Providence Resources: More than luck of the Irish
Market Cap: $700mm

PVR LN – Buy
£6.46
7th-Jan-2012

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Company Overview: Providence Resources has been around for ~30 years, operating offshore Ireland but came into being in its revamped form in 2004 when it brought in new management and was recapitalised. Tony O'Reilly joined as CEO in 2005 and the company listed on the AIM in the same year. Providence holds licences in 8 distinct basins offshore Ireland. The O'Reilly family owns 16% of the company; the remaining shares constitute the free float. With a view to streamlining its portfolio, the company raised $175mm in equity via two placings (Mar '11 and Apr '12), divested its US GOM position for $22mm, exited the Aje field (Nigeria) for $16mm in 2011 and more recently sold its UK onshore assets for $66mm to become a debt free pure-play on Ireland. The company's strategy is to secure initial high equity stakes, have a mix of exploration/appraisal, to focus on detailed subsurface analysis (seismic), evaluate multiple basins, bring in industry partners (Exxon and Repsol) and target a 4-5 year cycle time. It aims to monetise assets before getting into the development phase. The successful Barryroe appraisal (PVR 80% stake) saw the stock price rise ~200% in 2012. Average daily traded volume over the last 6 months was ~$2.5mm.

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Providence Resources

Net Asset Valuation ($ mm)	Value ($mm)	Per share	% of 3P NAV
Net cash (end '12)	60	£0.58	5%
Options, warrants & convertibles	0	£0.00	0%
Barryroe low case	420	£4.08	34%
1P: Net Asset Value	**480**	**£4.66**	**39%**
Unbooked but discovered assets slated for development:			
Spanish Point	9	£0.08	1%
Dragon - St. George's Channel	46	£0.45	4%
Hook Head	16	£0.16	1%
Barryroe mid case	363	£3.52	30%
Barryroe Middle Wealden	43	£0.42	4%
2P: Booked + Unbooked value	**957**	**£9.28**	**78%**
Exploration potential:			
Dunquin North - South Porcupine basin	39	£0.38	3%
Dunquin South - South Porcupine basin	21	£0.20	2%
Dalkey Island - Kish Bank basin	125	£1.21	10%
Pegasus - St. George's Channel	22	£0.21	2%
Barryroe high case	58	£0.57	5%
3P: Booked + Unbooked + Exploration value	**1,222**	**£11.85**	**100%**
New development:			
Total 4P Unrisked	299.2	£2.90	124%
4P: Booked, development, exploration, and new d	**1,521**	**£14.76**	**124%**
Diluted Shares		64	
FX rate (€/£)		0.63	

Investment points: We initiate coverage with a Buy rating and £12/share price target, based on our 3P NAV at a long term Brent price of $100/bbl and a 10% discount rate. We view Providence as having strong valuation support plus material high impact exploration over the next 12 months in a re-emerging oil and gas province, with excellent fiscal terms.

- **Barryroe:** We believe the value of Providence is supported by Barryroe alone. The field has had 7 wells drilled into it and 4 of successful flow tests (most recent at 3.5mbbl/d). At the low-end 17% recovery factor for the main Basal Wealden reservoir, Barryroe is worth £16/sh unrisked to PVR but we use a 1P risked value of £4.08/sh to account for reservoir risk (compartmentalisation in shallower reservoir) and dilution on farm-down. Assuming zero value for other assets we estimate the market is pricing in only a 16% total chance of success in the mid-case reserves scenario or 39% in the low case.
- **Huge exploration upside in next 9 months:** Providence will drill at least 3 basin opening wells: Dunquin in the South Porcupine Basin (worth >£6.70/sh unrisked); Dalkey Island in the Kish Bank Basin (worth >£16/sh unrisked) and Spanish Point in the Main Porcupine Basin (worth ~73p/sh unrisked).
- **Deep prospect inventory:** Above and beyond what we factor in to our 3P valuation, our 4P valuation of prospects without a defined drilling program has further risked upside of £3/sh from the likes of Drombeg and Newgrange.
- **Irish attraction:** Higher oil prices and technology have re-ignited interest in Ireland, which remains relatively under-explored. It has highly attractive fiscal terms (no royalty and only a 25% tax rate), proven petroleum systems over multiple basins, increased major/integrated interest (e.g. Exxon, Eni and Repsol), a domestic gas market, as well as access to the broader European gas market. We estimate a ~$10-20/bbl NPV for oil discoveries.
- **Take-out candidate:** PVR would offer a potential buyer net production potential of 80kboe/d from Barryroe, plus meaningful exploration exposure. PVR is the most meaningful way to gain diversified exposure to Irish exploration and production.
- **Successful farm-outs**: Providence has brought Exxon, Petronas, Repsol and Eni into its prospects. This also gives us encouragement for further planned farm-outs (Barryroe, Drombeg and Newgrange).
- **Atlantic basin and carbonate plays:** Arguably the most successful independent explorer, Tullow, is currently focusing on the Atlantic basin and on carbonate plays (although not in Ireland). PVR has carbonate prospects West of Ireland, where it is partnered with another carbonate specialist, Repsol (also present in the Canadian conjugate basins).
- **Dunquin attracting major interest:** Providence has worked up a 10TCFe prospect, attracted Exxon, Eni and Repsol in as farm in partners, and will drill it in the coming months. If successful it would be a basin opening well de-risking Providence's other prospects in the basin. Dunquin North is worth £6.80/sh unrisked.

- **Funding:** Following the sale of its UK onshore assets we estimate PVR has ~$50mm of cash which will cover its drilling program for 2013 (Dunquin $15mm; Spanish Point $20mm and Dalkey Island $5mm). However, it is sailing quite close to the wind, so in the absence of further farm-outs an equity issuance cannot be ruled out.
- **Management ownership:** The CEO's family owns 16% of the company (stable over time) so his interests are firmly aligned with those of the other shareholders.
- **Diversified across a number of basins:** Providence is the #1 acreage holder in 8 basins offshore Ireland.
- **Not another Rockhopper:** With the anticipation of a CPR and farm-out of Barryroe, the risk could be that PVR performs like Rockhopper after a deal. However, the political risk here is different to Argentina, there is lots of exploration potential outside of Barryroe and we also see lots of interest from majors/integrateds in Ireland.

Catalysts:

- **Barryroe CPR and farm-out:** PVR will publish an updated Competent Person's Report (CPR) in 1Q'13 and will open a data room to farm down its 80% stake in 1H'13.
- **Barryroe follow-on potential:** Providence is reprocessing seismic on the Jurassic horizon (good potential given no OWC in Basal sands), which should be completed shortly and may lead to some additional prospective resource.
- **Dunquin exploration well:** The potential basin opening Dunquin well will spud in March, with a result expected in mid-'13. The North prospect is ~5TCFe and worth £6.80/sh unrisked. Success would de-risk the analogous South prospect as well as other prospects in the basin.
- **Dalkey Island well:** PVR will spud a well in 1H'13 (may slip) on the ~250mmbbl Dalkey Island prospect ($5mm net cost). It is worth £16/sh unrisked (we use a 7.5% total chance of success). Even if unsuccessful, it will provide data on viability of gas storage in the area (we assign no value to this). There is a risk of delay due to an environmental challenge.
- **Spanish Point appraisal:** Providence will spud this appraisal well of a ~100mmboe field in mid-'13; we carry the prospect at 73p/sh unrisked. Also there is de-risking potential with a number of follow-on prospects.
- **Rathlin prospects and farm-out:** PVR will carry out 2D seismic following an FTG survey which identified 5 large anomalies. Providence plans to drill an exploration well in 1Q'14 and expressions of interest have been received from potential farm in partners and we would expect a deal this year.
- **Dragon rig sign up:** Dragon is an existing 200bcf gas discovery straddling the UK/Irish Median line, which PVR owns on both sides. An appraisal well is planned for 2014 and we estimate that it is worth £1.92/sh unrisked, plus there is exploration upside in the deeper Orpheus prospect (no value assigned in our 3P NAV).
- **Drombeg farm out:** This prospect is close to Dunquin, so success will increase interest. Further interpretation of the Drombeg seismic data has revealed a ~900mmbbl oil prospect, with multiple DHIs and interest from the majors is high. Given PVR's high stake, the prospect is worth ~£40/sh unrisked and we only include value in our 4P NAV.
- **Newgrange update/farm out:** Providence will likely look to farm-out this ~10TCF carbonate prospect, west of Ireland, in 2013 ahead of 2014/5 drilling by the operator Repsol. It is worth £32/sh unrisked but we only include this in our 4P NAV.
- **Heavy oil potential:** Before it was acquired by Cairn, Providence partnered with Nautical to examine the potential of the heavy oil Nemo and Baltimore discoveries, with >200mmbbls (in place); the discoveries may be revived this year.
- **Other prospects:** Providence has acreage in the Slyne Basin (Corrib analogues) where it has a small gas prospect. It has a tiny stake in the Eni operated Cuchulain prospect and also Marlin which is a Kinsale Head type prospect.
- **Barryroe 2014 program – rig signature:** We expect PVR to sign a rig deal in 2013 for pre-development appraisal drilling and an EWT on Barryroe in '14, plus potentially some exploration wells in the area.
- **Full market listing:** Providence now has a market capitalisation big enough to be in the FTSE 250 as well as having clear line of sight to production from its Barryroe oil field, which means that it may now look to be included in the market indices.
- **Repsol exploration day:** Repsol will hold an exploration day on 25th January and we expect Dunquin (plus its wider Irish portfolio) to be a key region that it highlights in the presentation, which should stir market interest.

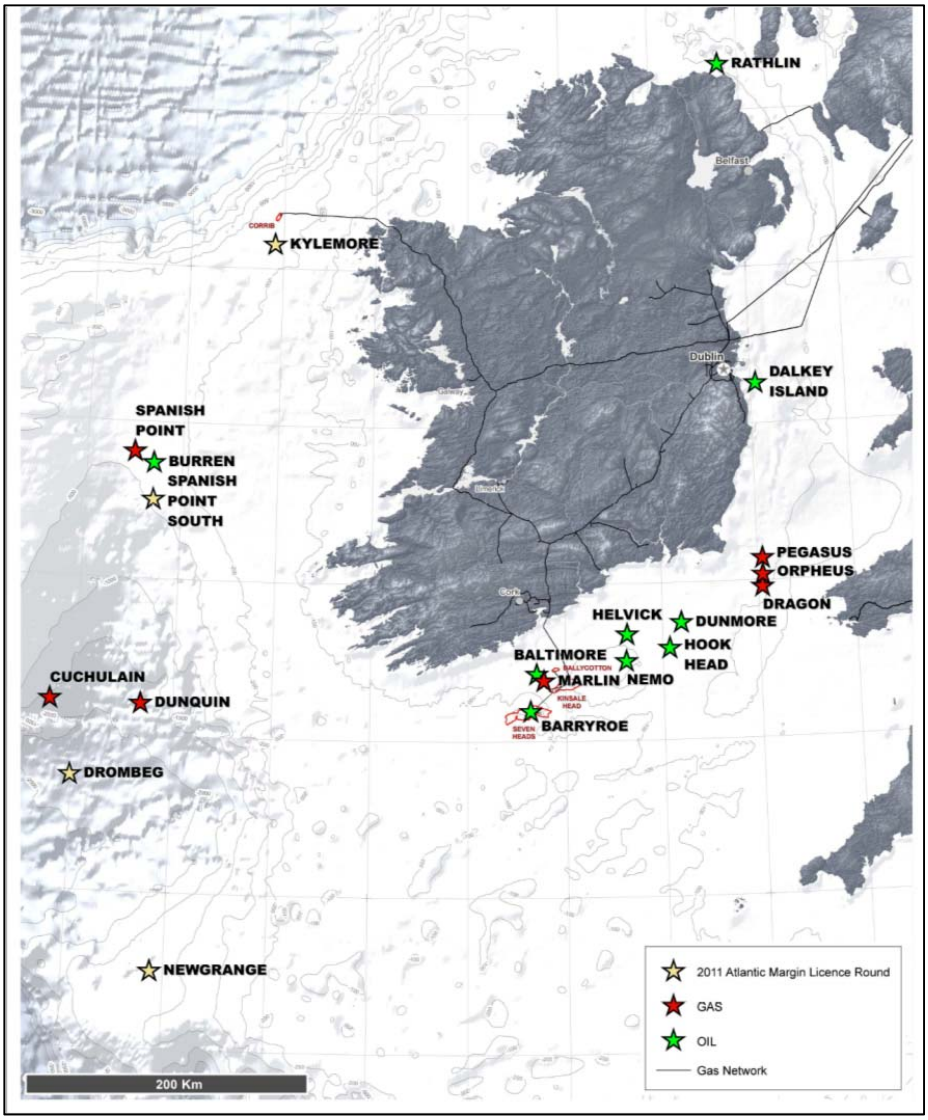
Risks:

