

**Pura Vida Energy NL**

PVD AU / PVD.AX

▶ **Market Cap**  
**A\$65m**  
US\$59.1m

▶ **Avg Daily Turnover**  
**A\$0.37m**  
US\$0.35m

▶ **Free Float**  
**80.4%**  
161.5 m shares

Current **A\$0.57**  
Target **A\$2.85**  
Prev. Target **A\$3.22**  
Up/Downside **400%**

**STOCK RATING****ADD**

HOLD

REDUCE

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## An African Hotspot

*PVD has raised ~A\$13.5m via the placement of 21.5m shares at A\$0.63ps. This reduces our risked mean valuation to A\$2.85ps. In order for a re-rating to this level to occur PVD must hit multiple milestones over the next 12 months, and will likely remain volatile until Moroccan drilling. We recommend investors stay active to take advantage of this volatility. In the success case, there is significant upside. We recommend this for high risk, speculative investors.*

PVD has raised A\$13.5m via a placement to fully fund its next 12 months of operations. The timing may have surprised some, but it should leave the company well positioned for any farm out negotiations, as the early programs can now be funded without a partner.

**An active 2014 ▶**

PVD has a lot planned for 2014, including the farm out of its Nkembe block in Gabon (which may be split into two processes), the drilling of the Toubkal prospect in offshore Morocco, and the 3D seismic program in Madagascar. Others in Morocco and Gabon will also be drilling prospects in 2014, and we think the market will retain interest in the story due to the news flow expected.

**Following through with a good strategy ▶**

PVD achieves early entry into frontier offshore plays and farms down equity

for free carried development. We believe this strategy is sound, and management have proven they are capable in Morocco. If they can replicate their success in Gabon and Madagascar we expect the share price will re-rate as more value is ascribed to these programs. PVD is positioned well in the African offshore hotspots for the next two years of drilling.

**Potential for upside ▶**

We see the potential for upside from PVD's permits through further de-risking. This may come from additional seismic evaluation, new seismic, nearby drilling, or farm outs of its permits. The main excitement is around the drilling of the large Toubkal prospect in Morocco, which if successful, may lead to significant upside. Key risks relate to the outcome of the first well, although additional prospects and a second fully funded Morocco well should provide some share price support.

**Future Drilling in Morocco over the coming 12 months (excluding PVD)**

Companies involved in drilling	CY2013	CY2014
Kosmos/Pathfinder		1 well
Genel		1 well
Kosmos		1 well
Genel /San Leon/Longreach		1 well
Capricorn/ San Leon /Longreach	1 well	
Capricorn/Genel/Nautical		1 well
Galp/Tangiers		1 well

SOURCE: MORGANS, COMPANY REPORTS

# Raising money ahead of high risk drilling by neighbours

## 1. Evaluating Key Milestones and Market Response

### 1.1 Pure play that hits its milestones and repeats ▶

PVD is a pure explorer which ticks the boxes that are needed for investors to stay interested through trading milestones. PVD had an early entry into Morocco which it subsequently farmed down, which is a region that has become the focus of global majors, and had a large interest in the block and operatorship prior to farm out, and the area is on trend with other large discoveries. PVD has repeated this strategy with entry into Gabon and Madagascar, providing diversification and further opportunity.

Our expectation is for milestones to drive re-ratings over the next 12 months due to de-risking, which will be necessary to reach the Target Price. Looking at PVD's share price chart to mid November 2013 (Figure 1), we see that catalysts included quantifying prospect size, independent expert review of prospects, technical results which indicate presence of hydrocarbons in the block, resource upgrades, and identification of multiple, unrelated prospects. A rerating occurred for PVD once it reached a certain level of derisking, from hydrocarbon indicators on seismic and a resource upgrade.

