



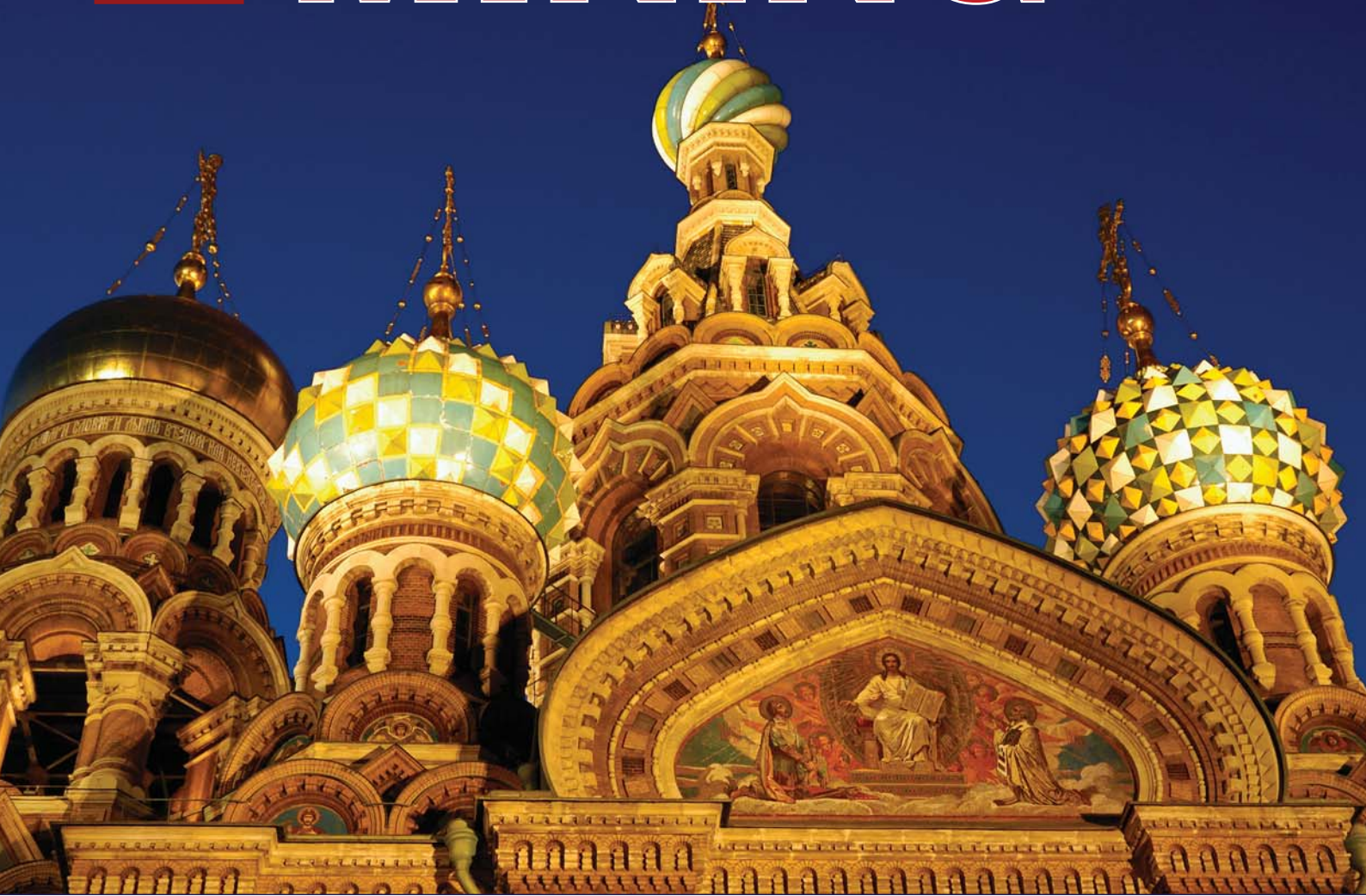
RUSSIA



CIS



MINING



Published by Edison Investment Research



COMPANIES FEATURED

Amur

Chaarat

Eurasia

Frontier

Ovoca

Hambledon

Highland

Kryso

Oxus

Peter Hambro

Sunkar

Trans-Siberian

Mining in Russia and the CIS

To many westerners, Russia remains, in Winston Churchill's words, "a riddle wrapped in a mystery inside an enigma". Yet at the dawn of the 21st century, when Russia's economy is growing at more than 7% per annum, this seems anomalous – doubly so within the context of the mining industry, given that Russia accounts for no less than 11.5% of the world's land mass and 14% of its mineral extraction.

