www.davy.ie Bloomberg: DAVY<GO> Research: +353 1 6148997

Institutional Equity Sales: +353 1 6792816

#### James McCullough

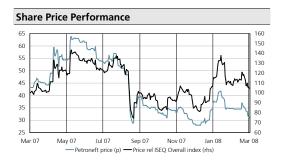
james.mccullough@davy.ie +353 1 6148921

Job Langbroek

job.langbroek@davy.ie +353 1 6148914

Caren Crowley

caren.crowley@davy.ie +353 1 6148923



Company data	
Reuters/Bloomberg/Xetra	PTR.L/PTR LN/P8ET
Sector	Resource
Shares (m)	192.0
Daily No. Shares Traded (m)	0.367
Free Float (%)	50.8
52 Week High/Low	63.75/28
Capital Structure	
Mkt. Cap (fm)	59.0
Net Debt/(Cash) (fm)	7.0
E.V. (fm)	66.0

#### Recent research and research resources

Recent research and financial data on <u>Petroneft</u> Sector research and data on <u>Resource</u> Davy Research

March 4, 2008



**Equity Report:** Company update

# **Petroneft**

Price: **31p** Target **55.0p** Issued **04/03/08** 

# Active exploration and development could transform company in 2008

#### Strong reserve growth from ongoing exploration

- A recent independent report showed an 81% increase in Petroneft's 2P reserves to 61m barrels of oil following a successful 2007 drilling programme.
- Petroneft is funded for its 2008 drilling programme which is due to get underway imminently.
- Two exploration wells to be drilled in H1 2008 could increase 2P reserves by a further 75%.

#### Plans to monetise its assets quickly

- Petroneft is currently finalising its development plan with the intention of beginning pipeline production in 2009.
- In December 2007, Petroneft announced an arrangement that will see its oil delivered into the regional Transneft pipeline system at a relatively low cost and on very attractive terms.
- We expect Petroneft to arrange project finance later this year.

# Base case valuation of 51p per share; current share price presents an attractive entry level

- Our base case valuation for Petroneft, based on the development of the existing oil fields and adjusted for the risk to that development, is 51p per share.
- Our downside case is 28p per share. Our optimum upside case is 119p per share.
- We believe that the current share price presents an attractive entry level to a combination of exceptional management, early-stage development and relatively low-risk exploration.

#### Disclosures

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# All the ingredients of a good story

2008 has the potential to be a transformational year for Petroneft.

#### **Exceptional management**

Petroneft is an Irish-registered oil and gas company with operations in Western Siberia that is managed by former senior Marathon Oil Company personnel with extensive experience of the Russian oil industry. Petroneft has also assembled a particularly strong and experienced operational team in its Russian office.

#### Reserves

It has a 100% equity interest in Licence 61, located in the Tomsk Oblast (Figure 1) in the Western Siberian basin; this licence extends over nearly 5,000 square kilometres and has three proven oil fields:

- Lineynoye;
- West Lineynoye;
- Tungolskoye.

Together, these three reservoirs have 2P reserves of 60.6 mmbbls of oil.

Licence 61 also has over 20 prospects, with 3P reserves for the entire licence of over 350 mmbbls. Petroneft is currently producing a small amount of oil for test purposes.

#### Pipeline production planned for 2009 after landmark deal

In December 2007, Petroneft signed a Protocol of Intent allowing for the delivery of its oil into the Transneft pipeline system on very favourable terms and with a relatively modest capital outlay. This deal has improved the project economics considerably.

Petroneft is currently in discussions to raise project finance for the development of its existing reserves. First pipeline production is planned for 2009.

#### Funded for three-well exploration programme in 2008

Two exploration wells and one appraisal well will be drilled this year, beginning in early March:

- Korchegskaya #1 exploration well (spud early March);
- Lineynoye #8 appraisal well at West Lineynoye (spud in May);
- West Korchegskaya #1 exploration well (spud in June).

As well as the above three wells, Petroneft will also be following up on last year's work:

- flow testing at Tungolskoye reservoir (results expected in March);
- reserve approval, development planning and debt finance for existing reserves (ongoing).

# Investment case and valuation summary

#### Management like this is hard to find

- We are not aware of any management team that has relevant local experience to match that of Petroneft.
- This is particularly important for small, independent, foreign firms operating in Russia, where familiarity with the system is crucial.
- Furthermore, Petroneft has assembled a high-calibre operational team through personal contacts developed in Russia over many years.

While oil exploration and development is inherently risky by nature, we believe that investing in junior companies with strong management is a prudent, long-term investment strategy.