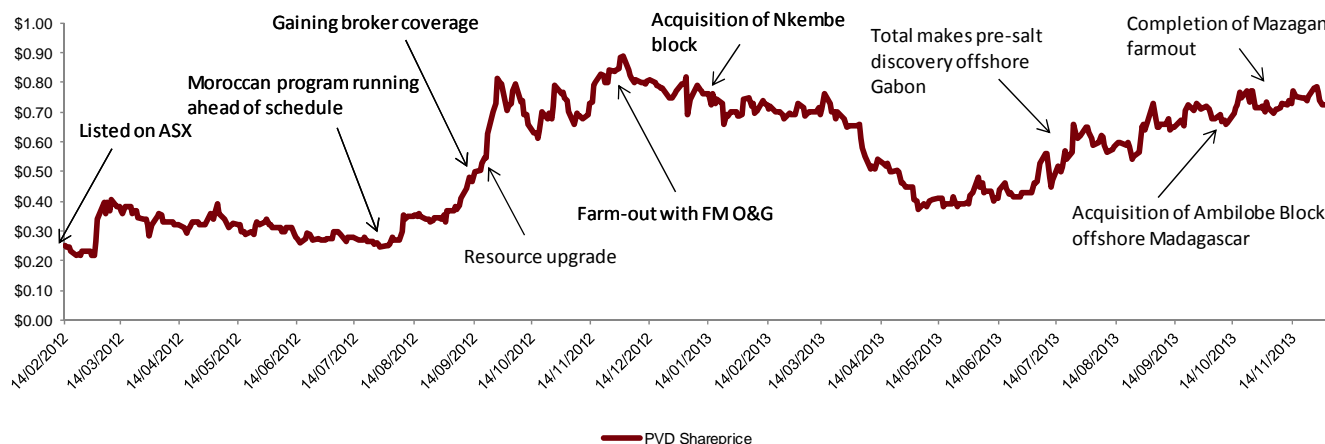
We anticipated a major catalyst to be around the announcement of the Morocco deal and then the closing of the Morocco deal and the receipt of US\$15m, however, neither eventuated. We believe the market was taking profits after the largely expected farm out to FMOG and following the close of the deal the market may have assumed a raise would be needed to fund Madagascar, which was announced just after the close of the Morocco deal.

We expect future catalysts to be the successful farm out of the Gabon permit (1Q2014) and the drilling of the Toubkal well in Morocco (2H2014). Proximal drilling may also provide confidence to the market and some nearby drilling may help to de-risk PVD's prospects if similar play types.

### 1.2 Upcoming milestones which may drive re-rating ▶

The next events which may drive a rerating are the Nkembe farmout in Gabon, which is delayed into 1Q2014 due to the potential of separating the block into two permits, and the drilling of Toubkal in Morocco, expected 2H2014. Drilling of nearby locations in Morocco and Gabon may drive volatility, as successes may drive a positive look through but failures may drive negative sentiment given a number of the play types are in PVD's block as well. Overall, we think the proximal drilling should serve to maintain interest in the story and certain prospects may help to de-risk PVD's prospects if a similar play type.

**Figure 1: PVD Share Price Chart to Present**



SOURCES: MORGANS, IRESS, COMPANY REPORTS

### 1.3 Major milestone toward end of 2014 ►

Our target price is a 12 month target, and includes the assumption that the market will add value for incremental milestones. This is based on the mean case valuation of the two Morocco prospects for which PVD is free carried, the Loba M1 oil discovery in Gabon, and Madagascar at cost, plus cash and corporate. We anticipate the market will drive the share price in the lead up to drilling in Morocco, due to the very large potential size of the prospect. In the success case, there is significant upside. However, we suggest investors stay active to take advantage of any such value, as in the case that the well is not successful, we expect the stock to de-rate significantly.

## 2. VALUATION, MILESTONES AND RISKS

### 2.1 Mean Case valuation \$2.85ps (range \$0.96-\$5.54ps) ►

We use a sum of the parts to value PVD, utilising the independent reviewer's mean recoverable prospective oil resource size estimates for two prospects in the Mazagan permit (Figure 10) to which we then apply a rule of thumb \$10/bbl value and a further risking to take into account market uncertainty around commercial success. We also value the Loba M1 discovery using the same method with a 15% chance of success given the coring information available. We value Madagascar at the cost of the work program.

The risking and \$/bbl valuation are designed to take into account future development costs which may eventuate in the success case, which we currently don't model. We assume the exercise of options in our valuation, and net cash takes into account activity for the full year. Upcoming activity may impact the target price and valuation, including:

- A successful farm out of Gabon, which may provide a look through valuation and cash. We currently only value the Loba prospect, however if the block is split into two for a farm out, this could have a positive impact.
- Given the early nature of the Madagascar farm-in, we value the project at what PVD is paying for it (US\$1.25m in back costs and US\$15m for seismic). A successful farm out, or further work up of the prospects via 3D seismic may provide a better idea of the exploration value of the permit.
- Proximal drilling in Morocco and Gabon may provide opportunities for assessing the risk of certain play types in PVD's permit areas

Our total risked valuation has decreased to A\$2.85 per share as a result of the placement and work programs as detailed in the placement. We expect the stock to re-rate towards this level in stages as market interest regarding the

upcoming Gabon farm-out intensifies and eventuates and the company sets a spud date for the Morocco drilling campaign. We retain our speculative outperform recommendation on the stock and note it is for high risk investors given the potential for downside and expected volatility around milestones.