Russia is to production what China is to consumption

Despite being frequently grouped with China, India and Brazil, Russia presents a very different investment proposition to its fellow 'BRICs'. Whereas China and India are coveted by the west for their near boundless potential to consume, Russia and Brazil are attractive for their potential to produce. But while Brazil's production is biased towards agri-business and soft commodities, Russia's is towards the traditional hard commodities of metals and minerals.

Nevertheless it remains underexplored

Russia, China, India and the rest of Asia account for a third of the world's land mass, but less than 20% of the global exploration budget. Moreover, in the case of western investment in particular, a disproportionate percentage of this expenditure has been directed towards a single metal – gold. This is a notable success, yet again seems anomalous, given that Russia ranks only sixth in global gold production, while its resources of diamonds and nickel, along with iron ore, are the largest in the world and, of coal, are second only to the US.

The national interest

As Churchill noted, "The key is Russian national interest." To date western investment in Russia has been undertaken by the 'pioneers'. In the longer term, the way to redress this imbalance is surely to persuade the Russian government that its own best interests are indeed aligned with those of the mining companies. Under such circumstances, the creation of a legal and fiscal environment perceived as conducive to western investment would then have the effect of finally unlocking the full potential of the west's reserves of capital for deployment in the east.

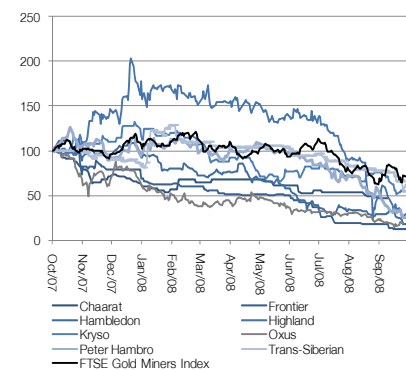
October 2008

Analyst

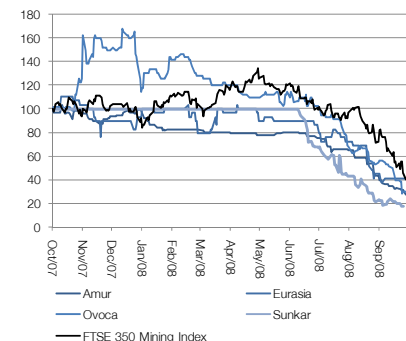
Charles Gibson

020 3077 5724

Russian gold companies vs FTSE Gold Miners Index



Non-gold companies vs FTSE 350 Mining Index



Investment summary: Perfect prospectivity – politics?

Comprising 75% of the former Soviet Union (FSU) and accounting for 11.5% of global land mass, Russia is by far the largest country in the world, well-ahead of Canada, China, the US, Brazil and Australia.

Exhibit 1: The world's largest countries by surface area

Country	Area (millions square km)	Pct. global land mass
Russia	17.1	11.5
Canada	10.0	6.7
China	9.6	6.5
US	9.6	6.5
Brazil	8.5	5.7
Australia	7.7	5.2

Source: Wikipedia

According to most estimates, Russia accounts for 15-17% of the world's mineral resources, valued in excess of US\$300tn, spread across 20,000 deposits, of which one third are (or have been) exploited. In general, these are located in six principal areas: Eastern Siberia, the Urals, Kola, the North Caucasus, the Russian Far East and the Arctic. More than half of Russia's mineral resources are located east of the Ural Mountains. Russian resources of diamonds, iron ore and nickel are the largest in the world, while those of coal are ranked second only after the US. In addition, it is liberally endowed with bauxite, copper, cobalt, lead, mica, molybdenum, tin and zinc.