We are optimistic about Petroneft's ability to monetise its appraisal assets in the short term, thus delivering strong value enhancement for shareholders. In the longer-term, we expect Petroneft's management to develop a portfolio of exploration and production assets as it makes the transition from small-cap explorer to mid-cap producer.

#### Base case valuation implies 50%-plus upside from current levels

We believe that Petroneft now offers an excellent opportunity to invest in exceptional management and relatively low-risk Russian exploration and development oil assets at a currently attractive entry level.

We have modelled a range of scenarios, as outlined in the side panel. Resulting valuations range from 28p per share if exploration drilling is unsuccessful to 119p per share if the drilling is successful and product pricing remains strong. Our base case valuation, based on what we perceive to be the most likely development case for the already established oil fields, and adjusted to reflect the risk of that development, is 51p per share.

#### **Financial position**

Petroneft has \$10m in cash, which is committed to its upcoming drilling programme. We expect it to spend over \$100m in the next five years on development; an initial capital requirement of approximately \$75m will likely be funded through debt and equity (we expect approximately 80% debt finance).

Davy scenario valuation	
Scenario	p/share
Base case	50.7
Korchegskaya drilling successful	69.7
Drilling success and strong product pricing	118.8
Downside case	28.3

Source: Davy

#### **Current reserves**

The main reservoirs and exploration targets on Licence 61 are shown on the map below (Figure 1).

Petroneft drilled three wells in 2007: two appraisal and one exploration.

- Oil was confirmed in the Lineynoye and Tungolskoye reservoirs.
- The West Lineynoye reservoir was also discovered.
- The programme resulted in the addition of 27.1 mmbbls to Petroneft's 2P reserve figure (to 60.6 mmbbls).
- The total cost of the programme was \$15.5m (\$0.58 per barrel).

A review of the 2007 drilling programme is included in the Appendix.

Lineynoye oil field (16.3 mmbbls 2P)

West Lineynoye oil field & Lineynoye #8 location (28.8 mmbbls 2P)

Korchegskaya target and Korchegskaya #1 location (36 mmbbls 3P)

West Korchegskaya target and West Korchegskaya #1 location (10 mmbbls 3P)

Tungolskoye oil field (15.5 mmbbls 2P)

- Source: Petroneft
- Ryder Scott classifies reserves as possible where multiple seismic lines confirm four-way dip closure of the structure at the Base Bazhenov seismic horizon
- 2P and 3P reserves are explained in the appendix

#### **Independent reserve audit in December 2007**

• Independent reserve consultants Ryder Scott estimated Petroneft's 2P reserves at 60.6 mmbbls with 350 mmbbls of 3P reserves, as shown in Table 1.

 Petroneft will receive a price equivalent to Urals Blend for it oil. However, the high quality of this oil will be of benefit through lower lifting and capital costs

- The Bazhenov layer is a brownishblack bituminous claystone with interlayers of calcareous claystone
- Alternative deeper sources (and reservoirs) are known to exist in the Western Siberian Basin and have been found in the adjacent Licence Block (Licence 59, TNK-BP); these have not been actively explored in Licence 61
- Well fracturing is a commonly used technique for oil wells in this part of the world; it can increase production by opening up flow paths within the reservoir

- This estimate follows on from the successful 2007 drill campaign which added 27.1 mmbbls of 2P reserves at a cost of \$15.5m, equating to \$0.58 per 2P barrel of oil.
- The oil found is a light, sweet crude of 38° to 44° API and with low wax content.
- In parallel with the Western reserves estimate (SPE-compliant), Petroneft has also commissioned an estimate that is compliant with the Russian reserve classification system. This will be submitted to the local authorities for approval in March.

Table 1: Licence 61 independently estimated	mated reserves	at December 31	st 2007
Figures in barrels (m)	Proven	Probable	Possible
Lineynoye	4.3	12	6.5
West Lineynoye	0.9	27.9	16.4
Tungolskoye	1.5	14	7.3
Korchegskaya			36
West Korchegskaya			10.5
Traverskaya			19.5
Sibkrayevskaya			29.5
Kirillovskaya South			18
Other			145.8
Total	6.7	53.9	289.5
	1P	2P	3P
Reserves	6.7	60.6	350.1

Source: Ryder Scott report

#### Geology

Oil is present in Upper Jurassic (J1) sands located immediately below the Base Bazhenov layer at the base of the Cretaceous horizon. The sands are typically separated into a  $J_1^{\ 1}$  layer of sand originally in a marine setting over a transitional marine to continental  $J_1^{\ 2}$  layer. The Bazhenov Formation, which has a total organic content in this region as high as 10%, acts both as the primary oil source and as a seal.