For reference, we have shown below the valuation utilising the same methodology but using the independent assessors P90 (90% of the range of resource estimates are above this number) case for potential resource size, as per Figure 9 and the SOTP for the P10 (10% of the range of resource estimates are above this number) case.

**Figure 1: Risked SOTP Low Case Value**

	A\$m	A\$/share
PVD interest in Mazagan (low case)	119.6	0.74
Gabon NAV	13.4	0.08
Madagascar at cost	17.1	0.11
Net Cash	17.7	0.11
Corporate expenses	-12.3	-0.08
<b>PVD low case valuation</b>	<b>155.6</b>	<b>0.96</b>

SOURCES: MORGANS

**Figure 2: Risked Mean Case SOTP Valuation**

	A\$m	A\$/share
Morocco NAV	414.6	2.57
Gabon NAV	24.0	0.15
Net debt (Cash)	17.7	0.11
Corporate costs	-12.3	-0.08
<b>Total</b>	<b>461.1</b>	<b>2.85</b>

SOURCES: MORGANS

**Figure 3: Risked SOTP High Case**

	A\$m	A\$/share
PVD interest in Mazagan (high case)	837.8	5.19
Gabon NAV	34.4	0.21
Madagascar at cost	17.1	0.11
Net Cash	17.7	0.11
Corporate expenses	-12.3	-0.08
<b>PVD high case valuation</b>	<b>894.7</b>	<b>5.54</b>

SOURCES: MORGANS

Each case is defined by the independent assessors estimate of potentially recoverable quantities from Undiscovered accumulations, with the P90 case using the most certain estimates that the resource would be at least that size to which a chance of success is then applied reflecting both whether the hydrocarbon will be present and producible and whether it will ultimately be commercial. As Toubkal is large the entire range of possible outcomes is economic.

## 2.2 Milestones on the horizon ►

As PVD is not expected to be drilling a well until 2H CY14, we believe market focus over the coming half to be on the farm-out at Gabon, further technical work on leads and prospect potential, and key nearby drilling by others to be positive milestones for the stock.

**Figure 4: Milestone Table**

Near-Term Catalysts and Milestones	Expected	Impact
Announcement of timing and targets of high impact Mazagan drilling program	end CY13	+
Drilling results on neighbouring blocks offshore Morocco	1QCY14	+
Drilling results on neighbouring blocks offshore Gabon	1HCY14	+
Farmout of Nkembe block to secure funding for drilling program	1HCY14	++
Drilling in Mazagan	CY14	++++

SOURCES: MORGANS, COMPANY REPORTS

## 2.3 Risks ▶

Key risks include country risk, exploration risk, geologic risk, oil price and AUD/USD fluctuations.

We rate investment in PVD as speculative and high risk. Monitoring of upcoming milestones will be necessary and we recommend investors stay active. Though there is significant upside in the success case, if the first well is unsuccessful, we would expect the share price to significantly de-rate based on past performance of other explorers. The continued diversification of the assets should provide some share price support via the inherent value and as the assets are further derisked and value potentially realised via farm out, should add value.

## 3. REVIEWING THE ASSETS

### 3.1 Mazagan Permit, Morocco ▶

The Mazagan Permit comprises six exploration blocks off the Atlantic coast of Morocco, representing a total area of ~10,900km<sup>2</sup> with water depth ranges from ~1000m to ~3000m. The area lies about 80km offshore from the coastal town of Essaouira. The Permit is surrounded by oil and gas majors who have farmed into the neighbouring fields.

FMOG has farmed in to the Mazagan permit offshore Morocco with total expenditure of US\$215m for a 52% interest and a US\$15m payment to PVD. Consequently PVD (23%) and the Moroccan National Oil Corporation (Office National des Hydrocarbures et des Mines, ONHYM) (25%) are free carried for two wells.

The work commitments for the initial exploration phase on the Mazagan permit have been completed and all funds held under the bank guarantee have been released to PVD. In addition, a US\$15m payment has been received by PVD upon completion of the farmout.

The Toubkal prospect may be drilled either in March 2014 or 2H2014, depending on rig availability, and we expect PVD will be in a position to announce the schedule over the next two months. However, there is plenty of upcoming drilling activity in neighbouring blocks (Cairn has spudded its high risk well this month, with results expected in 30 days), with up to eight offshore wells to be drilled to keep investors interested. Any success in these other wells would in our view draw further investor interest to Morocco and PVD's share price would likely benefit from this.

