

# PROJECT PORTFOLIO UPDATE

DECEMBER 2017



# ENVOI



# ENVOI

## DELIVERING ENERGY OPPORTUNITIES

Envoi was founded in 2000 as a global advisory consultancy specialising in the marketing of upstream oil and gas asset acquisition and divestment. Our specialist skills and global network have seen us become a leading A&D consultancy for the international upstream oil and gas industry.

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### DELIVERING SERVICES

#### Upstream divestments

Envoi's main area of activity is asset or project divestment. This service involves the review, unique technical documentation, marketing, management and coordination of upstream asset sales. It can comprise helping our clients identify new partners through a farmout of interests in exploration or appraisal and development projects, a straight sale of production or a corporate sale.

#### Upstream acquisitions

Envoi can tap into our global network to identify appropriate opportunities for upstream investment, tailored to fit our clients' criteria.

#### Strategic portfolio advice

We assist clients in strategy planning and subsequent entry into new international core areas, leading to the acquisition of projects for a specific portfolio. We help to identify potential new sources of capital through our global network of oil and gas industry and financial contacts. Conversely, we assist clients wishing to exit a particular region with planning their sale of assets.

#### Country promotion

Our extensive A&D experience and track record in marketing international upstream projects, together with our global network of contacts, underlines our capacity to assist governments and national oil companies to market their country's hydrocarbon potential and encourage new investment. We can also organise roadshows or presentations at industry conferences for specific license rounds.

#### Corporate presentations and reports

Whether you're an oil and gas company or a government, managing a start-up or initial public offering, raising funds for a new project or simply updating your investors, Envoi can help your company prepare a clear and concise presentation.

### DELIVERING ON OUR STRENGTHS

#### Global reach

Over two decades in the world of upstream A&D, Envoi has formed lasting relationships with the industry's leading players and decision-makers, building an unrivalled global network of several thousand high-quality contacts along the way. These include upstream oil and gas organisations of all sizes, as well as financial investors in search of upstream opportunities. By continually meeting and strengthening these contacts with the people who matter, we can better manage the evolving demands of both our network and our clients.

#### Unique style

Our technical and commercial reviews rapidly add value to projects, by pinpointing and highlighting the strengths, while our distinctive documentation ensures positive presentation and clarity of detail to potential buyers.

#### Flexibility

Our bespoke services are tailored to fit our clients' specific opportunities and needs.

#### Expert knowledge

Expanding on our own in-depth experience, we have established associations with specialist consultants who we retain for specific projects when required.

#### Commitment

Our success fee structure aligns our remuneration and goals to our client's success.



# ACTIVE PROJECTS

## ACTIVE PROJECT LOCATOR



### ASIA



## KAZAKHSTAN

Onshore / Appraisal, development and exploration

Envoi has been commissioned by privately owned Lucent Petroleum LLP, to assist in the search for investors to join them in the pilot development and potential deep target exploration of the Lebyazhye field. Their 100% owned and operated onshore Yuzhnaya Block, which covers an area of 1,341 km<sup>2</sup> of the North Caspian Basin, western Kazakhstan, lies in a well-established hydrocarbon producing area. This region's hydrocarbon potential is already proven by existing fields including the giant six billion barrel Tengiz field, which lies north of Lucent's acreage. Lucent's Block is itself surrounded by numerous other producing fields which have established export and service infrastructure. Of the two existing oil and gas fields on Lucent's Block, a partner has already been found to assist with the pending development of the Munaibai field. Lucent is therefore now seeking a partner for a staged investment in the Lebyazhye development. Discovered in 1980, Lucent's 2011 appraisal well (LX-14x) supported the field's estimated 27 MMboe Triassic reserves which will be exploited by the initial re-entry of the four existing discovery and appraisal wells with a view to first production of between 300 - 500 bopd in late 2017. Two subsequent horizontal side-tracks are planned for 2018. This would be followed in 2019 by a deepening of the LX-14x well to test additional 150+ MMboe resource potential identified by Lucent in the deeper Carboniferous reef play that has not been tested in this Block. A number of follow-on leads have also been identified, with additional potential in deeper Carboniferous and Devonian plays already proven in the region. Lucent is offering up to 50% in the Lebyazhye field development in return for a staged investment totalling US\$ 25.4 million and involvement in the initial, early cash flow development of the existing Triassic resource and subsequent test of the potentially much larger, deep Carboniferous potential.