#### Small-scale production already underway

Petroneft is currently producing at a stabilised rate of 226 bopd from the Lineynoye #6 well. This rate is being achieved with a submersible pump but without fracturing the well.

The oil is being pumped into holding tanks at surface level, from where it is being transported out by truck over winter roads. Petroneft is not making any significant profit or loss on this production as volumes are small and costs are high. In effect, it is a long-term flow test that will provide important information on the pressure characteristics of the reservoir.

We expect the Lineynoye #7 well at the West Lineynoye reservoir to be put on similar production imminently and for both to run until winter roads are no longer available.

- The drilling contract is a turnkey contract for a set number of wells; it is not based on a day rate
- Petroneft's 2008 drilling contract price is the same as it was in 2007

# 2008 drilling programme

#### Scope for reserve upgrades in this year's drilling

This year's exploration drilling programme aims to convert up to 46.5 mmbbls of 3P reserves to the 2P category at a cost of \$15m. If successful, this would equate to a cost of \$0.32 per 2P barrel.

The drilling rigs used in the 2007 programme are to be used again this year. A summary of the programme is shown in Table 2.

Table 2: Summary of upcoming workflow on Licence 61			
Tungolskoye #4	Appraisal	Flow testing existing well	March 2008
Korchegskaya #1	Exploration	3P reserve estimate of 36 mmbbls	March 2008
Lineynoye #8	Appraisal	Appraisal of West Lineynoye reservoir	May 2008
West Korchegskaya #1	Exploration	3P reserve estimate of 10.5 mmbbls	June 2008

Source: Petroneft

#### Tungolskove #4 flow test

The Tungolskoye reservoir contains 15.8 mmbbls of Petroneft's 2P reserves. Last year's delineation well, Tungolskoye #4, confirmed 15.2 metres of net oil pay, which is the thickest reservoir interval encountered in any of the 17 wells drilled on the block to date. The saturated sandstone pay is in the J1 interval and appears to consist of a thin  $J_1^1$  interval sitting directly above a thicker  $J_1^2$  interval.

The well was not flow tested due to technical difficulties involving water ingress because of a poor cement job behind the casing. A side-track well to alleviate this problem was suspended in December 2007 as delays in sourcing necessary equipment would have led to further significant delays in moving the drilling rig to the West Korchegskaya prospect (and hence to significant delays for the entire exploration programme).

A mobile workover drilling rig has been secured by Petroneft to complete the flow test at Tungolskoye. This is expected to be onsite by the beginning of March. While a positive flow test from this work is not absolutely critical to the development plan, we think it will be important to maintain investors' confidence in reserves.

We estimate that a negative test here would bring about one-quarter of the Tungolskoye reserves into question, and an additional test on the northern high of the structure would be required to confirm the remaining three-quarters.

#### Korchegskaya #1 exploration well

Ryder Scott has estimated Possible Reserves of 36 mmbbls (P50 estimate) for the Korchegskaya target, with P10 upside of 62 mmbbls.

Unlike the existing three reservoirs, there have been no historic wells on the Korchegskaya target. However, two wells drilled nearby in the Soviet era (Lineynoye #2 & #4) both found good reservoir rocks but no oil. These wells were drilled on the southern flank of the Lineynoye oil field,

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 A producing oil field must always have four key ingredients: oil source; migration pathway from source to reservoir; seal to keep oil in reservoir; good quality reservoir rocks to contain the oil and in both cases the top of the J1 interval was shown to be below the level of the oil water contact as determined last year in the Lineynoye #6 well. Both wells flowed water but no oil. The Korchegskaya prospect is a separate structure to the south with a controlling spill point for oil at -2,490 metres subsea.

As exploration wells go, Korchegskaya is relatively low-risk:

- The Korchegskaya target lies between the established Lineynoye oil field (to the north) and Tungolskoye oil field (to the south); the proximity of these reservoirs immediately indicates the presence of an active oil source.
- Oil in this area is likely sourced from deeper levels to the east; the migratory pathway for Korchegskaya is the same as that for Tungolskoye and Lineynoye.
- The Bazhenov Formation, which is ubiquitous throughout the region, acts as a seal in the Tungolskoye and Lineynoye reservoir and should also form a good seal at Korchegskaya.
- We see the reservoir rock itself as the main risk at Korchegskaya; the J1 layer is abundant throughout the licence, but the thickness and reservoir quality are variable.