History

Despite a lapse of almost two decades since the fall of the Iron Curtain, the mining industry continues to exhibit the legacy effects of the Soviet system. This is particularly apparent in five areas.

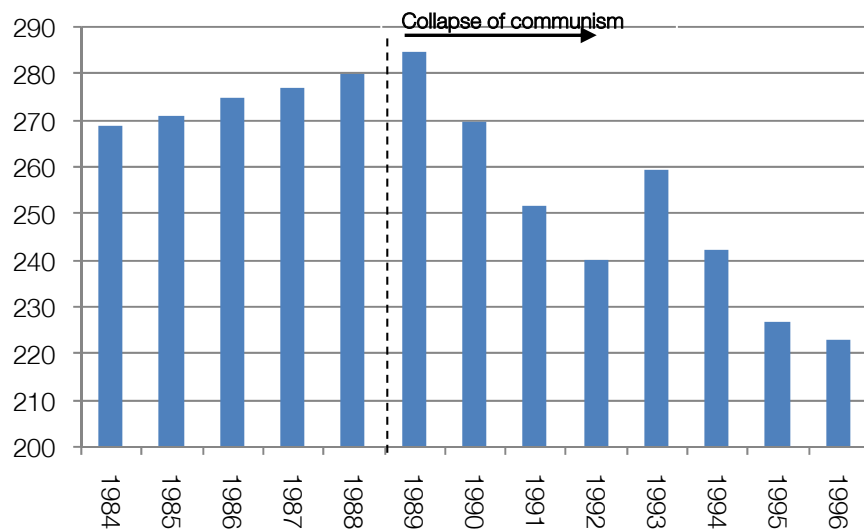
Geology: Unlike in the west, ore reserves in particular are not classified with reference to economic considerations. Historically, this was done for several reasons. Most notably, during the Soviet era it was regarded as a 'social duty' to mine ore resources, rather than an economic imperative. This led to the development of ore resources that would have been regarded as uneconomic in the west. Nevertheless, it provided much-needed employment. In addition, the inflated production that this philosophy engendered was seen as evidence of the superiority of the communist system in the propaganda war with the west. While there is now a move towards the adoption of western reserve and resource definition conventions, a significant amount of reporting (and historical data) is still conducted using the old Soviet A, B and C1 system.

Structure: Since profitability was disregarded as a motivating force, ownership of mining operations was similarly seen as irrelevant. As a result, mining operations were often controlled by large state-controlled combines. In many cases, however, these remained long after the disintegration of the Soviet Union. As a result, Norilsk still controls over 90% of Russian nickel and platinum group metal (PGM) production and 70% of its copper production, while Alrosa accounts for almost 100% of diamond production.

Production: The breakdown of trading patterns occasioned by the dissolution of the Soviet Union and the creation of borders and tariffs where none had previously existed caused a sharp reduction

in internal trade within the successor Confederation of Independent States (CIS). As in the 1930s in the west, this collapse in trade resulted in higher unemployment and lower demand. Annual demand for nickel in Russia in 1998 was less than 10% of demand in the Soviet Union during the late 1980s. Although some of the excess capacity was absorbed into western markets, supply ultimately had to be reduced by curtailing uneconomic capacity. This is illustrated in Exhibit 2 below, which shows CIS production of gold compared with that in the Soviet Union from 1984 to 1996.

Exhibit 2: Russian and CIS gold production, 1984-1996 (tonnes)



Source: Gold Fields Mineral Services, South African Chamber of Mines, Edison Investment Research

It is notable that Russian production in the year 2000 barely differs to that in 1996. Nevertheless, the performance of Russia's gold sector is still better than of iron ore, where production in 2000 was only 77% of that in 1990. There are, however, other areas in which current production exceeds that in 1990, most notably aluminium, lead and zinc.

Technology. Since the Soviet system disregarded economic imperatives in the exploitation of its mineral resources, the principal limitation on mining operations was often a technological one. Where Soviet technology lagged behind that in the west, it is notable that deposits that could and would have been exploited in the latter region were sometimes overlooked in the FSU (eg near surface gold deposits at grades between 5g/t and 8g/t). In addition, the absence of the need for cost control often led to different cost and productivity patterns. Energy expenditure, for example, in most Russian mining operations is estimated to be about 30% greater than in the west, while productivity is typically 33% lower.