- **Barryroe reservoir risk and farm-out implications:** Given the overlying Seven Heads field (Upper Wealden reservoir) was heavily compartmentalised, there is a worry that the main Barryroe reservoir, the Basal Wealden, will encounter the same issue. This will require an EWT with pressure data to establish dynamic reservoir behaviour, which isn't planned until 2014 and hence could dissuade potential farminees. Providence is confident from the work that it has done that

compartmentalisation won't be a major issue given that its seismic inversion study has shown the Basal sand to be widespread and continuous (Upper Wealden laterally discontinuous), fault density is much lower at the Basal level versus the Upper and it will also use horizontal wells to mitigate any compartmentalisation issues.

- **Irish political risk:** One of the most infamous Irish fields is Corrib, where development began in 2004 but is still not on stream given delays due to local opposition. Barryroe should be spared such opposition given there will be no new pipeline to shore required with direct oil exports from the FPSO and gas using the existing Kinsale Head infrastructure. However, Dalkey Island drilling, which is close to Dublin has been held up by permitting and if successful in a development scenario there is likely to be considerable pushback from local residents.
- **Change in fiscal terms:** Given that Ireland has very favourable fiscal terms there is a significant risk that in the future additional taxes are levied. However in the short-term we do not expect Ireland to do this given it is in the process of attracting exploration companies to increase exploration activity in the country once again.
- **Getting farm-outs done:** Given the difficult financing environment in the market at present there is likely to be a lot of competition for farm-in partners and the experience of Rockhopper (although Falklands political risk was an additional factor here) suggests that getting a farm-out done may require a compromise on terms and take longer than expected.

Asset overview



Source: Providence Resources

Field Summary

Country	Field	P50 gross reserves	Working interest	P50 WI reserves	EV/bbl (WI) $	Unrisked value $mm	Unrisked value £/share	Geological CoS	Commercialisation CoS	Gross risked dry hole cost	Total risked value $mm	Total risked value £/share	Risked as % of share price	Comments
Ireland	Barryroe low case	146	80%	117	$14.4	$1,680	£16.30	50%	50%	$0	$420	£4.08	64%	17% recovery factor; 3,500bbl/d IP
Core/1P NAV		**146**	**80%**	**117**	**$14.4**	**$1,680**	**£16.30**	**50%**	**50%**	**$0**	**$420**	**£4.08**	**64%**	
Ireland	Spanish Point	95	32%	30	$2.5	$75	£0.73	50%	50%	$32	$9	£0.08	1%	Well planned for 2Q/3Q13
UK/Ireland	Dragon - St. George's Channel	33	88%	29	$6.8	$198	£1.92	50%	50%	$4	$46	£0.45	7%	Well in 1Q'14
Ireland	Hook Head	20	73%	15	$7.5	$108	£1.05	50%	50%	$15	$16	£0.16	2%	Potential for well in '13
Ireland	Barryroe mid case	120	80%	96	$25.0	$2,402	£23.31	33%	50%	$42	$363	£3.52	55%	31% recovery factor; 7,000bbl/d IP
Ireland	Barryroe Middle Wealden	52	80%	42	$11.1	$464	£4.50	33%	50%	$42	$43	£0.42	6%	16% recovery factor
Contingent/2P NAV		**320**	**66%**	**212**	**$15.3**	**$3,248**	**£31.52**	**35%**	**50%**	**$135**	**$477**	**£4.62**	**136%**	
Ireland	Dunquin North - South Porcupine basin	827	16%	132	$5.3	$700	£6.79	15%	50%	$170	$39	£0.38	6%	Plans to spud in April 2013
Ireland	Dunquin South - South Porcupine basin	873	16%	140	$3.3	$461	£4.48	15%	50%	$170	$21	£0.20	3%	Follow-on prospect to North
Ireland	Dalkey Island - Kish Bank basin	250	50%	125	$13.5	$1,693	£16.43	15%	50%	$9	$125	£1.21	19%	Plans to spud in 1Q'13
UK/Ireland	Pegasus - St. George's Channel	33	100%	33	$6.6	$221	£2.14	25%	50%	$6	$22	£0.21	3%	Well in 1Q'14 with Dragon
Ireland	Barryroe high case	103	80%	82	$25.2	$2,072	£20.11	10%	50%	$57	$58	£0.57	9%	43% recovery factor; 7,000bbl/d IP
Risked exploration/3P NAV		**2086**	**25%**	**513**	**$10.0**	**$5,147**	**£49.95**	**13%**	**5%**	**$411**	**$265**	**£2.57**	**176%**	
Ireland	Barryroe Purbeckian/Lower Wealden	124	80%	100	$5.0	$498	£4.83	20%	50%	$40	$18	£0.17	3%	Untested upside
Ireland	Drombeg	872	80%	698	$6.0	$4,186	£40.62	10%	50%	$135	$101	£0.98	15%	Farm-out likely
Ireland	Newgrange - Goban Spur	1667	40%	667	$5.0	$3,333	£32.35	10%	50%	$32	$154	£1.50	23%	Repsol operated gas prospect
Ireland	Helvick	3	73%	2										Discovery - borderline commercial
Ireland	Nemo													Heavy oil discovery
Ireland	Cuchulain	233	3%	7	$5.0	$37	£0.36	10%	50%	$135	$0	£0.00	0%	Eni-operated gas prospect
Ireland	Burren	33	32%	11	$10.0	$106	£1.02	33%	50%	$23	$10	£0.10	2%	Oil leg to Spanish Point
Ireland	Kylemore - Slyne basin	19	66%	13										
N. Ireland	Rathlin Basin													Conducting G&G work
Ireland	Orpheus - St. George's Channel	48	100%	48	$6.6	$320	£3.11	20%	50%	$6	$26	£0.25	4%	Deeper prospect below Dragon
Ireland	Marlin	7	60%	4										Kinsale Head analogue
Future prospects/4P NAV		**3007**	**52%**	**1549**	**$5.5**	**$8,480**	**£82.30**			**$371**	**$309**	**£3.00**	**223%**	
1P		**146**	80%	117	$14.4	$1,680	£16.30	50%	50%	$0	$420	£4.08	64%	
1P +2P		**466**	**70%**	**328**	**$15.0**	**$4,928**	**£47.82**	**40%**	**50%**	**$135**	**$897**	**£8.70**	**136%**	
1P +2P +3P		**2552**	**33%**	**841**	**$12.0**	**$10,075**	**£97.77**	**26%**	**27%**	**$545**	**$1,162**	**£11.27**	**376%**	

Source: TPH estimates

Management

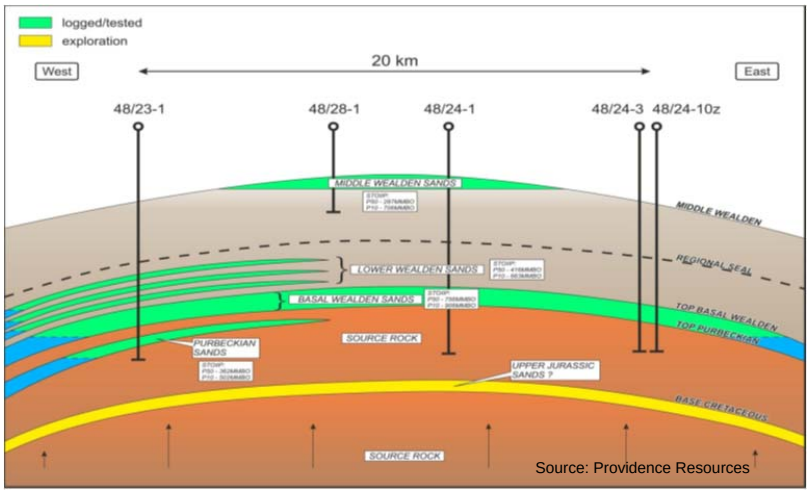
The CEO of Providence for the past 7 years, Tony O'Reilly, comes from the family of the largest investor in the company. Whilst not an "oil man", he has built up a strong technical team around him and is focused on making commercial decisions and reducing risk. He has been successful in bringing in major integrateds as partners and has monetised assets when it made sense to do so. Providence has a strong operational management team for a company of its size, led by the Technical Director John O'Sullivan has ~30 years total experience: 20 years of experience with Mobil and Marathon Ireland and has been with Providence since 2002. The operations manager, Fergus Roe has 13 years of experience from Halliburton; senior geologist, Becky Watson has 15 years of experience from Shell and Marathon; senior geophysicist, Keith Bryne has 10 years of experience at PGS and Newfield and the reservoir and project analyst, Donal Meehan 8 years of Exxon experience. The CFO, Simon Brett was recently promoted from Group Financial Controller after the former CFO resigned to become CEO of Falcon Oil and Gas but has remained on the board as a non-executive director.

Financing

Following the sale of its UK onshore assets we estimate PVR will end 2012 with ~$50mm of cash which will cover its drilling program for 2013 (Dunquin $15mm; Spanish Point $20mm and Dalkey Island $5mm). However, it is sailing quite close to the wind, so in the absence of further farm-outs an equity issuance cannot be ruled out. The historic financing transactions and assets sales are shown below

- **April 2007:** Placing of 368mm shares to raise $34.6mm
- **Nov 2007:** Took out a $250mm revolving credit facility
- **May 2008:** Bought Triangle (US GoM) for $67.5mm
- **July 2008:** Raised €42mm through placement of convertible bonds at 12% rate
- **Feb 2010:** Placing of 448mm shares to raise €16.3mm
- **May 2010:** Stock consolidation of 1 share for every 100
- **Feb 2011:** Placing of 16mm shares to raise $65.7mm at £2.55/sh
- **Apr 2011:** Sold US GoM portfolio to Dynamic Offshore in April 2011 for between $15-22mm.
- **Dec 2011:** Completed the sale of its stake in the Aje field for $16mm
- **Apr 2012:** Placing of 13mm shares to raise $100mm at £4.80p/sh in April 2012.
- **Sep 2012:** Sale of UK onshore assets to IGas for $66mm or $22mm net of pay down of existing debt

Barryroe - Exploration Licence 1/11



Source: Providence Resources

Providence has an 80% stake in the Barryroe field, where it is partnered with Lansdowne (LOGP LN; 20% WI). San Leon (SLE LN) transferred its 30% stake in the field to Providence, in return for a 4.5% net profit interest, prior to the most recent appraisal well. The field, which was discovered in 1974 by Esso, is located in ~100m water depth, ~50km offshore S.E. Ireland. It is directly below the compartmentalised Seven Heads gas field (Upper Wealden reservoirs). The Barryroe oil discovery is hosted by a 4,500ft thick sequence of thin sandstones, interbedded with claystones, of Lower Cretaceous (Wealden) age. Prior the 2012 appraisal well (48/24-10z), 5 wells had been drilled into the field, all of which encountered hydrocarbons in the Middle, Lower or Basal Wealden formations. 3 wells were flow tested and yielded 1,400-1,600bopd of 30-45^{O} API sweet and waxy (12-22%) crude from the Middle or Basal Wealden reservoirs. Purbeckian shales are the source: a several thousand feet thick, over-pressured, lacustrine waxy oil prone source rock under the Basal sand. Analysis of down-hole samples from the oil sand confirm that it is under-saturated and that no gas cap would be expected at the crest of the structure c. 900' up-dip. The 2012 appraisal well into the Basal Wealden was successful in proving a commercial flow rate plus good reservoir quality and incorporating the well data with the seismic inversion study helped to increase confidence in the reservoir continuity.