Petroneft is currently assembling the drilling rig at the Korchegskaya #1 site, and we expect the well to spud in early March. All going to plan, it will take approximately 30 days to drill and a further 30 days to test.

#### Lineynoye #8; West Lineynoye delineation well

The Lineynoye #8 well will test the central lobe of the West Lineynoye reservoir. Ryder Scott has attributed 28.8 mmbbls of 2P reserves to the reservoir, and we understand that this estimate assumes approximately 8 metres of net oil pay with good quality reservoir at Lineynoye #8. This is based on the reservoirs seen in the Lineynoye #3 well located about 2km north of Lineynoye #8.

Of course, the reserve estimate will be scaled appropriately based on how much pay is confirmed by the well. In addition, the balance of thickness between the  $J_1^{\ 1}$  interval and the  $J_1^{\ 2}$  interval will be important ( $J_1^{\ 1}$  is a marine layer with generally better reservoir properties).

As with the Korchegskaya target, the principal risk to this well is reservoir quality.

As well as giving a better idea on reserves in the reservoir, the Lineynoye #8 well will provide valuable information regarding the productivity of the reservoir in the central lobe. This information will be very important to Petroneft in determining its production schedule. Initial development will be concentrated at the most productive locations on the reservoir to maximise early cashflow.

The Lineynoye #8 well is expected to spud in May.

#### West Korchegskaya #1 well; small but significant

Ryder Scott estimates that the West Korchegskaya prospect contains some 10.5 mmbbls of Possible reserves. While this offers material upside to Petroneft's reserves inventory, it will also provide important stratigraphic data pertaining to the eastern portion of the Licence Block where there are numerous prospects. There have been no wells drilled to date in this part of the block.

The West Korchegskaya structure itself has relatively steep relief and appears well defined. The important information will concern the presence and quality of reservoir sands below the Base Bazhenov layer. There are a number of other targets in the vicinity of the West Korchegskaya target whose perceived prospectivity will be affected by the results of this year's well.

The West Korchegskaya #1 well is scheduled to spud in June 2008.

 Current production from the Lineynoye reservoir is being used as a long-term flow test, the results of which will be used to inform the main development plan

# Pipeline production planned for 2009

Petroneft is currently producing oil from the Lineynoye reservoir and shipping it out by road. The main goal of this is to determine the technical parameters of the reservoir, particularly the flow rate and pressure characteristics over time.

#### Landmark pipeline deal

- In December 2007, Petroneft signed a Protocol of Intent with Bashneft, a company controlled by the government of the semi-autonomous Bashkortostan region in Russia (west of Tomsk Oblast).
- This deal will allow Petroneft to transport its oil through Bashneft's pipeline system to deliver it to the regional Transneft pipeline.
- Bashneft's own oil production is in decline, and it needs surplus oil to keep its pipelines full (and contribute to its fixed costs).
- Petroneft will build a pipeline to Bashneft's site at Lukpaiskoye (60km northwest of Lineynoye).
- Bashneft will charge a tariff based on actual costs in proportion to the amount of oil transported, but this will not exceed the Transneft rate for a similar segment. This allows some room for inflation but caps the tariff at a very favourable rate.

#### Pipeline must be ordered by end of May 2008

The start of pipeline and custody transfer construction, which we estimate will cost approximately \$25m, is dependent on debt project finance being secured. For production to commence in 2009, the pipeline must be ordered in May 2008 to allow for transport of the pipeline sections by barge before the local waterways freeze over.

#### Phased development from the north

The Bashneft pipeline deal allows Petroneft to develop its assets on a phased basis from the north of the licence block. The current plan is to begin producing from the Lineynoye and West Lineynoye reservoirs in the north of the licence block in 2009 and to bring on the Tungolskoye reservoir three years later. If this year's well at Korchegskaya is successful, that reservoir will probably be developed before Tungolskoye as it lies closer to the Lineynoye reservoirs.

This year's drilling programme is therefore very important in the context of the overall development plan for the licence.

 The consultant group working on Petroneft's case is one of the most experienced and successful in the region, with an immaculate track record of having development proposals approved without amendments

# **Next steps**

#### **Development plan**

According to Petroneft and Ryder Scott estimates, field development is economically viable based solely on the Lineynoye and West Lineynoye reservoirs. Tungolskoye will likely be developed subsequently, depending on the outcome of the upcoming drilling programme.

A development plan is currently being finalised by independent Russian consultant group SNIIGGMS, which will be used in an application to the authorities for permission to develop the oil fields and necessary transport infrastructure.