Depletion. In addition to the anomalies described above, in instances in which the Soviet Union's internal requirements for a particular metal could be met from a single operation, there was very little incentive to explore for additional resources. While there was considerable exploration in general, this sought to uncover the sub-soil geology of the country. Where a metal or mineral was not regarded as being in short supply, there was a notable absence of follow-up work to delineate any additional, potential ore body.

As a result, a notable feature of Russian mining activities is both the selective over- and under-development of reserves and resources relative to the more market-based levels of exploitation in the west.

Contemporary production

Russia accounts for approximately 14% of global mineral extraction.

Exhibit 3: Contemporary Russian production of metals/minerals

Metal/mineral	Production	World ranking
Aluminium	4,200,000t	2
Copper	570,000t	7
Diamonds	11,600,000cts	3
Gold	143t	6
Nickel	270,000t	1
Platinum group metals	3.9Moz	2

Source: Edison Investment Research

Nickel & PGM production

Production of both nickel and PGMs is, in effect, controlled by Norilsk Nickel. PGM production, stocks and resources were, until relatively recently, a state secret on account of their applications within the military-industrial complex. They were thus regarded as strategically important from a geopolitical perspective. These restrictions have been successively lifted however with the result that in 2005, resource estimates were declassified. Unusually, these were defined using the Australian JORC convention, as summarised below.

Exhibit 4: Russian platinum group metal JORC reserves & resources

	Proven & Probable	Measured & Inferred
Platinum (Moz)	15.993	40
Palladium (Moz)	62.183	141
Total	81.791	181

Source: Edison Investment Research

As such, Norilsk's reserve base is capable of supporting production of PGMs at approximately current levels for another 20 years, while its resources could support production for more than 45 years.

Nevertheless, past over-exploitation has resulted in the widespread depletion of Norilsk's nickel ore. The company plans to continue to concentrate on nickel production until 2010. This should prevent output declining in the short term. Thereafter, however, it intends to switch its focus to the copper rich ore also in the region. Given the close association between nickel and PGMs, it is possible that this will lead to a reduction in PGM output.

Coal

Russia's coal mining industry currently consists of 241 mines (104 underground and 137 open cast) operating on 114 coal deposits, located in 22 coal basins. According to the State Register of Reserves, total Russian coal reserves amount to 200Gt, of which 106Gt fall into the Soviet A, B and C1 categories of explored reserves. As such, Russia accounts for 11% of global coal resources, second only to the US.

At the moment, production capacity within Russia's coal industry is approximately 315Mt pa. The stated intention of the authorities is to increase production to 310-330Mt pa by 2010 and to 375-430Mt pa by 2020. As yet, however, no clear strategy for achieving this goal has been detailed. Moreover, whatever strategy is ultimately decided, it is likely to require high levels of capital expenditure in order to implement.

Gold

Unlike most other major gold producing countries, the production of gold in Russia is disproportionately derived from placer deposits. Thus, while these types of deposit account for only 18.2% of Russia's reserves, they account for almost 50% of production. In addition, a relatively high proportion of Russia's gold is produced as a by-product of another mineral.

Less dominated by any one single producer than other metals, gold has also been relatively successful in attracting foreign investment. As a result, foreign entities now control between 15% and 18% of gold produced in Russia – approximately 30-36t pa.