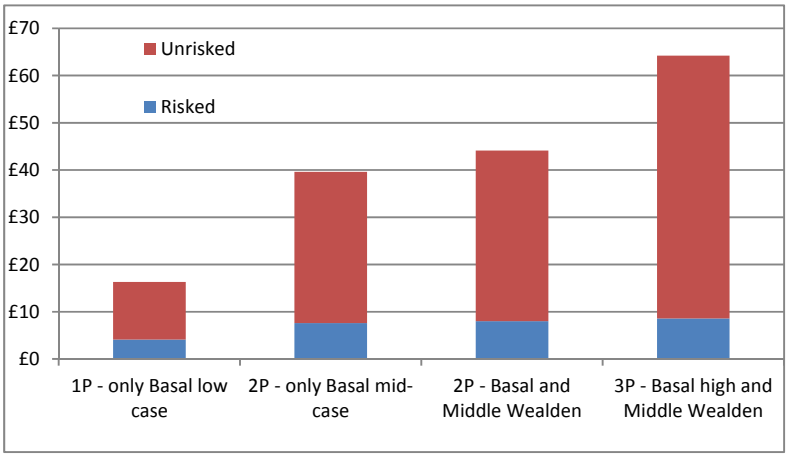
Valuation: We have built up our Barryroe valuation using different scenarios and risk levels, assuming first production is not until 2017.

- Our low case (1P) scenario is assuming the low case 17% recovery factor on just the Basal Wealden reservoir (146mmboe gross with 88% oil), a 50% haircut to the PVR expected initial horizontal flow rate of 7,000bbl/d and 5.7mmbbl EUR per well which gives an F&D cost of $27/boe. This gives an NPV of $14.4/bbl which is worth £16.30/sh unrisked or £4.08/sh risked (50% geological and 50% commercialisation CoS).

- Our mid-case (2P) scenario is assuming the mid-case recovery factor on just the Basal Wealden reservoir (266mmboe gross) with IP rates and EURs in line with PVR assumptions which gives an F&D cost of $15/boe. This gives an NPV of $20/bbl which is worth an incremental £23/sh unrisked or £3.50/sh risked (33% geological and 50% commercialisation CoS on the incremental resource).

- We also include in the 2P scenario the Middle Wealden assuming a 16% recovery factor (52mmboe) which has an NPV of $10/bbl and is worth £4.50/sh unrisked or £0.42/sh risked (33% geological and 50% commercialisation CoS on the incremental resource).

- Our high-case (3P) scenario is assuming the high-case 43% recovery factor on the Basal Wealden reservoir (368mmboe gross) plus a 16% recovery factor on the Middle Wealden, with IP rates and EURs in line with PVR assumptions, which gives an F&D cost of $14/boe. This gives an NPV of $20/bbl which is worth an incremental £20/sh unrisked or 57p/sh risked (10% geological and 50% commercialisation CoS on the incremental resource).



Source: TPH estimates

2012 appraisal: The most recent well, 48/24-10z (cost $75mm including testing and $10mm mobilisation), was drilled in March 2012 following new 3D seismic data, to a target depth of 7,550ft and found better than expected reservoir development in the Basal Wealden. The well test analysis confirmed the permeable Basal oil bearing reservoir interval sitting directly above the oil prone source rock. The Basal sands are widespread across the area (new 3D seismic allays fears from previous CPR on lateral extent and connectivity), a sheet like beach sand with a blocky character (so vertical connectivity also doesn't appear to be an issue). The Basal sand is interpreted to be deposited in a sand rich Lower Delta plain environment similar to the Lower Brent formation and is pervasive throughout the basin. In the Lower Wealden, the well encountered a thick ~1,000ft section of inter-bedded sands and shales with all sands logged as hydrocarbon bearing with porosity up to 100mD. The well did not penetrate the Purbeckian interval due to the delays experienced in the drilling program.

- **Reservoir characteristics:** The well encountered 41ft of net pay (40% net to gross over a 1,500ft gross section) in the Basal Wealden, with an average 15% porosity, 600mD permeability and 87% hydrocarbon saturation. The higher permeability relative to porosity is likely to be from secondary diagenetic processes at play, which is thought to be similar to what is seen in a lot of North Sea unconformity sand plays. The Basal sand is interpreted to be deposited in a sand rich Lower Delta plain environment similar to the Lower Brent. There was no oil-water contact (OWC) found in this well which was drilled 900ft down from the crest of the structure and pressure gradient analysis suggests the OWC could be significantly (~100ft) down-dip. The oil was high quality: 43^{O} API, low sulphur, low TAN, low metal content, the viscosity was better than expected at 0.68 (vs. other high wax fields such as Sea Lion in the Falklands at >6 and Beatrice in the UK at 3) and the wax content was 17%.

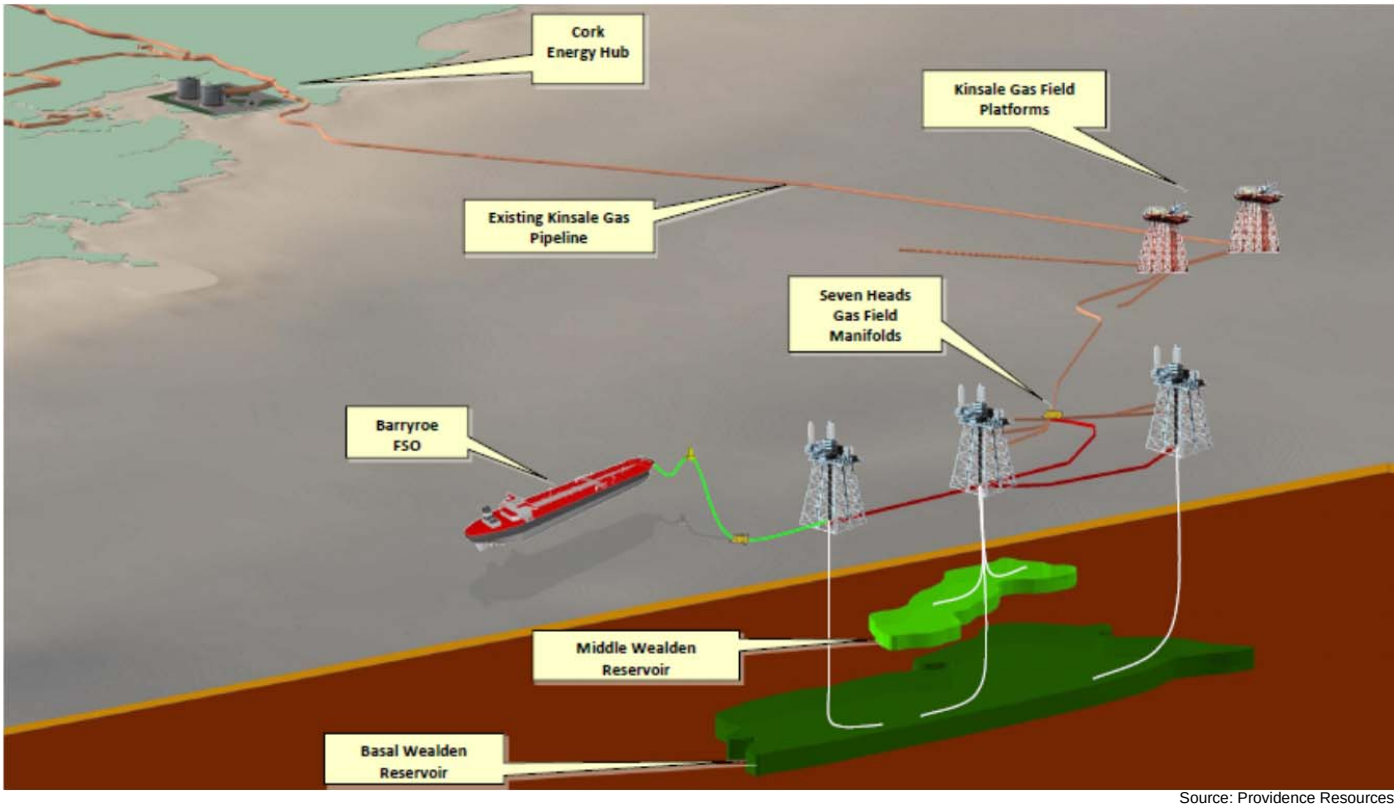
- **Flow rates:** This vertical well tested at 3,514bopd plus 2.9mmcfd from the lower zone of the Basal Wealden reservoir (24ft vertical section through a 68/64" choke for a total flowing period of ~18 hours with a 517psia well head pressure). The intention was to draw the well down as low as possible, to understand the natural potential of the well without lift. In the upper zone of the Basal Wealden, a rate of 7mmcf/d and 1,350bopd was achieved in a 17ft net gas bearing interval through a 36/64" choke – gas productivity exceeded expectations, so the well couldn't be fully opened up due to equipment limitations, with an estimated absolute open flow of 23mmcf/d. Providence estimates that the well could produce 3,350bopd and 17mmcf/d at a flowing well head pressure of 500psig, with a horizontal development well expected to produce 12,500bbl/d and 11mmcf/d of gas under natural lift. Whether or not flows from different reservoirs can be comingled depends on depths and pressures of the reservoirs at that time in field development – the stacked nature of the reservoirs does allow for up-hole well bore recompletions over time, which could enable exploitation of the otherwise marginal/non-commercial lower Wealden.

Resource: The main Basal Wealden reservoir is estimated to contain P50 in place resources of 756mmbbls (increased from the original 86mmbbls after being tested with the most recent well) based on a mid-case average net sand thickness of 23ft and seismic modelling confirms that the reservoir is widely developed. Providence (based on work by RPS) recently put out a recovery factor range of 17-43% with a base case of 31%, giving recoverable reserves of 234mmbbls. The low end of the recovery factor that is in line with the original ~16% estimate, which assumed only primary depletion. The current recovery factor estimates now assume water injection will be used, as the viscosity is less than 1 (lower than previously though); in comparison, the average recovery factor in the North Sea is 38%. The P10 in place resource estimate is 906mmbbls. The Middle Wealden is estimated to contain 287mmbbls of resources in place, with 45mmbbls recoverable resources (tested by previous wells). There is also a large amount of oil in place in the Lower Wealden (416mmbbls) and Purbeckian (362mmbbls) reservoirs. To the east of Barryroe, the Lower Wealden sands (which have been encountered in most wells) are thin in nature (interbedded sands and shales) but thicken to the west. The 48/23-1 well logged 120ft of stacked Lower Wealden sands, with an average porosity of 16% and 70% hydrocarbon saturation; the section was expected to flow given the reservoir properties, but the test was impacted by mechanical issues. There is further upside in the untested deeper Upper Jurassic, as mapping confirms the Barryroe closure extends to the base Cretaceous level (demonstrates a big trap), the lack of any oil water contact to date and the over-pressured Purbeckian shales should provide an effective seal for any potential accumulation. Providence is reprocessing seismic on the Jurassic which will be completed by end-2012 and may lead to some further prospective resource.