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### ASIA



## CENTRAL ASIA

Onshore / Production, redevelopment and exploration

Envoi has been commissioned by a listed independent to assist in its search for a partner to participate in the progressive exploration and exploitation of several majority owned and operated Licences located in the proven / producing -inter-montagne fairway of an independent Central Asian country, last exploited by the Russians in the 1990s. The fairway is estimated to contain over 4 billion barrels, of which 75% remains undiscovered. The Licences cover a combined area of over 3,000 km<sup>2</sup> and contain proven Mesozoic and Cenozoic stratigraphy with prolific source rocks (generating gas and oil between 30° to 42° API gravity), stacked reservoir sands and carbonates and locally competent interbedded seals, as well as a thick regional seals across the basin. Three drill-ready prospects have so far been defined on the existing 2D data with combined estimated prospective resources of 550+ MMboe. The Licences also include some existing production of around 250 boed, comprising 60% oil and 40% gas, which could be increased significantly with investment of US\$ 50 million in field redevelopment, modern maintenance technology and new equipment. Envoi's client is looking for a partner willing to commit in the very near term to fund one exploration well in the next 12 months to secure one of the Licences. The well is planned for 2017 to test one of the primary closures down-dip from an existing field at an estimated cost of US\$ 25 million. Such exploration commitment would unlock participation in the other acreage, including the existing production and the significant redevelopment upside.

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## AMERICAS



### COLOMBIA

Onshore / Exploration

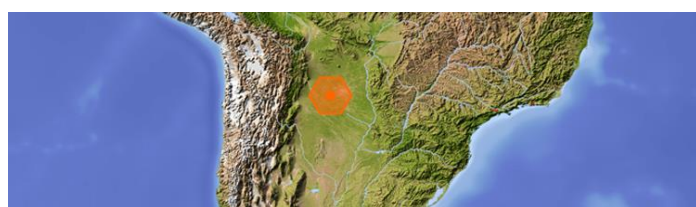
Envoi has been commissioned by London-listed Gulfsands Petroleum Plc ("Gulfsands") to assist in its search for a partner to join in the exploration of its two 100% owned and operated blocks, PUT14 and LLA50, situated in the proven producing Putumayo and Llanos Basins respectively, onshore Colombia.

**Block PUT14** is located in an under-explored south-eastern part of the Putumayo Basin in southern Colombia, adjacent to the Ecuadorian border. Gulfsands has identified several large stratigraphic basin edge pinch-out leads, together with associated fault closed structures, which lie updip from the prolific Andean foreland play trend where elongate fault closed structures have been the focus of most successful exploration to date. The existing sparse 2D seismic grid over the PUT 14 block clearly shows the pinch-out potential of the proven plays that thin onto the basin margin but can still be sourced by the proven source kitchen to the west. Significantly, the underexplored Putumayo play trend in PUT14 area is an extension of, and lies on strike with, foreland basin margin analogue fields in Ecuador's Oriente Basin to the south. The primary targets are Cretaceous age Villeta Formation sandstone reservoirs in both faulted and potentially large stratigraphic closures. These clearly show progressive pinch out as the play formations thin eastwards, sourced by mature source rocks in the Caballos and Villeta Formations to the west. Gulfsands is planning a minimum 100 km infill 2D seismic programme which will more accurately define the closures mapped on the existing data and upgrade the leads to drillable status. Subsequent exploration drilling would fulfil all the work obligations of the initial exploration term for PUT14 ahead of its expiry in mid-2019, pending licence extension approval. The combined gross cost of the planned infill 2D seismic survey and one subsequent exploration well is currently estimated to cost US\$ 16 million.

**Block LLA50** is situated on the eastern margin of the largest sedimentary basin in Colombia, the 200,000 km<sup>2</sup> Llanos Basin, which evolved in front of the Eastern Cordillera uplift of the Andes. The existing, albeit sparse, 2D data acquired in the 1980s over Block LL50 has enabled Gulfsands to define large prospectivity and several fault associated leads up-dip from the much more explored proven-producing central foreland basin play trends to the southwest which contain numerous very large fields. The eastern extension of the Llanos foreland margin play has already been confirmed by fields on strike to the south. The shallow faulted leads defined by Gulfsands to date are interpreted as exhibiting similar traps and drapes of Paleogene Carbonera sands. Stratigraphic potential has also been identified as the stacked fluvio-deltaic sands pinch-out eastwards. Similar to PUT14, the planned 160 km 2D infill seismic programme will refine the leads and allow drillable locations to be defined. One exploration well would then fulfil the work obligations for the current exploration term which is due to expire in May 2018. The combined gross cost of infill 2D and one well is currently estimated to be US\$ 15.3 million. Gulfsands is offering a material interest in one or both blocks in return for funding the forward work programmes in each.