The development plan will be based on the Russian system of reserve classification. It will set out the number, locations and sequence of the production wells to be drilled, the infrastructure to be constructed and the use of any reservoir stimulation techniques over the life of the project.

In its 2007 report, Ryder Scott published its assumptions for licence development. Ryder Scott estimates that:

- Petroneft will drill some 131 development wells between 2009 and 2022.
- Almost half of these will be drilled by the end of 2011.
- This is an ambitious schedule, but Petroneft is confident that it can achieve these sorts of figures.

In light of its close relationship (through its director and main shareholder, Vakha Sobraliev) with the region's largest drilling company, we are comfortable with Petroneft's guidance on this issue.

We calculate our production forecasts (and development well capital expenditure estimates) on a "per well drilled" basis. Our most likely production profile for the development of the Lineynoye, West Lineynoye and Tungolskoye reservoirs is shown in Figure 2. Our estimates for other development scenarios are included in the valuation section.

25,000 20,000 15,000 pdoq 10,000 5,000 2010 2012 2014 2016 2024 2006 2008 2018 2020 2022

Figure 2: Production profile for "most likely" development case (barrels of oil per day)

Source: Davy

#### Paying for development

We estimate that Petroneft will have a maximum net cashflow deficit of approximately \$75m that will have to be covered through debt and equity finance, although other options are available. The debt/equity mix is unknown as yet, although management has previously expressed its desire to avoid further equity dilution.

The company announced as early as February 2007 that it has been in discussions with a number of banks regarding funding, and we understand that these discussions are ongoing:

- We expect that the Bashneft pipeline deal will have made the project more attractive to potential lenders (Petroneft has stated that the project is now economically viable based solely on the development of the Lineynoye and West Lineynoye reservoirs).
- We also expect that the results of some of this year's wells will be important to lenders, in particular Korchegskaya #1 and Lineynoye #8.
   Another key factor will be the approval of the development plan by the local authorities.
- In the case of positive drilling results and a painless development plan approval, we expect Petroneft will be able to secure debt on favourable terms later this year.

We expect that some equity will be required to fund the project. From a bank's point of view, drilling expenditure to date may satisfy any requirements for equity to be invested to balance debt committed.

# **Growth opportunities for Petroneft**

As well as making the transition from explorer to producer, there are two clear avenues for Petroneft to grow considerably:

#### **Further exploration on Licence 61**

#### A handful of targets with material reserve estimates

- As well as the three oil fields and two targets which are the focus of this year's operations, Licence 61 contains a further c.240 mmbbls in the Possible category.
- Some of this is associated with the already proven reservoirs, but most of it comes from the 24 other prospects on the licence.
- The median size (P50) is as high as 29.5mmbls for one target. Another four targets are greater than 15mmbls.

Seismic already completed by Petroneft, along with seismic yet to be shot and the results of this year's drilling campaign, will be used to determine the priority of each drill target.

One target of note is the Traverskaya target in the southeast of the licence. This has a P50 estimate of 19.5 mmbbls and interestingly is located immediately adjacent to the Kiev Eganskoye oil field discovered by the Soviets in the adjacent Licence Block, Block 80, now owned by Imperial Energy. Traverskaya appears to be a structural extension of the Kiev Eganskoye oil field located above the oil water contact for that field. Imperial has not yet drilled this target but plans to in 2008; we will be interested to see the results of this drilling.

## Acquisition of other assets

Petroneft has repeatedly stated that it is actively evaluating other investment propositions and seeking out opportunities to expand its portfolio and diversify the risk of having a single asset.

#### Mini-refinery site already acquired

In January 2008, Petroneft announced the acquisition of a site for a mini oil refinery to the south of Licence 61 at Pervomayka, 200km northwest of Tomsk City. The site is located at the Transneft pumping station at Pervomayka, and permission to use the land for a refinery has been granted. Preliminary clearance and site preparation have been carried out by the previous owner.

#### **Further acquisitions likely**

Petroneft's stated medium-term strategy is to participate in both the upstream and downstream sectors of the Russian oil and gas market. The refinery site acquisition gives Petroneft a viable option, but not obligation, to enter into the downstream business in the future.

Petroneft has considered a number of potential acquisitions already but has found asking prices too high. We think it likely that we will hear more on expansion activity, either upstream or downstream, in 2008.