Barryroe	In place	RF	Recoverable
Basal Wealden	756	31%	234
Middle Wealden	287	16%	46
Purbeckian	362	16%	58
Lower Wealden	416	16%	67
	1821		**405**

Source: Providence Resources

Forward plan and valuation: The 2nd phase engineering study is currently being conducted with results expected early this year. Providence is utilising RPS for the modelling/petrophysics and will use another company for the CPR. An updated CPR is to be published in Q1'13 and a data-room for a formal farm-out will be opened shortly after. There has been interest ahead of this and there is a chance that a deal may be struck ahead of the formal process. The forward plan in terms of further appraisal wells, or a long term well test and moving into the FEED stage (if required), is likely to be decided by a new operator post the farm out.



Source: Providence Resources

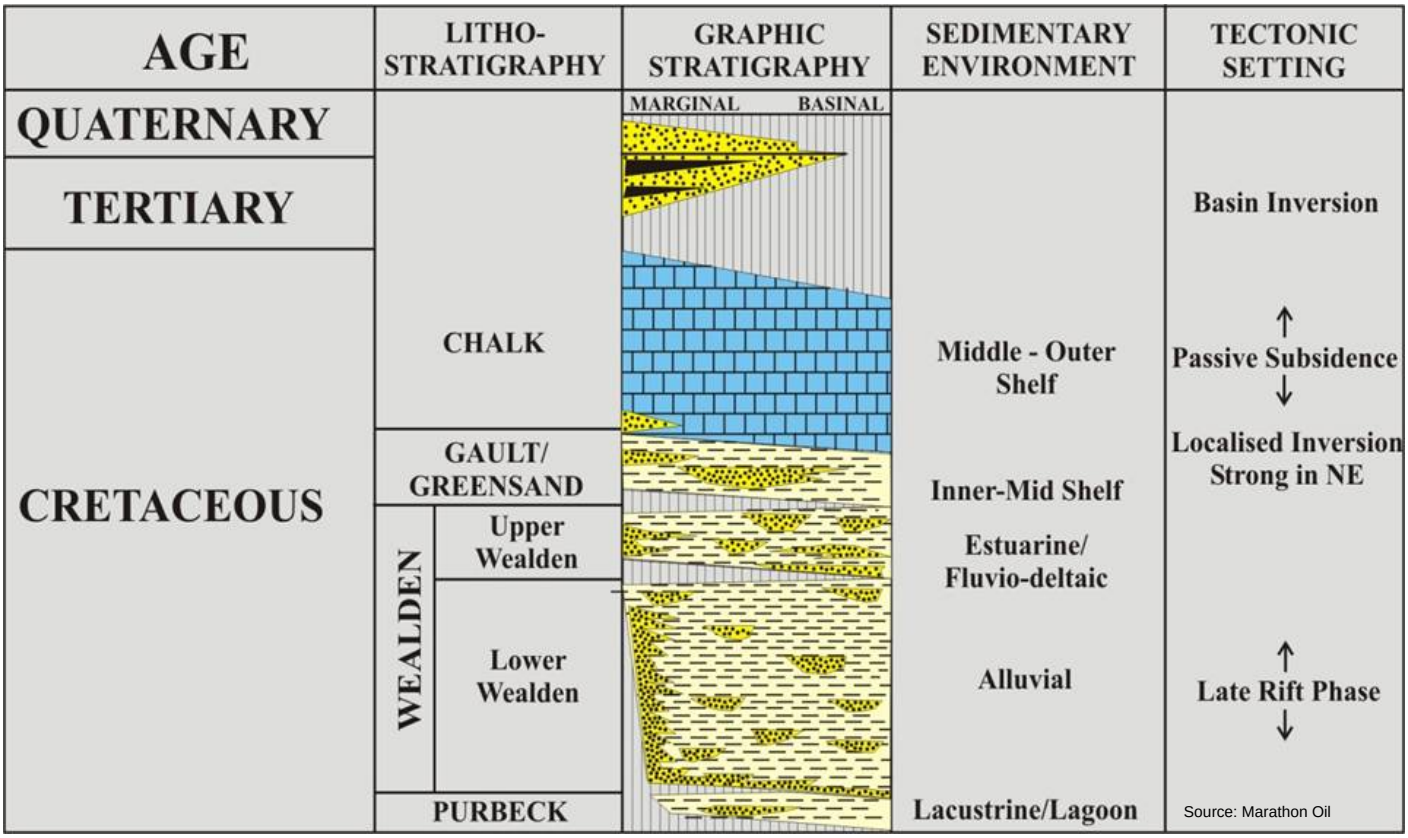
Development: An analogue field is the Beatrice field, in the UK North Sea. Well cost (TPHe $37mm) will depend on whether the wells are drilled from the fixed platform, using a Gorilla-class jack-up or using a semi-sub. The characteristics of the Basal sand (relatively flat and uniform in terms of thickness), lends it to horizontal drilling – the current plan is for 2,000ft horizontal wells. Each well is modelled as having an IP rate of 7,000bbl/d (versus expectations of 12,500bbl/d based on the vertical test well) with 41 producers required to get to a 31% recovery factor implying an EUR per well of 5.7mmbbls, plus a further 22 water-injectors are planned. The development concept is a fixed platform with 20 slots plus water injection; use of dry trees, 3 drill centres and a FSO with offshore processing. PVR is targeting a plateau production rate of 75-100mbbl/d per platform and 3 platforms are planned over the 25 year life of the field. Gas can go into the nearby Petronas controlled Kinsale infrastructure. The development is going to focus on the Basal Wealden but the other reservoirs (Middle or Lower Wealden) could be perforated in the same well, coming up hole, which means that even low flow rates could be commercial. Providence estimates a $15-20/bbl development cost for Barryroe. PVR hopes to agree a pricing structure with Shell and to achieve at least Brent pricing given high API and wax content (which refiners tend to like). PVR assumes development sanction will be given in 2013 and 1st oil in 2015 with $1B of capex to 1st oil.

Lansdowne CPR on Barryroe – Providence's partner Lansdowne hired RPS to issue a report on the Barryroe field prior to the most recent well being drilled and the new 3D seismic data. The report highlighted some challenges which Providence believes have been erased with the results of the well. Notably, the RPS report skewed the reserves to the Middle Wealden based on the results of the historic wells. The RPS report focused on the Middle Wealden given the test data and for the Basal Wealden only one well was tested, therefore no resource was ascribed from the 48/24-1 or 48/23-1 wells which logged pay. The two main problems with the Barryroe conceptual development that the report cited were the reservoir quality, reservoir continuity risk and the high pour point of the oil.

Pressure communication – There is no data to confirm the individual sand bodies are in pressure communication and this will be an objective of the planned 2014 pre-development drilling programme.

Reservoir quality – Although porosity (porosities in Basal Wealden sandstones are <18%) is low, permeability is relatively good (very variable and locally can reach more than 1 Darcy) which is likely to be a secondary diagenetic processes at play which similar to a lot of North Sea unconformity sand plays. Variable permeability is not thought to be an issue as the permeability/porosity relationship can be modelled and also the wells will be targeted to the sweet spots in the reservoir, allowing hydrocarbons to flow into this area. The flow rate achieved from the vertical well test, which exceeded expectations, further allays the fears here. The outline development plan calls for the use of horizontal wells to maximise reservoir exposure and to further mitigate any primary or secondary compartmentalisation.

Reservoir continuity – The CPR suggested that the lateral extent and connectivity of individual sandbodies remains uncertain and as stacked channel sands are only observed in the Basal Wealden in one well, this suggests that vertical connectivity of the channel sands is likely to be limited. As a result RPS said it was not considered feasible to develop the oil by water injection. It is true that the Upper Wealden sands are also very thin and laterally discontinuous. However, the seismic inversion study (isolating a lithological indicator for the Basal sands and then inverting the data and map the sand) showed the Basal sands are very widespread across the area with a blocky character, which agrees with the well control. Marathon, which has extensively worked the Celtic Sea, shows the Basal sand prevalent across the whole area (see below).



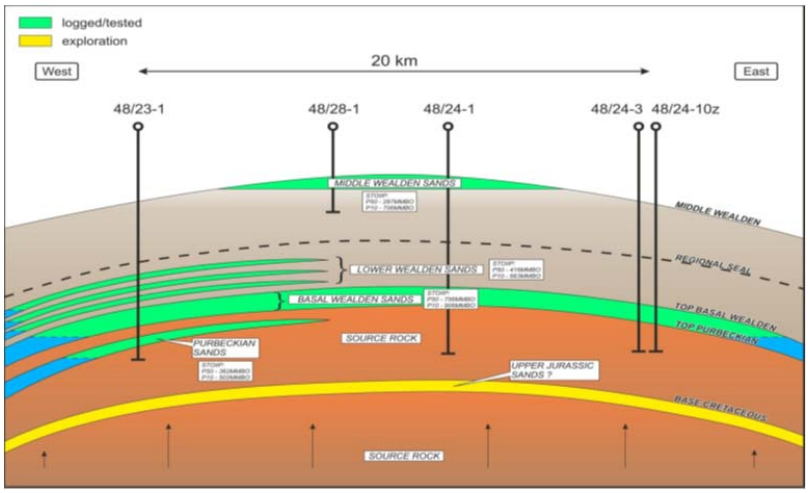
Faulting risk – RPS cited a risk of faulting but from the new 3D seismic the faulting is seen to be low. The Seven Heads gas field which is located above Barryroe was impacted by heavy faulting, however as you moved deeper faulting is thought to decrease. This is because the most recent structural development is dominated by Late Cretaceous inversion induced flower structures. These structures focus deformation in the shallow (Upper Wealden) versus deep (Basal Wealden).

Oil quality – The risk of water injection not working is now low from a crude quality standpoint, as Providence now knows the viscosity of the crude is suitable. There is no evidence of logged water bearing reservoir in any of the wells so the Basal Wealden oil sand product stream should be oil and solution gas. However there is risk from the reservoir continuity standpoint.

Historical well results

42/28-1 – The well was drilled in 1974 into the Middle Wealden and encountered 70ft of net pay over 2,041ft gross interval with 41% hydrocarbon saturation (high water cut) and 19% porosity. The well flowed 1,300bbl/d in aggregate over two intervals within the central part of the structure.

48/24-1 – The well was drilled in 1974 into both the Middle Wealden and Basal Wealden. In the Middle Wealden, the well encountered 86ft of net pay over a 2,107ft gross interval with 40% hydrocarbon saturation and 19% porosity and tested at 1,527bbl/d from a 5ft interval. There was just 9ft of pay (lower than the average of 23ft modelled as a fault has taken out half of the reservoir), over a 2,583ft gross section encountered in the Basal Wealden with 42% hydrocarbon saturation and 20% porosity but this was not tested.



Source: Providence Resources

48/23-1 – The well was drilled in 1976. The Basal Wealden was not tested but logged as hydrocarbon bearing and the cores showed good permeability. The overlying Lower Wealden was tested (120ft of stacked sands) and did not flow even though it had a high hydrocarbon saturation (70%) and good porosity (average of 16%). Significant well bore wash-outs occurred which is thought to be the mechanical reason for the failure. The 48/23-1 well also encountered and logged a ~70ft hydrocarbon bearing sand within the Purbeckian lacustrine shales underlying the Basal Wealden, which was not tested.