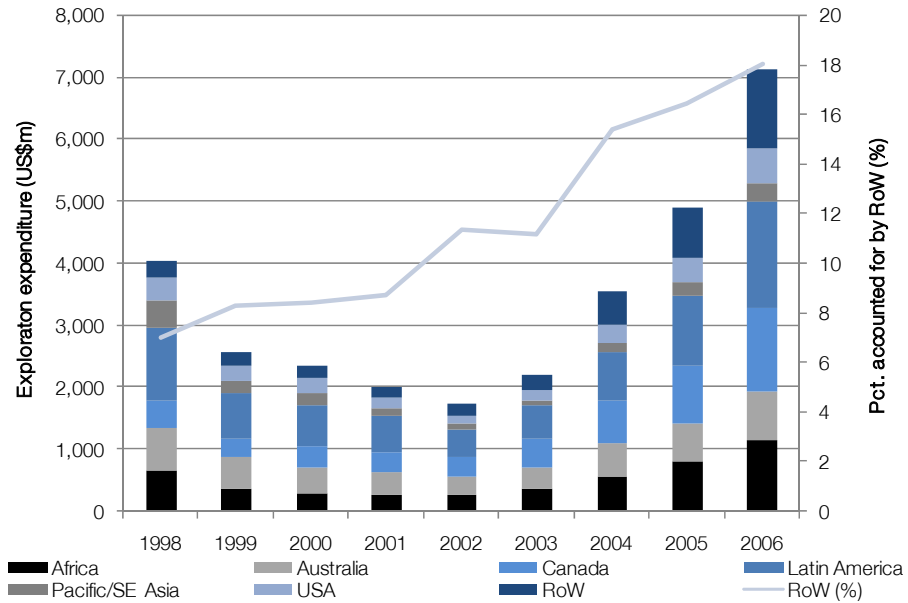
Iron ore

Potentially accounting for as much as 26% of the world's iron ore, Russia's iron industry nevertheless suffers from the widely spread locations of its mines and works. In addition, 60% of Russia's reserves are contained within the Kursk Magnetic Anomaly (KMA), which, although extensive (with 4Gt of reserves and potentially 60Gt of resources), is nevertheless relatively low grade and remains unattractive in the context of the prevailing economic climate.

Metals' contribution to the Russian economy

Metals account for 19% of industrial production in Russia and employ 9.3% of the industrial workforce, with over 1m people involved in metal extraction. Nevertheless, Russia has an historically poor record in attracting investment capital. In part this is due to the historically secretive attitude adopted by the authorities towards the country's resources. This, in turn, has acted as a disincentive towards exploration expenditure. Exhibit 5 depicts the share of global exploration expenditure accounted for by destination countries. It clearly shows the under-investment by the global mining industry on average into China, Russia and India relative to North and South America, Australia and Africa.

Exhibit 5: Global metals and minerals exploration expenditure



Source: South African Chamber of Mines, Edison Investment Research

Although the proportion of exploration expenditure accounted for by the rest of the world has grown strongly since 1998, at just 18% of the total it remains disproportionately low relative to the 34% of the global land mass accounted for by these countries.

Russia has also been relatively unsuccessful at attracting capital expenditure for beneficiation. The reasons advanced for this short-fall include perceived disincentives inherent in the tax system, the legal system and the licensing system. For example, gold licences may now only be awarded by the Russian Ministry of Natural Resources in Moscow. In addition, the government has recently enacted a new law that restricts foreign ownership in Russian mining ventures to 49%. It has also raised the spectre of ‘restricted’ mineral deposits, which are subject to a different set of laws.

Exhibit 6: Soviet Union, coal and major minerals



Source: University of Texas

Company profiles

Investment summary: Major new Ni resource

Via its contiguous Kun-Manie and Kustakskaya properties, Amur controls 100% of the fifth largest new nickel sulphide deposit discovery since Voisey's Bay.

Kun-Manie

Amur's Kun-Manie property is located 700km from the world's largest nickel consumer (China) and 320km from its nearest railhead (Ulak). It comprises one well defined prospect (Vodorazdelny), three partially defined prospects (Maly Krumkon, Ikenskoye and Falcon) and three further targets (Chorney Ispelene, Kubuk and Yan Hegd). The property has access to both the Vanino all weather sea port in Russia's Far East and power supplies from the Zeya hydroelectric dam.

Kun-Manie reserves & resources

Amur has drilled up a total resource of 68.5Mt at 0.5% nickel (Ni) and 0.14% copper (Cu), containing 341,000t (750m lbs) Ni and 95,500t (211m lbs) Cu. In the measured category, this comprises 3.7Mt at 0.61% Ni and 0.16% Cu containing 22,700t Ni and 5,800t Cu respectively, while in the indicated category it comprises 47.7Mt at 0.48% Ni and 0.13% Cu containing 226,800t Ni and 64,400t Cu respectively and in the inferred category, 17.1Mt at 0.54% Ni and 0.15% Cu containing 91,500t Ni and 25,300t Cu respectively. Of the three prospects, the largest is Ikenskoye, which contains 36.4Mt at 0.45% Ni, followed by Maly Krumkor, 26.2Mt at 0.52% Ni and then Vodorazdelny, 5.9Mt at 0.71% Ni. The resource remains open both along strike and down dip, with 80% of the Maly Krumkon and 50% of the Ikenskoye targets as yet unexplored.