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## AMERICAS



### PARAGUAY

Onshore / Appraisal, development and exploration

President Energy Plc, the UK-based AIM-listed company, has commissioned Envoi to identify a strategic partner for the appraisal, exploitation and upside exploration of its four Concessions, which cover an adjacent area of 34,000 km<sup>2</sup> over the entire prospective area of the Pirity sub-basin, onshore northwest Paraguay. Key to the opportunity is the underexploited nature of the sub-basin which is an extension of the proven-producing Tarija Basin in NW Argentina/Bolivia and the Olmeda Sub-basin in Argentina, where President owns three other concessions with production from five fields. Their activities in Paraguay to date have included extensive acquisition of 1,054 km 2D and 791 km<sup>2</sup> of 3D seismic data, and two wells, which resulted in their Lapacho discovery. Two play fairways have been defined by President's work including: i), the Cretaceous play known to extend from the Palmar Largo trend in Argentina, which remains essentially untested in Paraguay, and ii), the Palaeozoic play, a prolific producer in Bolivia and Argentina, but newly discovered by President in the Pirity Basin. President has mapped over thirty Palaeozoic prospects and leads across their Concessions, with an estimated combined 'mean' potential of 3 billion boe unrisks prospective resources<sup>1</sup>. Their focus is on the Pirity and Hernandarias Concessions, as Don Quijote and Pilcomayo are both still in the Prospection Permit stage. The proximity to existing infrastructure in Bolivia and Argentina where gas prices are high (US\$ 6-8 mmbtu) ensure access to profitable markets. President operates the **Pirity Concession** 100%, which lies on the Argentinian border, close to its producing fields. President's second well in the acreage drilled in 2014 resulted in the Lapacho discovery, from which hydrocarbons were recovered, proving the active Palaeozoic play system. Severe hole conditions and poor cement isolation, however, prevented proper tests of the Silurian gas sands and oil found in fractured Devonian. In addition to a host of undrilled prospects, it is estimated that the Palaeozoic in President's combined acreage contains over 10 Tcf gas gross prospective resource potential<sup>1</sup> at and where drilling costs significantly less than in Bolivia. Additionally in Paraguay, Cretaceous prospectivity has been mapped with 3D defined potential of 357 MMboe resources<sup>2</sup> in a low risk extension of the light oil play proven by existing fields 30-70km away across the border. The value of oil in Paraguay is further enhanced by the very favourable tax /royalty fiscal regime and Brent pricing. President now plans to spud a lowest risk well by March 2018, in order to convert the block to an Exploitation Concession and execute a field development plan. President operates the **Hernandarias Concession** with 40% interest, with a right to earn up to 80%. The Concession covers the northerly extension of the Palaeozoic play trend proven by the 2014 Lapacho well, and contains numerous prospects and leads. These include a large drill-ready three-way dip anticline against a major bounding fault, estimated likely to contain up to 1.5 Tcf resource potential<sup>1</sup> in the Devonian and Silurian targets. President is offering up to 50% to a strategic partner willing to fund its way into one or more of its acreage positions by initial contributions to the next wells planned in each of the Pirity and Hernandarias Concessions at a combined estimated gross cost of US\$ 24 million.

<sup>1</sup> President Energy Management Estimate <sup>2</sup> Source RPS report June 2014, mean unrisks

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## AFRICA



### TUNISIA

Onshore / Exploration

Echo Energy (formerly Independent Resources), the UK-based, AIM listed company, has commissioned Envoi in its search for a new partner to join in its 2,252 km<sup>2</sup>, 86 % owned and operated Ksar Hadada exploration permit, in the Ghadames Basin, onshore Tunisia.

The block contains the proven Ghadames Lower Palaeozoic system, whose prolific Silurian source has provided in excess of 90% of the discovered hydrocarbons (30+ billion barrels of oil equivalent) of the vast basin, which occupies areas of Tunisia, Libya and Algeria.

