Marc Kofler
6 Repsol	REP SM	Underperform	€16.0	€13.5	5%	-11%	26	Marc Kofler
7 Royal Dutch Shell	RDSA LN	Outperform	2149p	2550p	5%	24%	210	Jason Gammel
8 Statoil	STL NO	Neutral	142kr	160kr	4%	17%	78	Marc Kofler
9 Total	FP FP	Neutral	€39.92	€42.0	6%	11%	116	Jason Gammel

Company	Ticker	Rating	Price as of	Target	Div. yield	Exp. return	Mkt Cap \$mm	Analyst
04-Jan-13								
European E&P								
Mid Cap (>\$1bn mkt cap)								
1 Afren	AFR LN	Neutral	137p	145p	0%	6%	2,475	Mark Wilson
2 Cairn Energy	CNE LN	Outperform	278p	350p	0%	26%	2,687	Mark Wilson
3 DNO International	DNO NO	Outperform	NOK 9.58	NOK 12.70	0%	33%	1,517	David Farrell
4 Genel Energy	GENL LN	Neutral	741p	850p	0%	15%	3,279	David Farrell
5 Gulf Keystone	GKP LN	Underperform	177p	163p	0%	-8%	2,612	David Farrell
6 Lundin Petroleum	LUPE SS	Outperform	SEK 154	SEK 175	0%	14%	6,969	Mark Wilson
7 Premier Oil	PMO LN	Outperform	350p	574p	0%	64%	3,226	Mark Wilson
8 SOCO International	SIA LN	Underperform	368p	304p	0%	-17%	1,959	David Farrell
9 Tullow Oil	TLW LN	Underperform	1280p	1025p	1%	-19%	19,019	Mark Wilson
Small Cap (<\$1bn mkt cap)								
10 Aurelian Oil & Gas*	AUL LN	Res.	11p	Res.	na	na	na	Mark Wilson
11 Bowleven	BLVN LN	Neutral	69p	89p	0%	28%	308	David Farrell
12 Faroe Petroleum	FPM LN	Outperform	140p	158p	0%	13%	533	Mark Wilson
13 GeoPark*	GPK LN	Neutral	663p	635p	0%	-4%	484	Mark Wilson
14 Hardy Oil & Gas	HDY LN	Neutral	92p	96p	0%	4%	114	Mark Wilson
15 Heritage Oil	HOIL LN	Outperform	193p	213p	0%	10%	839	David Farrell
16 Max Petroleum*	MXP LN	Neutral	4p	4p	0%	10%	135	Mark Wilson
17 Rockhopper	RKH LN	Outperform	167p	351p	0%	110%	779	David Farrell
18 Petroceltic International	PCI LN	Outperform	7p	9p	0%	28%	349	David Farrell
19 PetroNeft	PTR LN	Outperform	6p	7p	0%	24%	60	Mark Wilson
20 Salamander Energy	SMDR LN	Outperform	192p	240p	0%	25%	806	David Farrell
21 San Leon Energy*	SLE LN	Res.	9p	Res.	0%	na	na	Mark Wilson
22 Serica Energy	SQZ LN	Outperform	25p	50p	0%	100%	77	Mark Wilson
23 Valiant Petroleum	VPP LN	Underperform	407p	405p	0%	0%	294	Mark Wilson
24 Victoria Oil & Gas*	VOG LN	Outperform	2p	6p	0%	169%	85	David Farrell
Oil Services								
1 Petrofac	PFC LN	Underperform	1644p	1350p	3%	-15%	9,013	Mark Wilson
2 Greka Drilling*	GDL LN	Outperform	14p	36p	0%	167%	95	Mark Wilson

Notes:

* Macquarie broker / joint broker

Other stocks mentioned in this report

Coastal Energy (CEN CN, C\$20.97, Outperform, TP: C\$25.00, David Popowich)

Noble Energy (NBL US, US\$104.90, Outperform, TP: US\$128.00, Joseph Magner)

TransGlobe Energy (TGL CN, C\$9.25, Outperform, TP: C\$17.25, David Popowich)

WesternZagros Resources (WZR CN, C\$1.09, Outperform, TP: C\$2.15, David Popowich)

Africa Oil (AOI CN / SS, not covered)

Bridge Energy (BRDG LN / BRIDGE LN, not covered)

Hyperdynamics (HDY US, not covered)

Mediterranean Oil & Gas (MOG LN, not covered)

Providence Resources (PVR LN / PRP ID, not covered)

Important disclosures:

Recommendation definitions

Macquarie - Australia/New Zealand

Outperform – return >3% in excess of benchmark return
 Neutral – return within 3% of benchmark return
 Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

Macquarie – Asia/Europe

Outperform – expected return >+10%
 Neutral – expected return from -10% to +10%
 Underperform – expected return <-10%

Macquarie First South - South Africa

Outperform – expected return >+10%
 Neutral – expected return from -10% to +10%
 Underperform – expected return <-10%

Macquarie - Canada

Outperform – return >5% in excess of benchmark return
 Neutral – return within 5% of benchmark return
 Underperform – return >5% below benchmark return

Macquarie - USA

Outperform (Buy) – return >5% in excess of Russell 3000 index return
 Neutral (Hold) – return within 5% of Russell 3000 index return
 Underperform (Sell) – return >5% below Russell 3000 index return

Volatility index definition*

This is calculated from the volatility of historical price movements.

Very high-highest risk – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

High – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

Medium – stock should be expected to move up or down at least 30–40% in a year.

Low-medium – stock should be expected to move up or down at least 25–30% in a year.

Low – stock should be expected to move up or down at least 15–25% in a year.

* Applicable to Australian/NZ/Canada stocks only

Recommendations – 12 months

Note: Quant recommendations may differ from Fundamental Analyst recommendations

Financial definitions

All "Adjusted" data items have had the following adjustments made:

Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
 Excluded: non recurring items, asset revaluations, appraisal value uplift, preference dividends & minority interests

EPS = adjusted net profit / $epowa^*$

ROA = adjusted ebit / average total assets

ROA Banks/Insurance = adjusted net profit / average total assets

ROE = adjusted net profit / average shareholders funds

Gross cashflow = adjusted net profit + depreciation

*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

Recommendation proportions – For quarter ending 31 December 2012

	AU/NZ	Asia	RSA	USA	CA	EUR	
Outperform	47.87%	54.89%	54.41%	41.93%	60.86%	44.14%	(for US coverage by MCUSA, 6.10% of stocks followed are investment banking clients)
Neutral	37.94%	26.41%	38.24%	52.16%	33.70%	27.73%	(for US coverage by MCUSA, 4.91% of stocks followed are investment banking clients)
Underperform	14.19%	18.70%	7.35%	5.91%	5.44%	28.13%	(for US coverage by MCUSA, 3.33% of stocks followed are investment banking clients)

Company Specific Disclosures:

Important disclosure information regarding the subject companies covered in this report is available at www.macquarie.com/disclosures.

Analyst Certification:

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