### 3.2 Nkembe Block, Gabon ▶

On the 15th of January 2013 PVD announced that it had been awarded an 80% interest and operatorship of the Nkembe block located in the producing Gabon Basin, offshore West Africa. The State of Gabon will hold a 20% free carried interest in the block.

There have been discoveries made in the Nkembe Block with the Loba M 1 well intersecting a shallow oil zone. PVD believes the well, which was drilled based on 2D data in 1976, used the wrong drilling approach (overbalanced vs underbalanced), the wrong type of drilling mud (which may have clogged up the reservoir), and more current 3D data shows the well only intersected the edge of the structure.

PVD has reviewed the cores from the Loba M1 well and they indicate good quality sandstone reservoirs and have abundant oil staining. The result has confirmed PVD's gross contingent resource estimate of 20mmbbls for Loba M1. PVD plans to appraise and potentially develop the Loba Oil Field for near term production and cash flow. PVD has also released its resource estimates for additional prospects in the permit. We currently attribute no value in our risked valuation for these deep and presalt plays.

Industry activity in Gabon is ramping up with eight offshore wells planned within the next 12 months. The first of these wells, the Total-operated Diaman-1



exploration well has been drilled in the Diaba block to the south of PVD's Nkembe block, targeting a 2,250 mmbo pre-salt prospect. The well encountered a 50-55m net hydrocarbon column in the well, which is believed to be natural gas and condensate. This proves that there is a working petroleum system in the area. This pre-salt play also extends into PVD's Nkembe block, and we believe is a main driver of interest in PVD's ongoing farmout process.

The company has initiated a farm out process for the Nkembe block to secure a funding partner for the current phase of activities, including new 3D seismic acquisition and drilling. Nearby drilling has helped to derisk the pre-salt play, proving there is a hydrocarbon system in the area. PVD has a look-alike structure to the one recently tested by Total.

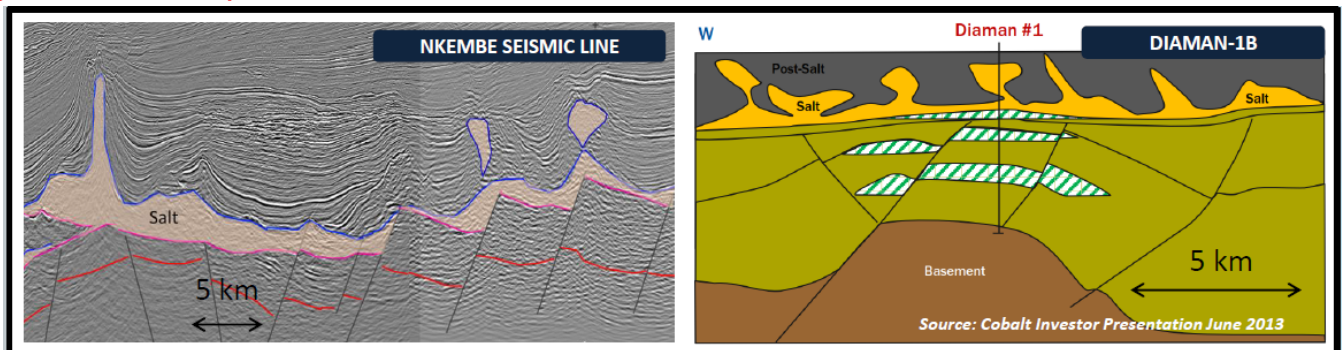
The Nkembe block contains shallower prospects in the east, related to the Loba discovery, and deeper pre-salt discoveries in the West. It is likely that two different types of companies would be interested in these two areas. The company is therefore considering splitting the block, or splitting the prospects amongst two partners. Due to this change, the farm out process will take longer than expected, and is likely to complete in 1Q 2014. We don't view this delay as a negative, though the market is likely waiting for this milestone. In addition, a number of deep water blocks are being offered in this year's bid round and PVD expect this to attract industry interest given the focus on the pre-salt potential of Gabon.

Figure 5: Structure comparison on Pre-Salt in Gabon

Prospective Oil Resources (mmbo recoverable)						
Prospect	Reservoir	Trap	P90	P50	P10	Mean
MVIM West	Pre-salt (Gamba Fm)	Pre-salt Structure	247	588	1,102	639
POM Deep	Pre-salt (Gamba Fm)	Pre-salt Structure	89	205	381	225
Lepidote Deep	Post-salt (Anguille Fm)	Anticline	61	120	219	131
Loba Deep	Sub-salt (Anguille Fm)	Sub-salt Structure	14	24	35	24
<b>Total (Gross)</b>	-	-	-	-	-	<b>1,019</b>
<b>Net to Pura Vida (80%)</b>	-	-	-	-	-	<b>815</b>

SOURCES: COMPANY REPORTS

Figure 6: Structure comparison on Pre-Salt in Gabon



SOURCES: COMPANY REPORTS

Given all of this activity over the end of 2013/beginning 2014, we would expect that PVD's share price will benefit as investors gain confidence in Gabon's potential.