**Range of Davy valuations** 

Korchegskaya drilling successful

Strong product pricing

Downside case

Source: Davy

p/share

50.7

69.7

118.8

28.3

Scenario

Base case

# Valuation: leverage on success case is compelling; limited downside from here

Our valuation is based on a discounted cashflow model. We use a 10% discount rate (i.e. cost of funds) on our forecast of future cashflows and then apply a development chance factor to account for technical and development risk remaining in this phase of the project.

Our base case valuation of 51p per share uses a long-term export oil price of \$65/bbl and a chance factor of 70% applied to the development of the Lineynoye, West Lineynoye and Tungolskoye reservoirs.

- We also consider a number of other scenarios, ranging from a "what if" downside case, in which we assume an unsuccessful drilling campaign this year, to a "best case" upside scenario whereby the Korchegskaya reservoir is also shown to be commercial and current product pricing remains over the life of the project.
- Our range of valuations is shown in the side panel.

Our base case forecast for the first five years of production is shown in Table 3. Assumptions used are presented in the side column.

Assumptions used in financial model (base case scenario)		
Domestic oil price (\$/bbl)	65	
Export oil price (\$/bbl)	35	
% of oil exported	30%	
Operating costs incl. transport (\$/bbl)	5	
Capital costs (\$m/well)*	2	

\*Additional capital costs are included for infrastructure spending, etc. Source: Davy

Table 3: Davy operating forecasts for production profile out to 2013 (\$m unless stated)						
	2008	2009	2010	2011	2012	2013
Production (mmbbls)	-	0.9	2.6	4.3	5.7	6.7
Revenue	-	38.5	114.8	186.3	247.7	290.4
Operating costs	-	4.4	13.2	21.5	28.6	33.5
Production taxes	-	19.1	57	92.6	123.1	144.3
EBITDA	-	14.9	44.5	72.3	96	112.6
Depreciation	2.1	4.7	8.4	11.8	15.6	18.2
EBIT	-2.1	10.2	36.2	60.5	80.5	94.4
Interest	-	-	-	6.8	5.9	5.1
Profit and property tax	0.5	3.7	10.9	16	22	26.2
Earnings	-2.6	6.5	25.3	37.7	52.5	63.1
Capital expenditure	27	36	52.5	53	61	49
Free cashflow	-27.5	-24.8	-18.9	-3.5	7.1	32.3
Carrage Davis						

Source: Davy

In our model, we hold both product prices and costs fixed over the life of the project. We forecast cashflows out to 2022.

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#### Valuation cases

Note that all pence per share valuations are fully diluted.

#### Base case

Our assumptions for our base case scenario, Table 4, are listed in the side panel.

Table 4: Base case development scenario			
Base case	\$m	£m	p/share
Three existing oil fields (risked)	186.0	94.4	33.1
Near-term exploration (1 in 5 success)	30.2	15.3	7.7
Other exploration (1 in 12 success)	25.6	13.0	6.5
Cash	13.8	7.0	3.5
Total	255.6	129.7	50.7

Source: Davy

- We believe that this valuation represents a conservative fair value for the Petroneft share price at present, taking into account the various risks and opportunities associated with monetising the company's assets.
- Near-term exploration refers to the Korchegskaya and West Korchegskaya targets to be drilled this year with cumulative Possible reserves of 46.5 mmbbls.
- Other exploration refers to five other significant targets on Licence 61 which have cumulative Possible reserves of 96 mmbbls.
- Given the level of activity to be pursued by Petroneft over the coming year, we think it unlikely that this valuation will be appropriate for very long. We therefore present a number of other cases exploring the upside and downside potential that we see arising from the work programme and from the movement of oil prices.

#### Upside case 1: success at Korchegskaya #1

In our first upside case (Table 5), we assume the exploration well at Korchegskaya this year is successful.

Table 5: Upside case 1 development scenario			
Upside case 1 – exploration success at Korchegskaya	\$m	£m	p/share
Three existing oil fields + Korchegskaya (risked)	326.0	165.5	58.0
Near-term exploration	6.8	3.5	1.7
Other exploration	25.6	13.0	6.5
Cash	13.8	7.0	3.5
Total	372.2	188.9	69.7

Source: Davy

- We assume that Korchegskaya would be brought on-stream in 2012 and that development of Tungolskoye would be consequently delayed by two years until 2014.
- We maintain our development chance factor of 70%.
- We maintain our treatment of West Korchegskaya as an exploration asset.