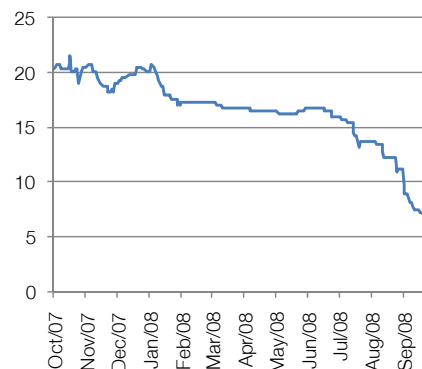
Pre-feasibility and Bankable feasibility studies

A pre-feasibility study (PFS) has been concluded at Kun-Manie and a bankable feasibility commenced, with a target date for completion of 2009. At a Ni price of US\$16,500/t, the PFS indicated a 4Mtpa operation lasting ten years. At a stripping ratio of 2.88 to one, this produces 20,000tpa Ni in concentrate (to be toll smelted) at an operating cost of US\$14.80 per tonne of ore (US\$2.51/lb Ni excluding by-product credits). The capital cost is US\$336m initially (including US\$140m for infrastructure) plus US\$65m of sustaining capex. On this basis, the project demonstrated a net present value of US\$84m and an internal rate of return of 15.7%, with a four year payback of capital costs.

Year End	Revenue (US\$m)	PBT (US\$m)	EPS (US\$)	DPS (US\$)	PE (x)	Yield (%)
12/06	0.0	(1.5)	(0.02)	0.00	N/A	N/A
12/07	0.0	(2.0)	(0.02)	0.00	N/A	N/A

Price 6.8p
Market Cap £8m

Share price graph



Share details

Code AMC
Listing AIM
Shares in issue 122m

Business

Founded in 2003 and listed on AIM in March 2006, Amur Minerals is a resource development company focused on base metals projects. Its assets currently consist of three projects; Kun-Manie, Kustakskaya and Amadjakan. The principal is the Kun-Manie nickel/copper sulphide project.

Bull

- Construction expected to start in 2011 with production in 2013
- Debt free
- Initial submission for mining permit made

Bear

- Certificate of discovery outstanding

Analyst

Charles Gibson 020 3077 5724
cgibson@edisoninvestmentresearch.co.uk

Investment summary: Cheap resource

The gold belt within which Chaarat's licence lies has historically been the source of the principal gold production within the CIS. The entire zone is characterised by large deposits such as Muruntau (175Moz), Kumtor (18Moz), Amantaitau (6.2Moz) and Jeeroy (5.6Moz). To date, Chaarat has delineated a resource in excess of 3Moz of gold, yet explored less than 6km of 28km of strike length.

Geology

Discovered in the 1980s, the mineralisation within Chaarat's licence is classified as either porphyry & epithermal or orogenic. It is particularly associated with major crustal sutures and shear zones related to a Palaeozoic magmatic arc. These zones are typically 5-20m in width and contain sulphide gold (including hosted by pyrite and arsenopyrite), silver and tungsten, dipping at 45-55° to the northwest and amenable to bulk mining.

Exploration

To date, Chaarat's exploration programme has involved over 25,000m of diamond drilling in 125 holes, a further 25,000m of trench and bulldozer excavation sampling and the development of an exploration adit. In the process it has identified three principal targets; the Contact, Main and Tulkubash zones, containing a combined indicated and inferred JORC resource of 22.1Mt of ore at a grade of 4.41g/t, containing 3.134Moz gold. All three zones are open both along strike and down dip.