### 3.3 PVD secures interest in offshore block Madagascar ▶

PVD has secured a 50% of the Ambilobe PSC offshore Madagascar via a farm-in with UK listed Sterling Energy. Under the agreement, PVD acquires a 50%

interest in the Ambilobe PSC. Sterling will retain a 50% interest and Operatorship.

**Figure 7: Location of Ambilobe PSC offshore Madagascar**



### **Madagascar Farm-in agreement**

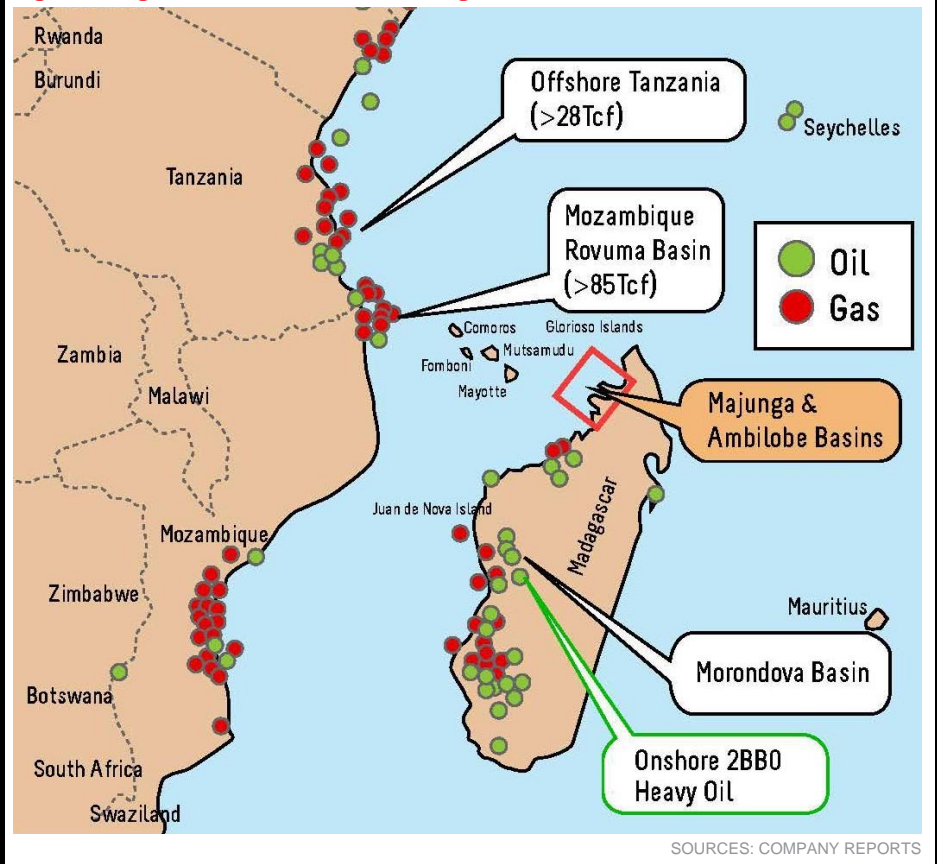
Under the farm-in agreement, PVD will reimburse US\$1.25 million in back costs to Sterling and fund the acquisition and processing of 1,000 km of 2D and 1,250 km<sup>2</sup> of 3D seismic data targeting substantial anticlinal and salt related prospects up to a maximum cost of US\$15 million. An opportunity is available to acquire the 2D data in the first half of CY2014 and discussions are underway regarding the use of a vessel with costs anticipated to be in the order of US\$2 million. The 3D acquisition will be undertaken separately following a competitive tender and timing will be determined by vessel availability (indicatively second half of CY2014).

### **Prospectivity of the region**

PVD sees the Ambilobe block as having a variety of plays relating to salt with potential for large scale oil discoveries. Exploration onshore in Madagascar has already resulted in the discovery of numerous heavy oil fields proving the existence of an abundant oil source. PVD believes that the large onshore discovered oil play extends into the Ambilobe block due to the oil seeps onshore on the eastern block boundary. Due to the depth of the reservoirs in the offshore area, it is PVD's view that any oil found in the area of the Ambilobe permit will be a light grade oil different to that found onshore.