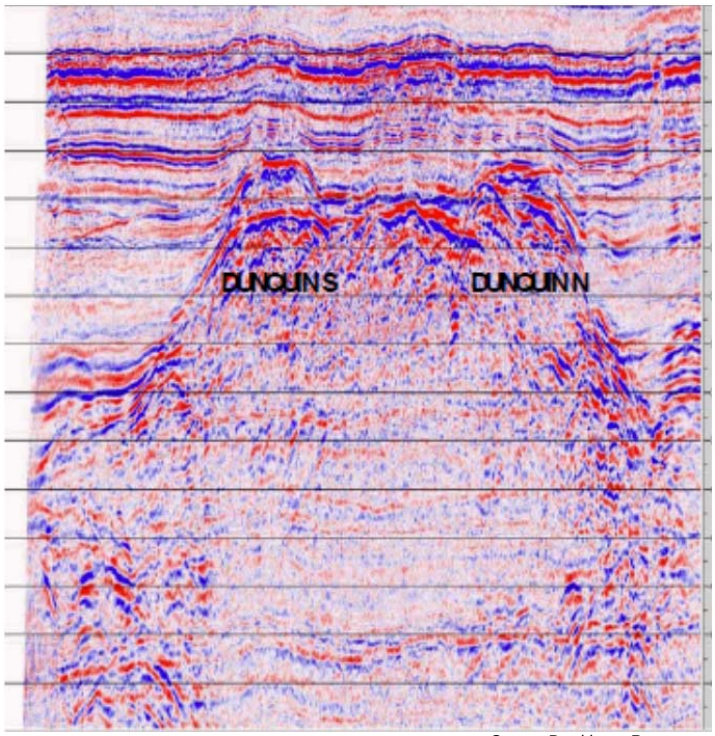
48/24-2 – The well was drilled in 1978. The well encountered 40ft of net pay in the Middle Wealden (40% hydrocarbon saturation and 18% porosity) but no pay in the Basal Wealden. The well was not tested - hydrocarbons indicated on logs and recovered from RFTs. The well is not depicted on the schematic above, primary as it lies out of the plane of the section on a somewhat elevated block on the south-eastern flank of the field. The well didn't log pay on wireline as the operator, was unable to run the wireline logs through the Basal reservoir section due to hole stability issues. They did however acquire mud-logs whilst drilling and these tie closely with the nearby 48/24-3 and 10z wells with strong C1-C5 shows in the Basal Wealden sands. PVR has tied this well in using the 3D seismic data so is pretty confident that the sands are areally extensive and hydrocarbon bearing in all of the wells.

48/24-3 – Drilled in 1990, the well encountered 112ft of net pay in the Middle Wealden (19% hydrocarbon saturation and 18% porosity) and 234ft of net pay in the Basal Wealden (35% hydrocarbon saturation and 19% porosity). The well tested at 1,619bbl/d and 2.9mmcf/d in aggregate from 20ft of sands in the Basal Wealden at >7,000ft. The well had a high GOR due to gas flowing from an upper gas bearing sand that was co-mingled in that test.

48/24-5A – The appraisal well 48/24-5A was targeted at the Upper Wealden (Seven Heads). However, a 20ft sand of possible Middle Wealden age was tested with 36ft of net pay (21% porosity and 54% hydrocarbon saturation). Although the rig was not equipped for oil testing, some 5 litres of oil were recovered. It is encouraging that oil moved into the well bore in such circumstances.

South Porcupine Basin - Exploration Licence 3/04 and LO 11/9

Dunquin: 3/04 (Dunquin North and South) was licenced in 2004 by Providence and Sosina. In 2006, ExxonMobil farmed in for an 80% stake in return for a $40mm work program. Eni farmed in for 40% from Exxon in 2009; Repsol for 25% in 2011; leaving Exxon with 27.5%; Providence now has 16% (8% paying and has a put option to go to 8% and get a full 2 well carry, which it can exercise up until 1 month prior to spud) and Sosina is the remaining party with 4%. 1,500km of 2D seismic was shot in 2006. The prospect is mapped off this data as containing 8.4TCF plus 316mmbbls (1.7Bboe P50 or 3.7Bboe P10), based on 20% fill of a 700km^2 structure and carried as a 1/6 CoS by Providence. It is located 200km offshore, in 1,500m of water with a 5,000m over-pressured, Middle Cretaceous carbonate reservoir target. The well is being drilled off long offset 2D seismic as it was thought that 3D would not give much further information and would have cost ~$25mm. Gas chimneys can be seen out of the two features. It is thought to be gas/condensate but Repsol also sees an oil case (geothermal gradient unknown). The Eirik Raude rig has been contracted from 1Q'13 for a period of 6 months to drill the Dunquin North well and is expected to take >100 days to drill at a cost of ~$175mm – there is the potential to take the rig to drill elsewhere in Ireland after. The Dunquin prospects (South and North) are estimated to contain reserves of 4.4 TCF and 4 TCF gas and 156 MMBBLS and 160 MMBBLS respectively.



Source: Providence Resources

Basin model: Dunquin is located in an undrilled area the same size as the Northern North Sea. Three wells have been drilled at the edge of the basin, all encountering hydrocarbons. One of the reasons that the basin is under-explored is the lack of sand presence – Providence looked at the data and came up with a carbonate model for the mid-Cretaceous (if there aren't sands you often get carbonates if the sea temperatures are right). The analogous fields are potentially Golden Lane in the US GoM, Laq (Acquitane field) onshore France and central Asian/Persian Gulf fields. The prognosed reason for the lack of sands was that the basin underwent hyper-extension in the late Jurassic/early Cretaceous taking any sands to the basin margin. The hyper-extension will also have caused strange features such as the Dunquin ridge, which rises up 4km from the basin centre. Carbonates have been confirmed in a well near the Newgrange prospect and the particular type of carbonates – rudists – only occur in the middle Cretaceous, building up reefs in highly oxygenated environments. The North and South prospects have slightly different morphologies – the North has higher energy and more uplift.

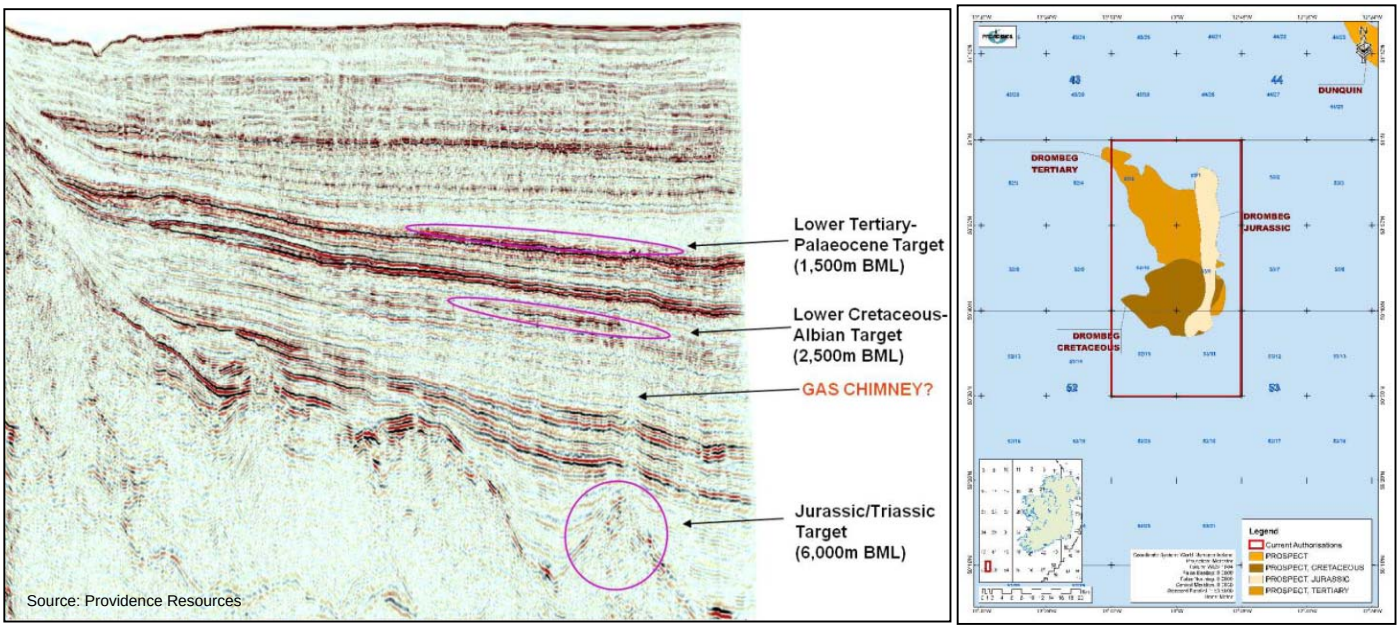
Geological risks: The main geological risks are source rock and reservoir quality. The thickness of the source rock and geothermal gradient is unknown. Providence believes there is a lot of source rock, which could be of the Aptian age. There are also seabed cores with hydrocarbons. The prospect is located 5km below the ocean bottom, which indicates that the reservoir would be tight, given the depth. However looking at the interval velocities from the seismic data through the carbonate build ups one can see velocities that are very low, indicating 16-20% porosity, which suggests natural diageneis has occurred to confer porosity. When you look at similar anomalies of velocity vs. depth in a global trend they tend to be higher porosity. 9% porosity is used in its prospect sizing so there is upside from higher porosity.

Potential development and valuation: We obtain ~$5.3/boe NPV for Dunquin North based on a 5TCFe (80% gas) development with first production in 2019. We use a $1.8/mcfe F&D cost and assume a $9/mcf gas price. Dunquin North is worth 37p/sh risked based on a 7.5% CoS (we use a 15% geological chance of success and a further 50% chance of commercialisation) or £6.80/sh unrisked. If we add in Dunquin South, the incremental 5TCFe would be worth $3.3/boe (worth less given time value of money assuming would be developed later), which is 20p/sh risked or £4.50/sh unrisked.

Licensing Option 11/9 - Drombeg

Drombeg is also located in the South Porcupine basin (60km from Dunquin). The prospect is located 220km off West Cork, in a 2,500m water depth and 3,000m below the seabed. It has multiple direct hydrocarbon indicators (AVO, amplitudes, impedance and a gas chimney) and majors/integrateds are interested in drilling. It provides further optionality on Dunquin. Providence has an 80% stake and is partnered with Sosina, which has a 20%. Exxon originally had an 80% stake in Drombeg, but later exited the block. It is thought that delays in drilling Dunquin meant that Exxon was not in a position to put a well commitment on Drombeg and it was more focused on the Tertiary potential so it was forced to relinquish the block. Providence/Sosina re-applied for the acreage in the 2011 bid round and were awarded the licence. Analysis of the primary Drombeg seismic anomaly has indicated a recoverable (P50) prospective resource potential of 872mmbbls based on a 29% recovery factor. So far only 2D seismic has been shot over the prospect. However, 3D will likely be required to be shot before drilling a well. Sosina previously carried this Drombeg as 10TCF prospect.

Valuation: Given no firm drilling plans, we include no value within our 3P NAV for Drombeg. Using a 872mmboe prospect (~90% oil), we assume ~$6/boe valuation based on field start-up in 2019 and an F&D cost of $30/boe. We use a 5% total chance of success (10% geological and 50% commercialisation chance of success) which gives a risked value of £1/sh or unrisked of £41/sh within our 4P valuation.