Exploration of the Ksar Hadada area began in the late 1950s and since then 1,800 km of 2D seismic data of various vintages have been acquired and nine wells have been drilled on the block. All but one of the wells confirms the presence of Silurian-sourced mature oil in the block. There is good fault controlled structuring with fault throws of 200+ m dating mainly from the Late Carboniferous Hercynian event with later adjustment by the Early Cretaceous Austrian transpression. Oil migration postdates this and oil and gas have been recorded in Ordovician, Silurian and Permian sandstones.

Three wells confirm the presence of a significant oil accumulation (Sidi Toui) in the Upper Ordovician reservoir with unrisked STOIP of 425 mmo and recoverable reserves of 64 mmo (CPR report March 2014). A similar undrilled prospect sits adjacent to this pool and there is additional Silurian unconventional potential in the permit.

Independent Resources is seeking a partner to participate in the next phase of exploration and appraisal, which carries a commitment to acquire 200km<sup>2</sup> 3D seismic data, horizontal sidetrack and test a Sidi Toui discovery and drill an exploration well in the adjacent prospect, at an estimated cost of US\$ 13 million.

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## AFRICA



### GABON

Offshore / Exploration

Marathon Oil Corporation has commissioned Envoi to assist in its search for a quality partner to participate in the drilling phase of its 100% owned and operated, 1,120 km<sup>2</sup> Tchicuate (G13) Licence offshore southern Gabon. The acreage is on the highly prospective margin of the largely undrilled deeper water South Gabon Basin, and located immediately outboard of the proven producing pre-salt Etame oil fields and Dussafu discoveries in shallower water. Significantly, 2 of the recent pre-salt exploration wells (Diaman, Leopard) in the region have found significant amounts of hydrocarbons.

The area's primary play consists of stacked lower Cretaceous pre-salt Gamba and Dentale sands, overlying source rocks including the highly organic Melania 'hot shale'. This sequence was deposited in the Dentale Paleo-Trough during the early continental break up, rifting and separation of what is now Brazil and Africa. A variety of trap-types have been identified. Upside potential exists in the post-salt Cretaceous Madiela play, which is prolific in Congo and Angola.

Regional gravity data clearly indicates that the Tchicuate acreage sits immediately west of the Atlantic Hinge line on the flank of the Dentale Palaeo-Trough. Here, basin modelling suggests more of the source rock is in the oil window compared to the more mature, gas prone central part of the trough, as defined by the Diaman and Leopard discoveries. Furthermore, Tchicuate is interpreted to contain thicker delta front sediment sequences fed from the east and ponded over the hinge zone on the trough flanks. The new CGG multi-client BroadSeis PSDM 3D seismic data over the block, processed for Marathon on an accelerated basis, provides excellent imaging in the pre-salt section. Marathon's interpretive work has identified multiple well-imaged prospects, with a combined resource potential exceeding 1 Bn bbls oil recoverable.

The PSC was awarded in August 2014 and is in the first exploration period, with an outstanding exploration well commitment prior to the end of 4 year period. Given moderate drilling depths of 2,000-3,500 metres below seabed mudline over the prospects and favourable rig rates the prospects can be tested very economically. Fiscal terms were negotiated prior to the new 2014 O&G Hydrocarbon law terms, providing a very attractive return. Marathon would like to find a partner willing to earn 40% or more equity in the Tchicuate Licence in return for a negotiated contribution to the planned well and past costs.

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## AFRICA



### GHANA

Offshore / Exploration

Envoi has been commissioned by Amni International Petroleum Development Company Limited (Ghana) ('Amni'), to assist in its search for a partner for its 90% owned and operated Central Tano Block in the Tano Basin, offshore Ghana. The remaining 10% is controlled by the Ghana National Petroleum Company (GNPC). The Block is situated approximately 60 km offshore in water depths of 300 to 1,500 metres and is bounded by the prolific Deepwater Tano and Cape Three Points Blocks, within which are a number of very large discoveries, including the Jubilee, the TEN field complex and Teak Fields discovered from 2007 onwards. These are recognised by the industry as the first discoveries in the deep water Cretaceous (Cenomanian-Turonian-Campanian) sand play, regenerating a West African exploration frenzy post the major Albian -Aptian synrift discoveries of the 90's. The 279.48 km<sup>2</sup> Central Tano Block is part of the original Deepwater Tano Block, which was relinquished by its operator Tullow in 2013 as part of their Licence obligation. Amni was awarded the area as the distinct "Central Tano Block" in March 2014 for an initial seven year term of three exploration phases. Amni's acreage is considered highly prospective due to its position in the heart of the most productive area of the Tano Basin, where three different plays are being evaluated, including: 1) the Turonian and Cenomanian fan systems, analogous to the Jubilee field, 2) the shallow Campanian fan systems and 3) the Albian-Aptian synrift system. Five prospects and eleven leads across the three plays have so far been identified to date with a combined potential of more than 3,500 MMbo in place. Amni is currently completing the interpretation of the 1,600 km<sup>2</sup> Tano Deep 3D data set together with some 450 km<sup>2</sup> of 3D PSDM reprocessed seismic. This has enabled the initial selection of three possible drilling locations where stacked prospects can be tested by individual wells. Amni would like to spud the first of two commitment wells in 2017. Amni is looking for a partner willing to earn up to a 40% equity in the Block by funding the two obligation wells (est. dry hole cost US\$ 50 million each), with a negotiated contribution to past costs.