ExxonMobil is Operator of the Ampasindava block located immediately to the South of Ambilobe and ExxonMobil is planning a deep exploration well (~US\$200m) in 2015. We also understand there is an upcoming offshore bidding round for new block releases and we would anticipate there would be significant interest from oil and gas majors looking to enter the region.

Figure 8: Significant discoveries in the region



## 1. Appendix

Each case is defined by the independent assessors estimate of potentially recoverable quantities from Undiscovered accumulations, with the P90 case using the most certain estimates that the resource would be at least that size to which a chance of success if applied reflecting both whether the hydrocarbon will be present and producible and whether it will be commercial. The Geologic Chance of Success (Pg) is the chance of the geologic model being correct. The high case has a 10% probability that the resource would be at least that size and utilises the least certain estimates.



**Figure 9: Low Case Valuation of prospects**

Mazagan Permit, Morocco	Net Recoverable Resource (mmbbl)				PVD Interest		IECoS*	Valuation					
	P90	P50	P10	Mean	W	Low Resource		NPV / bbl	Unrisked (m)	Unrisked /share	Risking <sup>†</sup>	Risked (m)	Risked /share
<b>Miocene Prospects</b>													
Toubkal	437	1,168	3,074	1,507	23%	100.4	31.20%	\$10.00	\$1,004	\$6.22	10.00%	\$100	\$0.62
Tafraoute	294	807	2,115	1,047	23%	67.7	32.20%	\$10.00	\$677	\$4.19	0.00%	\$0	\$0.00
Amoudi East	167	478	1,137	590	23%	38.4	32.20%	\$10.00	\$384	\$2.37	5.00%	\$19	\$0.12
Amoudi West	122	342	869	435	23%	28.0	32.20%	\$10.00	\$280	\$1.73	0.00%	\$0	\$0.00
Amchad	22	62	161	80	23%	5.1	33.60%	\$10.00	\$51	\$0.32	0.00%	\$0	\$0.00
Zagora	20	51	132	65	23%	4.5	33.60%	\$10.00	\$45	\$0.28	0.00%	\$0	\$0.00
<b>Lower Cretaceous Toethrust Trend</b>													
Jbel Musa	78	217	571	281	23%	18.0	19.20%	\$10.00	\$180	\$1.11	0.00%	\$0	\$0.00
Jbel Lakhdar	58	167	400	208	23%	13.4	19.20%	\$10.00	\$134	\$0.83	0.00%	\$0	\$0.00
Jbel Ayachi	55	156	414	203	23%	12.7	19.20%	\$10.00	\$127	\$0.79	0.00%	\$0	\$0.00
<b>Lower Cretaceous Inversion Anticline Trend</b>													
Jbel Tadrart	238	689	1,780	879	23%	54.6	19.20%	\$10.00	\$546	\$3.38	0.00%	\$0	\$0.00
Jbel Azayza	230	640	1,687	829	23%	52.8	19.20%	\$10.00	\$528	\$3.27	0.00%	\$0	\$0.00
Jbel Talmest	130	370	953	475	23%	30.0	19.20%	\$10.00	\$300	\$1.86	0.00%	\$0	\$0.00
Jbel Aroudane	121	322	851	417	23%	27.8	19.20%	\$10.00	\$278	\$1.72	0.00%	\$0	\$0.00
<b>Sub total</b>	<b>1,972</b>	<b>5,470</b>	<b>14,144</b>	<b>7,017</b>		<b>453.5</b>			<b>\$4,535</b>	<b>\$28.07</b>		<b>\$120</b>	<b>\$0.74</b>
<b>Nkembe Block, Gabon</b>													
<b>Loba Oil Field</b>													
Loba M1	11	20	29	20	80%	9.0	N/A	\$10.00	\$90	\$0.55	15.00%	\$13	\$0.08
Loba Deep	14	24	35	24	80%	11.2	N/A	\$10.00	\$112	\$0.69	0.00%	\$0	\$0.00
<b>Other play types</b>													
M/M West	247	588	1,102	639	80%	197.6	N/A	\$10.00	\$1,976	\$12.23	0.00%	\$0	\$0.00
POM Deep	89	205	381	225	80%	71.2	N/A	\$10.00	\$712	\$4.41	0.00%	\$0	\$0.00
Lepidote Deep	61	120	219	131	80%	48.8	N/A	\$10.00	\$488	\$3.02	0.00%	\$0	\$0.00
<b>Sub total</b>	<b>422</b>	<b>957</b>	<b>1,766</b>	<b>1,039</b>		<b>338</b>			<b>\$3,378</b>	<b>\$21</b>		<b>\$13</b>	<b>\$0.08</b>
<b>Total</b>	<b>2,394</b>	<b>6,427</b>	<b>15,910</b>	<b>8,056</b>		<b>791</b>			<b>\$7,912</b>	<b>\$49</b>		<b>\$133</b>	<b>\$0.82</b>