Base case assumptions	
Export oil price (\$/bbl)	65.0
Domestic oil price (\$/bbl)	35.0
Development chance	70%

**Equity Report:** Petroneft

Source: Davy

Upside case 1 assumption	
Export oil price (\$/bbl)	65.0
Domestic oil price (\$/bbl)	35.0
Development chance	70%

Source: Davy

March 4, 2008

Upside case 2 assumptions	
Export oil price (\$/bbl)	90.0
Domestic oil price (\$/bbl)	49.0

Source: Davy

Development chance

Downside case assumptions	
Export oil price (\$/bbl)	65.0
Domestic oil price (\$/bbl)	35.0
Development chance	70%

Source: Davy

#### **Upside case 2: product pricing remains strong**

In our second upside case (Table 6), we apply current oil prices to our first upside case.

Table 6: Upside case 2 development scenario				
Upside case 2 – exploration success & strong product prices	\$m	£m	p/share	
Three existing oil fields + Korchegskaya (risked)	602.0	305.6	107.0	
Near-term exploration	6.8	3.5	1.7	
Other exploration	25.6	13.0	6.5	
Cash	13.8	7.0	3.5	
Total	648.2	329.0	118.8	

Source: Davy

70%

- Our current product pricing is based on the quoted price for Urals blend oil and a reported Russian domestic oil price.
- We maintain our development chance factor of 70%.

#### Downside case: what if drilling doesn't work out?

There are a number of risks to our base case valuation, the most obvious being unsuccessful well results at West Lineynoye and Korchegskaya in this year's drilling campaign.

In our downside case (Table 7), we use the same assumptions as for our base case above but eliminate the West Lineynoye reservoir from our forecast and remove the contribution of the Korchegskaya target from our exploration valuation.

Table 7: Downside case scenario			
Downside case	\$m	£m	p/share
Development of Lineynoye and Tungolskoye	92.9	47.2	16.5
Near-term exploration	6.8	3.5	1.7
Other exploration	25.6	13.0	6.5
Cash	13.8	7.0	3.5
Total	139.2	70.6	28.3

Source: Davy

- We emphasise that eliminating entirely the West Lineynoye reservoir, where oil has already been discovered, from our forecast is a very conservative approach and reflects a situation that is extremely unlikely to arise.
- We maintain our treatment of West Korchegskaya as an exploration asset.

### Russian tax reform offers further upside potential

Another important source of potential upside may come from the reform of the Russian energy tax system:

- Under the standard tax and royalty model, the level of tax taken by the state in Russia is based on the oil price and foreign exchange rate.
- This means that while higher oil prices are reflected in higher revenue lines, the tax take is also significantly higher.
- We estimate that over 60% of Petroneft's gross revenues will be paid to the state through various taxes.
- At the same time, capital costs in the industry have increased dramatically.
- The combination of these two effects is causing margin erosion that is stifling investment in infrastructure.
- Lobbying efforts to reform the tax system to make investment economically feasible are intensifying. Dmitry Medvedev, recently elected to succeed Putin as president, has called for a reduction of energy export duties.
- By way of illustration, a 10% drop in export duties from current levels would increase our base case valuation for Petroneft to 55p per share.

# **Appendix**

#### Brief review of 2007 drilling

Petroneft drilled three wells in 2007: two appraisal and one exploration.

- The total cost of the programme was \$15.5m.
- Oil was confirmed in the Lineynoye and Tungolskoye reservoirs.
- The West Lineynoye reservoir was also discovered.

#### Lineynoye reservoir (appraisal)

- The Lineynoye #6 well took 50 days to drill. Net pay of 13.2 metres was split between the two layers with 2 metres in the  $J_1^{\ 1}$  layer and 11.2 metres in the  $J_1^{\ 2}$ .
- Porosity of 14-16% was measured, with hydrocarbon saturation of 75-84%.
- The well tested at a rate of 100 bopd.
- The oil water contact was lowered by approximately 10 metres to a subsea depth at or below -2,530.5 metres.

#### **Tungolskoye reservoir (appraisal)**

- The Tungolskoye #4 well took 30 days to drill and logged 15 metres of net pay in the two layers.
- The well was not flow tested due to technical difficulties around the cement casing.
- A sidetrack was drilled subsequently, and this was suspended in December 2007 to avoid delaying the 2008 drilling programme.
- A truck mounted rig has been secured to test the well in March this year.