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## UNITED KINGDOM



### NORTH SEA *NEW*

Offshore / Exploration

Envoi is working with privately owned Aimwell Energy Limited, to assist Azinor Catalyst ("Azinor") in the search for a drilling partner for Licence P.2278 comprising Blocks 13/16b & 17 located in the UK North Sea's Inner Moray Firth. The acreage, covering some 300 km<sup>2</sup>, is located 140 km offshore northeast of Aberdeen in around 105 metres of water and is a traditional Licence awarded to Azinor Catalyst in 2015 during the 28th round for an initial 4 year term to September 2019. Aimwell's technical focus and experience on the area has spanned over a decade in various phases of exploration with different companies, initially involving interpretations based on 2D data in 2004 which first highlighted the Upper Jurassic as a play target. This was later followed by 3D data acquired in 2006 but which only partly covered the area now known to be most prospective, although it clearly showed evidence of large undrilled potential in the Upper Jurassic. Merger of this 3D with the adjacent Captain 3D dataset (ref: area on map) and subsequent reprocessing in 2014-16 by Western Geco and Azinor, has proved instrumental in unlocking the Upper Jurassic Buzzard sand potential. This has not only fulfilled the current Licence obligation but resulted in a significant enhancement to the data quality and enabled confident mapping of the large Churchward pinchout Prospect that is now the obvious target.

This consists of a large structural/stratigraphic trap comprising Buzzard aged sandstones pinching out onto the Captain High on the southern flank of the Smith Bank Graben. Volumetric estimates of the Churchward prospect using conservative reservoir parameters, and based on a structural spill point associated with the Smith Bank Fault (which also coincides with a flat spot that can now be mapped on a number of lines), supports a 'mid-case' resource potential of 525 MMbo recoverable. This has an estimated upside in excess of 2 Billion barrels recoverable if a discovery confirmed a thicker Buzzard equivalent reservoir.

Azinor, and its carried technical partner Aimwell, would now very much like to find a near term drilling partner to help accelerate the planned well programme to test the Churchward prospect and benefit from the current availability of rigs and services whilst at their lowest rates for many years.

Azinor is therefore offering a material interest in the P.2278 Licence in return for funding a well in 2018, estimated likely to cost only GBP £9 million (~ US\$ 11.5 million equivalent) which is equivalent to a risk reward ratio of over 1:200.

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## UNITED KINGDOM



### **EAST MIDLANDS** *(UNDER OFFER)*

Onshore / Production and development

Blackland Park Exploration Limited ('Blackland') is an independent oil and gas company which owns several exploration and production assets in the East Midlands, onshore England (UK), both in its own right and through two wholly-owned subsidiaries, AltaQuest Energy Corp (UK) Limited ('AltaQuest') and Courage Energy (UK) Ltd ('Courage'). The assets, covering a total 250 km<sup>2</sup>, are all located in the vicinity of the Gainsborough Trough of the East Midlands Basin.

The owners of Blackland would now like to divest all of their assets through a corporate sale for cash including the combined producing and undeveloped reserves attributed to the assets it currently owns, including its subsidiaries. These assets include Blackland's own production from the Whisby field, in which the #6 appraisal well drilled successfully and defined new reserves in Q1 2016. Also, AltaQuest's shut in reserves at Newton oil field, with its appraisal upside, and Courage's undeveloped Reepham oil field. The opportunity would also include all of the prospective exploration upside in the combined acreage, plus the booked accumulated tax losses associated with the three companies which can be used to offset future tax liability from other E&P assets elsewhere onshore UK if appropriate.

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