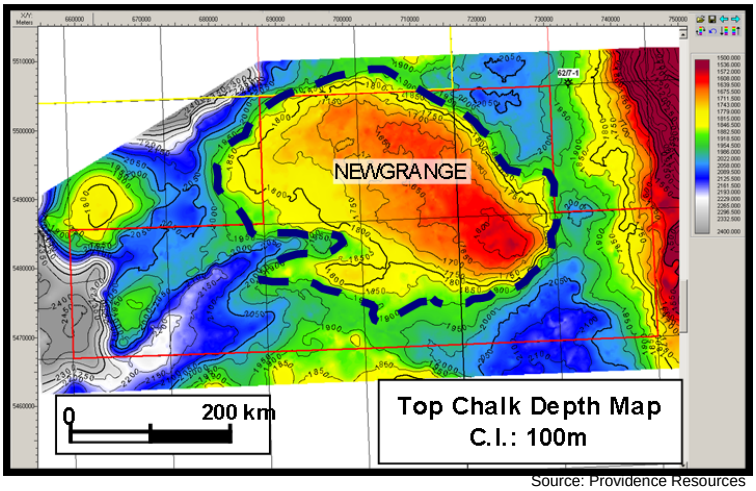
The primary target is a Lower Cretaceous sandstone stratigraphic fan, similar to Jubilee in Ghana. The Lower Cretaceous Drombeg stratigraphic prospect has a significant seismic amplitude anomaly and low seismic impedance as well as a marked AVO (amplitude versus offset) response. The anomaly is consistent with a modelled hydrocarbon bearing sandstone interval of c. 200-300ft and is aerially extensive, covering ~240km^2. It is interpreted to be the deepwater equivalent of the Lower Cretaceous Apto-Albian aged shallow water marine sandstones encountered in the BP-operated 43/13-1 well (~70ft of net sandstone with average porosity of ~19%), drilled in 1988, situated ~80km from Drombeg.

An underlying second seismic anomaly has also been identified and modelled to be consistent with a hydrocarbon bearing sandstone with a thickness of ~140-200ft and both anomalies appear to have a potential common down-dip depth termination. A major Jurassic tilted fault block closure covering ~150km^2 has been mapped beneath the prospect and a marked fluid escape feature has been identified at its crest. This 'chimney' appears to terminate at the down-dip edge of the Drombeg seismic anomaly and provides potential evidence of hydrocarbon sourcing and migration into the Lower Cretaceous prospect. This fluid escape feature is significant in that it suggests an oil remigration model at Drombeg which is similar to that which has been proposed for the BP-operated Foinaven and Schiehallion Fields in the UK, West of Shetlands.

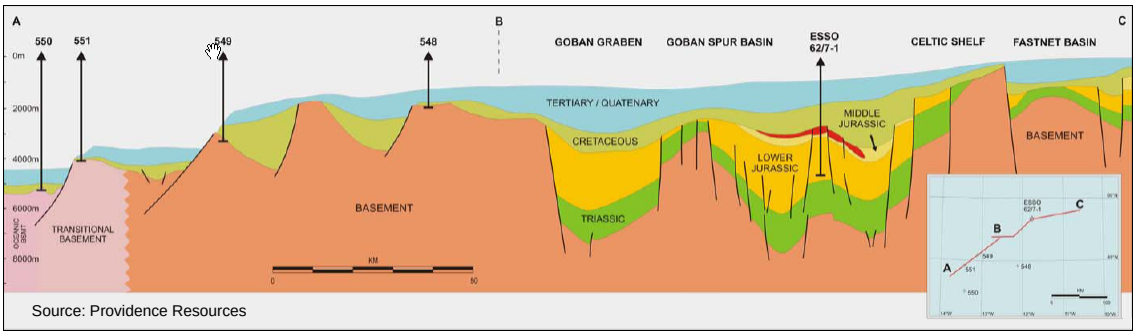
Goban Spur basin - Licensing Option 11/11

The licence is located ~ 250 km off the south-west coast of Ireland, in ~1,000m of water, and awarded in the October 2011 Irish Atlantic Margin Licensing Round. Repsol has a 40% stake, Providence also 40% and Sosina 20%.The Newgrange prospect is a large four-way dip closed anticline, overlying a basement high, which extends over a ~1,000sqkm area, with 14TCF of in place potential. It is located just 500m below the mud line so would be a lower cost well ($35mm) than other wells in the area. Nearby well control suggests the potential for excellent carbonate reservoir. Repsol (also in Dunquin) took over operatorship from Providence in recognition of Repsol's extensive deepwater drilling expertise together with its recent significant successes in carbonate exploration elsewhere in the Atlantic Basins. Repsol appears to be devoting significant resource to the block. The current work program involves acquiring new 2D seismic and re-interpreting the existing data with a focus on the Cretaceous with interest also in the rotated Jurassic fault blocks. Also, Repsol is looking to undertake seismic inversion and conjugate basin studies.

Valuation: Given no firm drilling plans, we include no value within our 3P NAV for Newgrange. Using a 10TCF resource estimate, we obtain ~$5/boe valuation. We use a 5% total chance of success (10% geological and 50% commercialisation chance of success) which gives a risked value of £1.50/sh or unrisked of £33/sh within our 4P valuation.



Source: Providence Resources



Source: Providence Resources

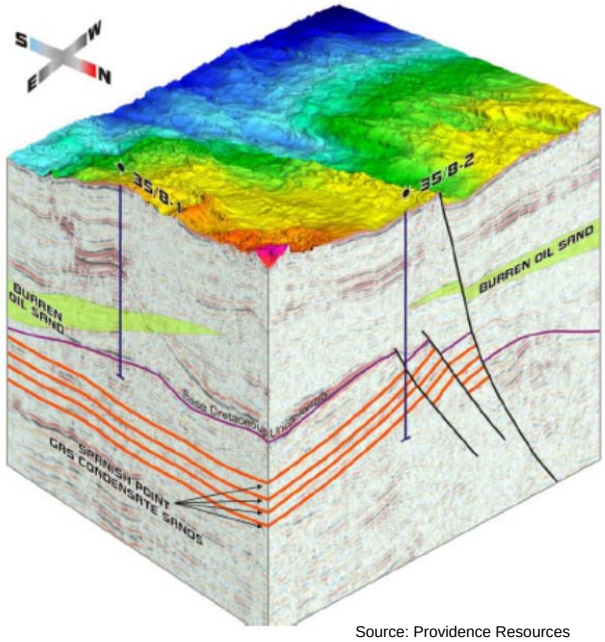
FEL 01/99

Licence FEL 1/99 (consists of blocks 43/19, 43/20, 43/24, 43/25, 43/28, 43/29) was originally awarded to Eni and covers six blocks (1,500km^2). It is located west of the Dunquin prospect and immediately north of the Drombeg acreage in the Porcupine Basin. In August 2009, ExxonMobil, Providence and SOSINA farmed into FEL 1/99. The main target is the Cuchulain prospect with 1.4TCF of gross unrisked prospective resource. It is a structural trap formed by a tilted fault block – Middle Jurassic fluvio-deltaic sandstones. There are additional leads in the adjacent blocks such as Emer, Conall and Blathnad. The area appears to be heavily faulted. We assign no value to this prospect and Providence has just a 3% stake.

Porcupine Basin - Exploration Licences 2/04 & 4/08 (PVR 32%)
Spanish Point

The Spanish Point gas condensate discovery is 170km offshore located in the Main Porcupine Basin, west of Ireland, in 350m of water, with a reservoir depth of 4,200m (Upper Jurassic Volglan deepwater turbidite sandstone) in a tilted fault block similar to many North Sea fields. The main issue on this field is that it is a low permeability reservoir, so getting a commercial flow rate is a challenge. It was discovered by Phillip/Hess in 1981 (well 35/8-2) and logged a 1,400ft oil and gas bearing column which tested 1,800boe/d (1,000bbl/d and 5mmcf/d) from one of four Upper Jurassic intervals (~150ft thick each) but was not fracture tested (fraced). Average core permeability in the shallowest target, the A sand, is around 10 mD.

The Spanish Point discovery well 35/8-2 encountered 3 Upper Jurassic reservoir units, each over 150ft thick and gas bearing throughout. The porosity ranged from 12-16% with permeability of 0.1-20 mD. The gross column was 1400ft with ~400ft of net pay. Average core permeability in the shallowest target, the A sand, is around 10mD. 3D seismic data shot in 2009 shows the discovery well was drilled at the crest of a large structural closure covering around 20km^2 and with 1000ft of vertical relief. Uncertainty whether the structure is filled to spill, and whether columns in the different sands are common or stacked is the main volumetric concerns and key appraisal objective.



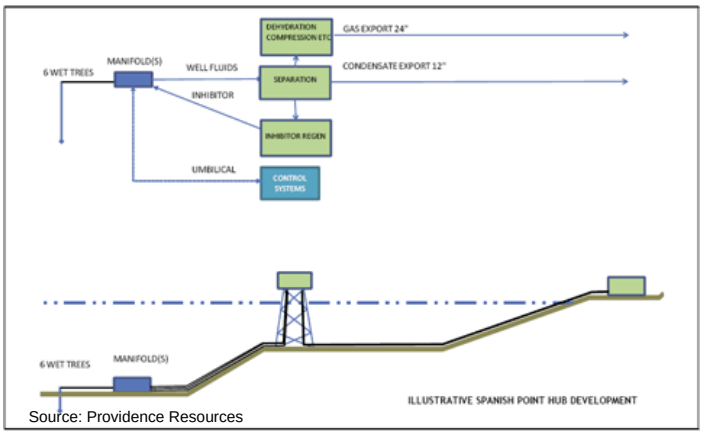
Source: Providence Resources

Spanish Point	1C	2C	3C
Gas (bcf)	210	415	862
Condensate (mmbbls)	15	26	54
Total (mmboe)	**50**	**95**	**197**

A production test on the discovery well on the topmost sand reservoir, the principal target, gave stable rates without stimulation of 4.85mmcf/d gas and 925bbl/d of 40°API condensate. However, the production test was undertaken sometime after the well was drilled with over-weighted mud. Test analysis indicates this caused major skin damage and had a negative effect on well performance. Based on core and well test analysis, reservoir properties are comparable to those of the Chiswick field, which was successfully developed by the Chrysaor management team using prop-fractured horizontal wells. With a reservoir pressure of 10,580 psig and a reservoir temperature of 265°F, Spanish Point is considered borderline high pressure, but not high temperature.