SOURCES: MORGANS, COMPANY REPORTS

**Figure 10: Mean Case Valuation of prospects**

Mazagan Permit, Morocco	Net Recoverable Resource (mmbbl)				PVD Interest		IECoS*	Valuation					
	P90	P50	P10	Mean	W	Mean Resource		NPV / bbl	Unrisked (m)	Unrisked /share	Risking <sup>†</sup>	Risked (m)	Risked /share
<b>Miocene Prospects</b>													
Toubkal	437	1,168	3,074	1,507	23%	346.7	31.20%	\$10.00	\$3,467	\$21.46	10.00%	\$347	\$2.15
Tafraoute	294	807	2,115	1,047	23%	240.8	32.20%	\$10.00	\$2,408	\$14.91	0.00%	\$0	\$0.00
Amoudi East	167	478	1,137	590	23%	135.8	32.20%	\$10.00	\$1,358	\$8.41	5.00%	\$68	\$0.42
Amoudi West	122	342	869	435	23%	100.0	32.20%	\$10.00	\$1,000	\$6.19	0.00%	\$0	\$0.00
Amchad	22	62	161	80	23%	18.3	33.60%	\$10.00	\$183	\$1.13	0.00%	\$0	\$0.00
Zagora	20	51	132	65	23%	15.0	33.60%	\$10.00	\$150	\$0.93	0.00%	\$0	\$0.00
<b>Lower Cretaceous Toethrust Trend</b>													
Jbel Musa	78	217	571	281	23%	64.6	19.20%	\$10.00	\$646	\$4.00	0.00%	\$0	\$0.00
Jbel Lakhdar	58	167	400	208	23%	48.0	19.20%	\$10.00	\$480	\$2.97	0.00%	\$0	\$0.00
Jbel Ayachi	55	156	414	203	23%	46.6	19.20%	\$10.00	\$466	\$2.88	0.00%	\$0	\$0.00
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Jbel Tadrart	238	689	1,780	879	23%	202.2	19.20%	\$10.00	\$2,022	\$12.52	0.00%	\$0	\$0.00
Jbel Azayza	230	640	1,687	829	23%	190.8	19.20%	\$10.00	\$1,908	\$11.81	0.00%	\$0	\$0.00
Jbel Talmest	130	370	953	475	23%	109.2	19.20%	\$10.00	\$1,092	\$6.76	0.00%	\$0	\$0.00
Jbel Aroudane	121	322	851	417	23%	96.0	19.20%	\$10.00	\$960	\$5.94	0.00%	\$0	\$0.00
<b>Sub total</b>	<b>1,972</b>	<b>5,470</b>	<b>14,144</b>	<b>7,017</b>		<b>1,614.0</b>			<b>\$16,140</b>	<b>\$99.92</b>		<b>\$415</b>	<b>\$2.57</b>
<b>Nkembe Block, Gabon</b>													
<b>Loba Oil Field</b>													
Loba M1	11	20	29	20	80%	16.0	N/A	\$10.00	\$160	\$0.99	15.00%	\$24	\$0.15
Loba Deep	14	24	35	24	80%	19.2	N/A	\$10.00	\$192	\$1.19	0.00%	\$0	\$0.00
<b>Other play types</b>													
M/M West	247	588	1,102	639	80%	511.2	N/A	\$10.00	\$5,112	\$31.65	0.00%	\$0	\$0.00
POM Deep	89	205	381	225	80%	180.0	N/A	\$10.00	\$1,800	\$11.14	0.00%	\$0	\$0.00
Lepidote Deep	61	120	219	131	80%	104.8	N/A	\$10.00	\$1,048	\$6.49	0.00%	\$0	\$0.00
<b>Sub total</b>	<b>422</b>	<b>957</b>	<b>1,766</b>	<b>1,039</b>		<b>831</b>			<b>\$8,312</b>	<b>\$51</b>		<b>\$24</b>	<b>\$0.15</b>
<b>Total</b>	<b>2,394</b>	<b>6,427</b>	<b>15,910</b>	<b>8,056</b>		<b>2,445</b>			<b>\$24,452</b>	<b>\$151</b>		<b>\$439</b>	<b>\$2.72</b>