#### **West Lineynoye reservoir (exploration)**

- The Lineynoye #7 well took 57 days to drill.
- The pre-drill estimate of Possible reserves at West Lineynoye was c.67 mmbbls.
- However, the well established a thinner reservoir section than anticipated; in particular the J<sub>1</sub><sup>2</sup> layer, which in the nearby Lineynoye #5 well was found to measure approximately 6.3 metres, consisted of very fine grain sandstone and siltstone.
- While hydrocarbons were encountered, no reservoir rock was present.
- The gross oil column found was 22m thick, and the reservoir appears to be "filled to spill".
- The J<sub>1</sub><sup>1</sup> layer gave 1.5 metres of net pay and flowed at a rate of 125 bopd.
- Following this result, Ryder Scott estimated Possible reserves of 28.8 mmbbls for the reservoir.

- Russia is divided into locallygoverned regions known as oblasts. The Tomsk Oblast is approximately 316,900 sq km in area and has a population of c.1m.
- Stimul-T was owned by Vakha Sobraliev, General Director of the largest drilling and support services company in the Tomsk region; Sobraliev's stake in Petroneft currently stands at c.12%

## **Licence acquisition 61 summary**

Licence 61 is located in the northern end of the Tomsk Oblast, north of the river Ob and adjacent to Imperial Energy's Licence 68. It lies in the Western Siberian Basin, which has 144bn bbls of discovered oil reserves and 1,300 TCF of discovered gas reserves.

In November 2004, a local company, Stimul-T, bid for Licence 61 in an auction conducted by the Russian subsoil agency and local Tomsk representatives of that organisation. Its bid of \$5.5m won the auction, but Stimul-T was unable to obtain local financing to pay.

Petroneft provided funding for Stimul-T in return for an 80% stake in the company and subsequently acquired the remaining 20% by share issue. Stimul-T is now 100% owned by Petroneft.

#### Key personnel

- Dennis Francis: Chief Executive Officer and co-founder. Francis, a
  geophysical engineer and geologist, headed Marathon Oil's business
  development activities in Russia from 1989 to 2003 and was Director
  of the Sakhalin Energy Investment Company. He received the
  Sakhalin Governor's award for his involvement in the Sakhalin II
  project.
- Paul Dowling: Chief Financial Officer. Dowling was appointed as CFO and to oversee relationships with the capital markets on October 1st 2007, having previously been a Partner with Dublin Accounting firm LHM Casey McGrath. He is a Chartered Certified Accountant and a member of the Irish Taxation Institute with 16 years experience in the finance arena, including significant experience in the Natural Resources sector.
- David Sanders: Executive Director, Secretary and General Counsel, and co-founder. Sanders has over 15 years of Russian business experience, particularly in the legislative field. He was very closely involved in drafting Marathon's ground-breaking agreements on the Sakhalin II project, among others.
- David Golder: Non-executive Chairman. Golder has 34 years of industry experience with Marathon Oil Company among others. He is a former Senior Vice President of Marathon and former Executive Vice President of the Upstream Sakhalin Energy Investment Company.
- Also on the board are Desmond Burke (30+ years experience in the minerals industry), Tom Hickey (Chief Financial Officer and Director of Tullow Oil), Vakha Sobraliev (30+ years experience in the West Siberian petroleum industry and control of the region's largest drilling company), and Paul Dowling (Chief Financial Officer with 16 years experience in finance).
- On the ground in Russia, the management of Stimul-T has over 100 years of combined experience. Alexey Balyasnikov, General Director, is

a former Head of Representation for Marathon in Moscow; Alexander Frenovsky, Executive Director, is the former General Director and Chief Engineer of the Tomsk region exploration company Tomskneftegazgeologia and has participated directly in the development of 15 oil fields in the Tomsk Oblast. Nikolay Karapuzov, Chief Geophysicist/Geologist, is the former Chief Geophysicist/Geologist of Tomskneftegazgeologia and has participated directly in the development of 17 oil fields in the Tomsk Oblast.

#### **Reserve classification**

#### **Proved reserves (P1)**

Proved reserves are those quantities of petroleum which, by analysis of geological and engineering data, can be estimated with reasonable certainty to be commercially recoverable from a given date forward, from known reservoirs and under current economic conditions, operating methods and government regulations.

#### **Probable reserves (P2)**

Probable reserves are those unproved reserves which analysis of geological and engineering data suggests are more likely than not to be recoverable. In this context, when probabilistic methods are used, there should be at least a 50% probability that the quantities actually recovered will equal or exceed the sum of estimated proved plus probable reserves (2P).

#### Possible reserves (P3)

Possible reserves are those unproved reserves which analysis of geological and engineering data suggests are less likely to be recoverable than probable reserves. In this context, when probabilistic methods are used, there should be at least a 10% probability that the quantities actually recovered will equal or exceed the sum of estimated proved plus probable plus possible reserves (3P).

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