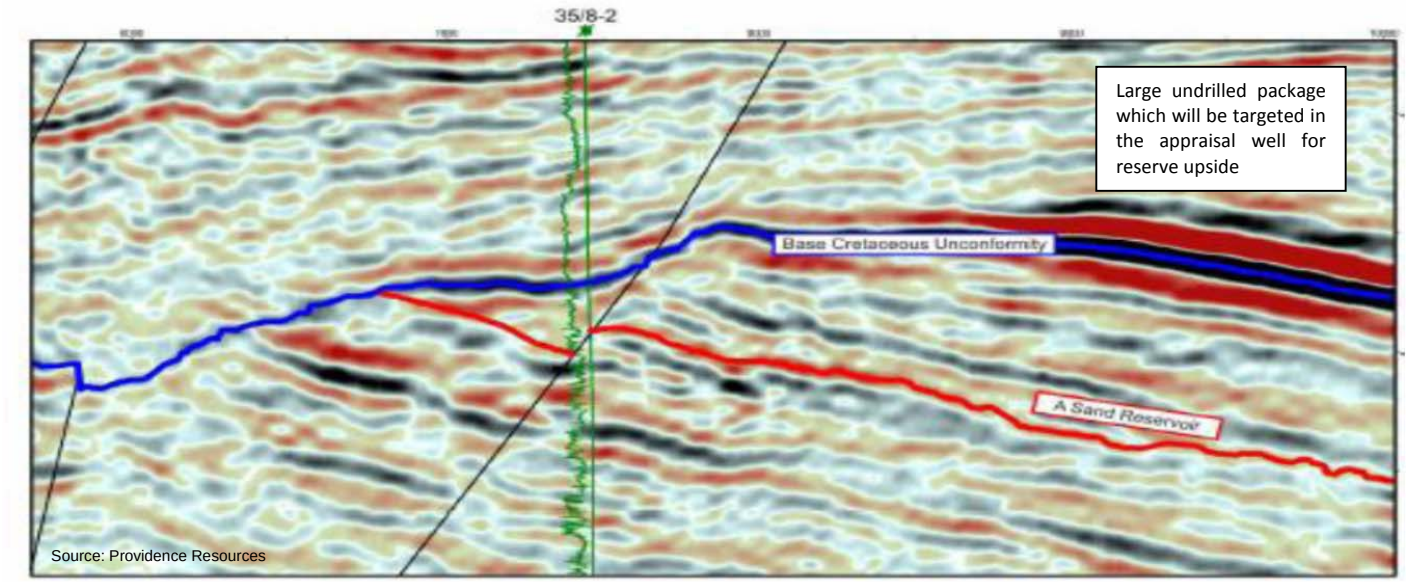
Post-drill analysis by Phillips suggested that the discovery could contain resources of up to 1.1TCF and 112mmbbls. The partners have since carried out detailed 3D seismic and integrated studies. In 2009, a ~300km^2 3D seismic survey was undertaken over the licence confirming a significant structural closure and indicated an undrilled section of up to ~750ft thickness above the existing ~1,400ft hydrocarbon bearing section, which may host additional hydrocarbon bearing zones. Fault density was shown to be low, which is positive for reservoir continuity. PVR subsequently confirmed a resource level of ~200-510mmboe in place and 100-200mmboe recoverable (415BCF and 25.6mmbbls on a 2C basis).

The first well on the block in 30 years is planned for mid-2013. The AFE for the appraisal well is $63mm (PVR exposure capped at $20mm) for a 65 day well inducing side-track, which is planned for 2Q/3Q'13 subject to rig availability; the well is designed to to confirm volumetrics, evaluate the reservoir properties and aid with the selection of a development concept. If successful, the group will return in 2014 to drill a second Spanish Point appraisal well, frac-test the original Spanish Point appraisal well and/or drill the first ranked exploration prospect on FEL4/08. Providence has a 32% stake; Chrysaor 60% and Sosina 8%. Chrysaor (private UK-based E&P) farmed in to the licence in 2008 and funded the 3D seismic in 2009 to earn an initial 30% stake. Providence may look to farm-out further pre-drill. Chrysaor have an option on a rig to drill one well.



Source: Providence Resources

Development and valuation: The conceptual development plan is to install a conventional jacket and topsides 160km from shore with 40km flow lines from a subsea manifold with wet trees and process offshore (separate and dehydrate) and then pipe the gas into the Shannon estuary, where it will be integrated with the main Irish grid. In a development scenario, peak production rates have been modelled at over 70,000boe/d by Providence. Development is envisaged with 6-14 fracture stimulated horizontal wells, producing in aggregate 250mmcf/d and 30mbbl/d. The field is thought to be very similar to the Chiswick field in the UK which was developed through the use of horizontal fraced wells. Chiswick is currently producing 85mmcfe/d from 4 wells - the reservoir is at 3,300m TVDSS with average porosity of 10% and permeability 1 mD. We model Spanish Point as coming on line in 2018 and have a $2.2/boe NPV based on a $3/mcfe ($18/boe) F&D cost and a $9/mcf gas price. We use a 25% total chance of success (50% geological and 50% commercialisation chance of success), which gives a risked value of 8p/sh or unrisked of 73p/sh.



Source: Providence Resources

Exploration

The main Porcupine Basin has been underexplored with only 13 wells drilled in the key area of Jurassic deposition, south of the Connemara oil field (some 10,000 km2). The Kimmeridge is the main source, same as the North Sea. The Jurassic is main reservoir target, which is normally pressured and similar to Brent sandstones. Of the five Jurassic penetrating wells on the eastern side of the main Porcupine basin, one well flowed hydrocarbons to surface (Spanish Point discovery), two had good oil and/or gas saturations and two penetrated only the uppermost part of the Upper Jurassic in mudstone facies (i.e. not effective tests of the section). Additionally, the Burren discovery well flowed oil from Lower Cretaceous sands. The Connemara field is highly compartmentalised but is in a different setting to Spanish Point and no faults were penetrated with the Spanish Point well.

A 220km^2 3D survey was carried out on 4/08 in July 2011. Senergy carried out a CPR on the resource potential of the 2/04 and 4/08 licences and established gross un-risked recoverable prospective resources of up to 750mmboe (P50). Targets identified in FEL 4/08 and FEL 2/04 include Wilde Pop-Up (15mmbbls), Wilde Downthrown (38mmbbls), Beehan, Costello South (17mmbbls), Costello North (39mmbbls), Shaw (56mmbbls), Rusheen (23mmbbls), Synge, and Cama (53mmbbls).

Burren discovery: The 35/8-1 Burren oil discovery (adjacent to Spanish Point) logged hydrocarbons in two Lower Cretaceous sands over a 400ft gross interval – the lowest most tested 730bbl/d of 34^{O}API oil with no water. It is estimated to contain 33mmbbls (P50) and up to 66mmbbls (P10) oil in place. It is believed that the reservoir sands may thicken significantly into the lows around the well location where the thickness and quality may improve significantly. A number of laterally extensive seismic anomalies of similar age to the Burren discovery have been identified within the 3D survey area. These anomalies suggest that the Burren discovery could from part of a much larger stacked Lower Cretaceous oil bearing reservoir system providing significant future appraisal and exploration potential. However, this is not likely to be tested in the short term and we include no value in our NAV.

Wilde Prospect: Previous 2D seismic interpretation indicated the presence of a potentially large structural closure, known as the Wilde exploration prospect, underlying the Spanish Point discovery. Interpretation and mapping of the new 3D data has confirmed the presence of the Wilde prospect with an associated ~45km^2 of areal closure. The Upper Jurassic interval of the Wilde exploration target is of significant interest as it is considered to be of equivalent age to Callovian-Oxfordian zones which flowed at a cumulative rate of c. 5,000 BOPD in the nearby 26/28-1 well (~30 km to the north). This well also encountered good reservoir development within the Bajocian-Bathonian section, suggesting further hydrocarbon potential within the underlying Middle Jurassic section. It is the same reservoir as the Connemara field, so faulting risk is present.

Kish Bank Basin - Exploration Licence 2/11

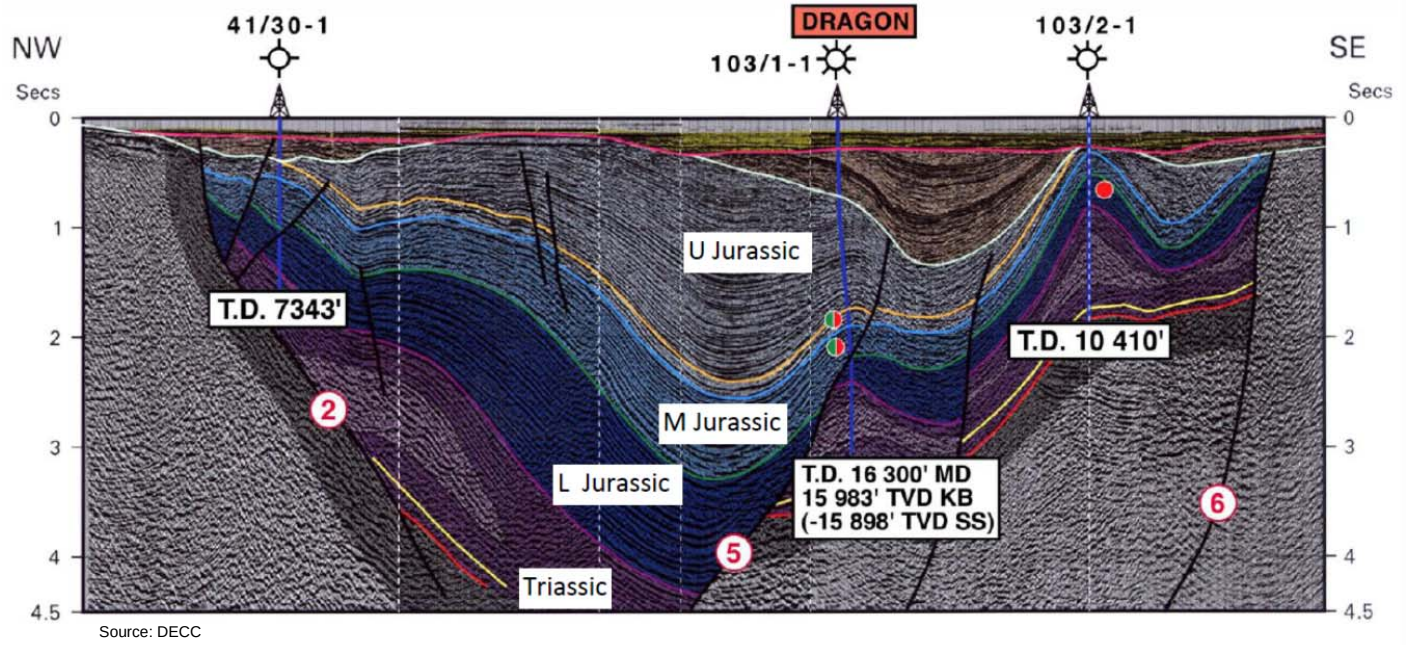
Providence was awarded the 2/11 licence in 2008 and has a 50% stake; Petronas has the residual 50% stake. The Dalkey Island prospect is located 10km from shore, in 25m of water, and is estimated to contain 850mmbbls of in place prospective resources (~250mmbbls recoverable). The Kish Bank Basin is akin to the prolific East Irish Sea Basin, which produces large volumes of oil and gas offshore Liverpool Bay. Four wells drilled to date in the basin have proven the presence of excellent quality Sherwood Sandstone reservoirs, Mercia Mudstone caprocks as well as gas prone Upper Carboniferous source rocks. In addition, oil shows in 2 out of 4 wells together with airborne seep detection data suggests the presence of a further oil prone source rock. The Dalkey Island prospect is a Lower Triassic tilted fault block structure, where seismic inversion analysis of vintage 2D seismic has revealed the presence of hydrocarbon indicators. Similarly aged oil productive reservoirs have been discovered in the Liverpool Bay area of the East Irish Sea Basin, offshore UK (Liverpool Bay field complex contains ~350mmboe). Seismic mapping of the Upper Carboniferous has revealed a large structural trap, which directly underlies the Lower Triassic Dalkey Island prospect.

We expect a well to cost $10mm and take 25 days to drill (shallow water and close to shore). The reservoir depth is 1,700m targeting Lower Triassic and Upper Carboniferous reservoirs in a structural trap. Providence estimates a 20% chance of success, with seal being the biggest risk. Providence had been waiting on a drilling permit (foreshore licence), which has been granted and the prospect is now planned to be drilled in 1H'13 using a jack-up rig that is currently contracted to Centrica. Given the proximity to shore in a success case we would anticipate significant hurdles for development from an environmental approval perspective. Detailed technical data relating to the subsurface geology, which will be acquired through the drilling of the Dalkey Island exploration prospect, will also assist with the advancement of the PVR's Ulysses gas sequestration and storage project.