IE CoS\* relates to the geologic chance of success as outlined in the DeGolyer & MacNaughton Independent Resource Assessment, September 2012  
Risking<sup>†</sup> is Morgans's risk assigned to the commercial probability of success of the well in addition to valuation discount applied to the prospect

SOURCES: MORGANS, COMPANY REPORTS

**Figure 11: High Case Valuation of prospects**

Mazagan Permit, Morocco	Net Recoverable Resource (m mbbbl)				PVD Interest		I.E.CoS*	Valuation					
	P90	P50	P10	Mean	WI	High Resource		NPV / bbl	Unrisked (m)	Unrisked /share	Risking*	Risked (m)	Risked /share
<b>Miocene Prospects</b>													
Toubkal	437	1,168	3,074	1,507	23%	707.1	31.20%	\$10.00	\$7,071	\$43.77	10.00%	\$707	\$4.38
Tafraoute	294	807	2,115	1,047	23%	486.4	32.20%	\$10.00	\$4,864	\$30.11	0.00%	\$0	\$0.00
Amtoudi East	167	478	1,137	590	23%	261.4	32.20%	\$10.00	\$2,614	\$16.18	5.00%	\$131	\$0.81
Amtoudi West	122	342	869	435	23%	200.0	32.20%	\$10.00	\$2,000	\$12.38	0.00%	\$0	\$0.00
Amchad	22	62	161	80	23%	37.1	33.60%	\$10.00	\$371	\$2.30	0.00%	\$0	\$0.00
Zagora	20	51	132	65	23%	30.4	33.60%	\$10.00	\$304	\$1.88	0.00%	\$0	\$0.00
<b>Lower Cretaceous Toethrust Trend</b>													
Jbel Musa	78	217	571	281	23%	131.2	19.20%	\$10.00	\$1,312	\$8.12	0.00%	\$0	\$0.00
Jbel Lakhdar	58	167	400	208	23%	92.1	19.20%	\$10.00	\$921	\$5.70	0.00%	\$0	\$0.00
Jbel Ayachi	55	156	414	203	23%	95.3	19.20%	\$10.00	\$953	\$5.90	0.00%	\$0	\$0.00
<b>Lower Cretaceous Inversion Anticline Trend</b>													
Jbel Tadrart	238	689	1,780	879	23%	409.4	19.20%	\$10.00	\$4,094	\$25.34	0.00%	\$0	\$0.00
Jbel Azayza	230	640	1,687	829	23%	388.0	19.20%	\$10.00	\$3,880	\$24.02	0.00%	\$0	\$0.00
Jbel Talmest	130	370	953	475	23%	219.1	19.20%	\$10.00	\$2,191	\$13.57	0.00%	\$0	\$0.00
Jbel Aroudane	121	322	851	417	23%	195.7	19.20%	\$10.00	\$1,957	\$12.12	0.00%	\$0	\$0.00
<b>Sub total</b>	<b>1,972</b>	<b>5,470</b>	<b>14,144</b>	<b>7,017</b>		<b>3,253.2</b>			<b>\$32,532</b>	<b>\$201.39</b>		<b>\$838</b>	<b>\$5.19</b>
<b>Nkembe Block, Gabon</b>													
<b>Loba Oil Field</b>													
Loba M 1	11	20	29	20	80%	23.0	N/A	\$10.00	\$230	\$1.42	15.00%	\$34	\$0.21
Loba Deep	14	24	35	24	80%	28.0	N/A	\$10.00	\$280	\$1.73	0.00%	\$0	\$0.00
<b>Other play types</b>													
MVIM West	247	588	1,102	639	80%	881.6	N/A	\$10.00	\$8,816	\$54.58	0.00%	\$0	\$0.00
POM Deep	89	205	381	225	80%	304.8	N/A	\$10.00	\$3,048	\$18.87	0.00%	\$0	\$0.00
Lepidote Deep	61	120	219	131	80%	175.2	N/A	\$10.00	\$1,752	\$10.85	0.00%	\$0	\$0.00
<b>Sub total</b>	<b>422</b>	<b>957</b>	<b>1,766</b>	<b>1,039</b>		<b>1413</b>			<b>\$14,126</b>	<b>\$87</b>		<b>\$34</b>	<b>\$0.21</b>
<b>Total</b>	<b>2,394</b>	<b>6,427</b>	<b>15,910</b>	<b>8,056</b>		<b>4666</b>			<b>\$46,658</b>	<b>\$289</b>		<b>\$872</b>	<b>\$5.40</b>

SOURCES: MORGANS, COMPANY REPORTS

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WOLLONGONG	(02) 9373 4452
	(02) 4227 3022

**ACT**

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**WESTERN AUSTRALIA**

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