Valuation: We obtain ~$12/boe NPV for Dalkey Island based on a 250mmboe (90% oil) development with first production in 2018. We use a $16/boe F&D cost – we assume a 1,000bbl/d IP rate and 1.7mbbls EUR. Dalkey Island is worth £1.21p/sh risked based on a 7.5% CoS (we use a 15% geological chance of success and a further 50% chance of commercialisation) or £16.50/sh unrisked. We include no value for the gas storage potential.

Gas storage: First announced in August 2008, the ULYSSES Study covered the northern and western sectors of the shallow water Kish Bank Basin and was focused on assessing the gas storage and carbon sequestration potential of the basin. These studies have now confirmed a site which may be suitable for offshore natural gas salt cavern development, similar to those recently proposed for development in the Lough Larne area of Northern Ireland at a cost of £400mm for 500mmcm (18Bcf) of gas storage. In addition, further geotechnical studies recently completed have confirmed published figures that the basin could host an effective carbon storage capacity of 270 million tonnes. AMEC began a conceptual development study in 2010. In 2011, the initial concept study was found to be economically and technically feasible with scenarios considered for gas storage capacity of up to 20 BCF and export rates of up to 1Bcfd. Detailed technical data relating to the subsurface geology, will be acquired through the drilling of the Dalkey Island exploration well, which will assist with the advancement of the project.

St. George's Channel Basin - Licence 1/07 (Ireland) and 103/1 (UK)



Source: DECC

The Dragon gas discovery straddles the UK/Irish Median line on a 25% / 75% basis; it is 35km offshore the UK or 40km offshore Ireland. Providence was awarded Irish Licensing Option 05/3 in 2005, which it owns 100% (previously owned by Marathon). In 2012, it was awarded a 50% stake in the adjacent block 103/1 in the St George's Channel Basin, offshore Wales, where it is partnered with Petronas's subsidiary, Star Energy (50%). The Dragon gas discovery is estimated to contain 300bcf of in place resources or 200bcf recoverable. The field is located in 100m of water, with a 2,500m reservoir depth. The appraisal well is planned for Q1'14, although no rig has been lined up yet. The development plan comprises either a subsea tie back to Milford Haven or south east Ireland. 2 wells have been drilled on the field, with the discovery well yielding >20mmcf/d on test.

Valuation: We value the Dragon discovery at $6.8/boe based on 200bcf of recoverable resources and $13/boe capex, coming on stream in 2016 and assuming a $9/mcf gas price. Dragon is worth 45p/sh on a risked basis using a 25% CoS (we use a 50% geological chance of success and a further 50% chance of commercialisation) or £1.90/sh unrisked. We value Pegasus at 21p/sh risked or >£2/sh unrisked. We include no value for the gas storage potential. We include no value for Orpheus in our 3P valuation but it could be worth ~£3/sh unrisked at $6/boe.

Resource: Previous work on Dragon discovery suggested in place resources of up to ~100bcf (25% on the Irish side and 75% on the UK side); Marathon put recoverable reserves at 51bcf. An updated study carried out by IKON Geoscience determined that the presence of the Dragon gas bearing reservoir sands may be directly detectable from the 3D seismic data. Revised mapping using the inverted seismic data set indicates that the Dragon gas accumulation may extend further into Irish waters than had been previously been mapped, with a potential resource base of up to ~300bcf in place (75% on the Irish side and 25% on the UK side). The analogous Jurassic-aged Pegasus gas exploration prospect (286km of 2D seismic shot in 2006) is located north-west of Dragon, with estimated prospective in place resource potential of ~300bcf; we assume 200bcf recoverable. The Jurassic aged Bajocian Orpheus gas exploration prospect, which lies beneath the Dragon gas field, has an estimated prospective resource potential of ~290bcf (400bcf in place) and could be drilled as part of any appraisal programme of the Dragon Field.

Previous wells: The 103/1-1 well drilled in 1994 encountered a number of gas-bearing Middle Jurassic-aged sandstone intervals. Zone 3 flowed 21mmcf/d and 120bbl/d of 42°API liquid hydrocarbons. Well 103/1-2 was drilled as a deviated well to investigate the prospectivity of "Fault Block B". It encountered water-wet sands stratigraphically equivalent to those found to be gas-bearing in well 103/1-1. Lack of fault seal is considered to be the most likely explanation.

Rathlin basin

The Rathlin Basin is located onshore/offshore Northern Ireland and is a Permo-Triassic rift system underlain by proven rich Carboniferous oil prone source rocks similar to that in the nearby prolific East Irish Sea Basin. The oil exploration potential of this frontier basin was recently highlighted by the Ballinlea-1 well (2008, first hydrocarbon exploration well in the basin), which encountered shows and recovered some good quality oil to surface during testing. Providence interprets this well to have been drilled on the margin of the basin which extends and deepens offshore towards the basin centre under Rathlin Island. A recent onshore well (Ballinlea-1) proved reservoir, seal and source with oil recovered. Plan is to drill an exploration well in 1Q'14 and expressions of interest have been received from farm in partners. Providence holds 100% stakes in 1 onshore and 6 offshore blocks in the Rathlin basin. The company has identified hydrocarbon prospectivity within the Lower Triassic Sherwood Sandstone Group reservoir interval and the deeper Carboniferous section. To date, just one exploration well has been drilled, with good quality oil brought to the surface. Initial analysis of a Full Tensor Gradiometry (FTG) and magnetic airborne survey has identified 5 large anomalies on the acreage and further analysis of this data and 2D will be undertaken to high grade prospects for potential drilling.

Slyne basin - LO 11/12

The LO 11/12 licence is located in 300m of water, 70km off the west coast of Ireland. Initial technical evaluation (2D and 3D seismic) revealed the Kylemore prospect (4 way dip closure with potential 228bcf of GIP) and Shannon prospect (23km^2 structural closure warrants re-evaluation after initial well in 1999 found reservoir faulted out), which is of a similar age to the nearby Corrib field. Providence has a 66% stake in the licence and First Oil Expro has 33% stake.

Other Celtic Sea Assets

Licence 2/07

- **Hook Head (72.5%, Operator)** – The Hook Head oil discovery lies approximately 60km off the south coast in ~70m of water. The structure is a large mid-basinal anticline where four wells have been drilled to date, all of which encountered hydrocarbon bearing sands. The original IRL50/11-1 discovery well, which was drilled by Marathon in 1971, logged ~100ft of hydrocarbons in five Lower Cretaceous sandstone units. The well was not flow-tested due to severe operational issues at the time. In July 1998, Providence acquired a high resolution 2D seismic survey which confirmed the 4-way dip closure and demonstrated that the original discovery well was drilled some way off the crest. Two wells were drilled by Providence in '07/08 with oil and gas encountered in both, although operational constraints resulted in limited test data – this is likely due to the wax content of the crude and should be over-come by using an insulated pipe. Well 50/11-3 logged 75ft of net pay in a 484ft gross column with average 20% porosity and 30^o API crude with 56ft of net pay in the Lower Wealden. Well 50-11/4 drilled to the NW of the structure encountered 30ft of net pay above the primary objective but net pay was substantially less than pre-drill expectations. Further evaluation of the field suggests that the majority of the resource (estimated at 48mmbbls) lies in the central part of the structure, with the north and south flanks providing additional potential incremental resources for any future development in the area. Generally, reservoir quality is poor, but new OBC seismic data can resolve the channel systems and also the risk of compartmentalisation is unclear. The crude is waxy with an API of 24^o. Providence had an option to use the GSF Arctic III rig to drill an appraisal well at Hook Head after Barryroe but was not able too, due to delays. The field is expected to be developed via an FPSO and shuttle tanker (similar to Barryroe). Sosina expects a 3,000bbl/d flow rate potential, with each individual well justifying its economics. The P50 resources currently stand at 15mmbbls, with 100mmbbls in the upside case. Partners in the project include, Atlantic Petroleum and Sosina, who took a 10% stake in 2010 in return for funding a drilling and development study. Sosina had the option to take a further 40% stake, in return for funding an appraisal well which would take PVR down to 33%. A well could be drilled to test the structure this summer, with an estimate cost of testing the well at $10mm.

- **Helvick (62.5%, Operator)** – The Helvick oil field is located in block 49/9, 36km off the south coast of Ireland. The Helvick discovery well, 49/9-2, was drilled in 1983 and flowed at a cumulative rate of 9,900bopd and 7.5mmcfd. Three appraisal wells were drilled in the late 1980s to delineate the field. In 2000, Providence drilled the 49/9-6Z well which was tested at rates of ~5,200bbl/d. Further detailed analysis indicated that the Helvick reservoir is compartmentalised and would require further appraisal, particularly in the surrounding area. Providence concluded that development of Helvick on a stand-alone basis could not be justified given market conditions at that time. However, recent modern analysis of well test data suggests that wells could produce oil at significant rates under primary depletion. This, together with improved commodity prices, indicates that Helvick could provide the potential for a small field

development. Accordingly, the Company is looking at a number of low cost development options for the field and in 2010, agreed to assign a 10% non-operated interest in the field to Lansdowne Oil and Gas. Partners in the project also include Atlantic Petroleum and Sosina Exploration. A development study by UPB was initiated in 2010. Resources are estimated at 3mmbbls (gross) and 1.875mmbbls net 2C to Providence, based on Lansdowne's CPR.

- **Ardmore/Nemo (54.4%, Operator) –** The Ardmore gas field lies approximately 48km north-east of the Kinsale Head gas field. The discovery well, 49/14-1, was drilled in 1975 by the then operator, Marathon, and flowed at an aggregate rate of circa 8mmcfd. In 2006, Providence completed a 369km high-resolution pseudo-3D seismic survey over the field. A recent assessment of the data, together with a re-evaluation of the original well test data, indicates a recoverable resource potential of 30Bcf within the uppermost reservoir interval. In addition, the deeper oil reservoirs intervals termed Nemo are thought to contain up to 230mmbbls in place of heavy (16º API) oil. In 2010, the partners agreed a two-step farm out on the block to Nautical Petroleum (now Cairn), a UK heavy oil specialist, which involved Nautical funding and carrying out a focused work programme on the development feasibility of the Nemo oil discovery in return for 25% equity in the field. Nautical has an option to increase its stake in the field to 65% and take-over operatorship should it elect to drill an appraisal well on Nemo. Partners in the project include Nautical Petroleum (now Cairn), Atlantic Petroleum and Sosina Exploration.

Licence Option 10/1

- **Baltimore (60%, Operator)** – The Baltimore heavy oil discovery is located in block 48/19(p) in the North Celtic Sea Basin. The 48/19-2 discovery well is situated some 30km off the south coast of Ireland in 100m of water. Discovered in 1992, this 11ºAPI heavy oil accumulation is estimated to have an in-place resource potential of up to 300mmbls. Field assessment studies were started by partner Nautical Petroleum, but the status and progress is unclear after its take-over by Cairn. Nautical was brought in for its heavy oil expertise, gained from its participation in the Kraken and Mariner fields.

- **Marlin (60%, Operator)** – The Marlin exploration prospect is located ~15 km NW of the producing Kinsale Head gas field. This structure is the same age as the primary producing reservoirs in Kinsale Head and has 74bcf of in place potential. The Marlin prospect demonstrates striking similarities to the nearby Ballycotton gas field, which is a successful offshore development.

The following Tudor, Pickering, Holt & Co. affiliates have contributed to this research report: (1) Tudor, Pickering, Holt & Co. Securities, Inc., and (2) Tudor, Pickering, Holt & Co. International, LLP.

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We, Anish Kapadia and Shola Labinjo, do hereby certify that, to the best of our knowledge, the views and opinions in this research report accurately reflect our personal views about the company and its securities. We have not nor will we receive direct or indirect compensation in return for expressing specific recommendations or viewpoints in this report.

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