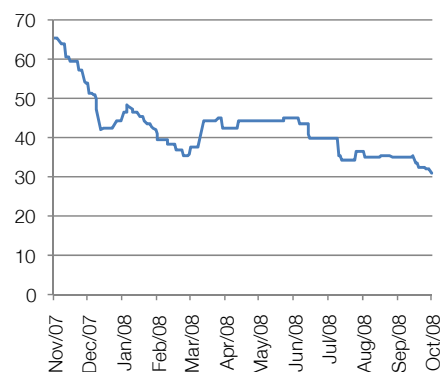
Studies

Chaarat has completed a positive scoping study on the project and is now in the process of assembling a pre-feasibility study that it expects to complete in H209. Thus far, the scoping study has indicated a mining method of longhole stoping with backfill to produce 235,000oz gold pa for five years, before falling to 210,000oz thereafter, at a cash cost (net of silver and antimony credits) of US\$359/oz. Pursuant to new ecological and geological information the company is now working on another development strategy to further improve operational and capital efficiency which it believes will result in lower cash costs, capital expenditure and in a higher NPV and IRR.

Year End	Revenue (US\$m)	PBT (US\$m)	EPS (US\$)	DPS (c)	PE (x)	Yield (%)
12/06	0.0	(3.1)	(0.06)	0.0	N/A	N/A
12/07	0.0	(6.5)	(0.11)	0.0	N/A	N/A

Price 31.0p
Market Cap £22m

Share price graph



Share details

Code CGH
Listing AIM
Shares in issue 71.9m

Business

Admitted to AIM in November 2007, Chaarat has a 100% interest in a 604km² licence in the mountainous area of western Kyrgyzstan in a highly prospective area of the Tien Shan gold belt.

Bull

- Market cap = US\$13.7 per resource ounce
- Adit intersected 22.45m at 5.73g/t Au plus 13.1g/t Ag
- Six drill rigs being used for ongoing exploration
- Hydro power potential
- Cash on balance sheet of US\$7m as at 30 June 2008

Bear

- Mountainous terrain
- Kyrgyz political risk

Analyst

Charles Gibson 020 3077 5724
cgibson@edisoninvestmentresearch.co.uk

Investment summary: Alluvial platinum

Eurasia is one of the oldest junior mining companies operating in Russia. Its most advanced exploration licence in the central Urals is situated near the site of historic platinum producing assets that date back to the early nineteenth century. The PGM deposit being assessed for its economic potential is unlike the main mines in the world, in that it is alluvial in nature. In addition, the funding required to take it through to a bankable feasibility study is being provided by Anglo American in return for a 50% stake in the project.

Seeking mining licence

The West Kytlim licence area comprises 251km² of land, including two river systems (Tylai and Kosva) and their associated river terraces. These are rich in both PGM-carrying sediments and the 'tailings' of historic mining operations. Following the completion of a drilling and trenching programme at Bolskoya Sosnovka, Eurasia submitted a preliminary feasibility study (which has been approved) as a first step in converting its licence from an exploration into a mining one. It is now in the process of defining the area of future mining operations and upon completion of this requirement, will embark on a bulk sampling operation followed by the trial processing of 10,000m³ of ore through a mobile concentrator rig.

Cheap, low tech methods anticipated

Early indications suggest that the West Kytlim deposits will require minimal capex to develop and be susceptible to low tech, dry mining techniques. As such, Eurasia intends to exploit PGM grades above 100mg/m³, with a target production rate of 5-6,000oz in 2009, rising to 15,000oz per annum for the following 7-8 years.

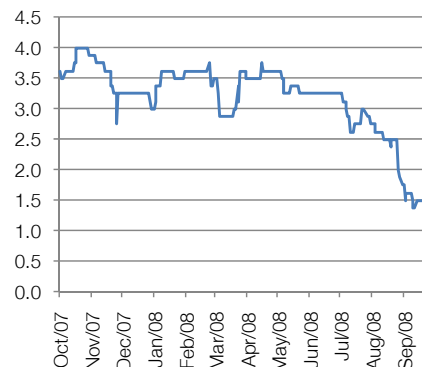
Other assets

Eurasia's operations in the Kola Peninsula comprise three exploration projects covering mafic and ultramafic intrusive rocks (ie similar to the Bushveld Complex) at Monchetundra and Volchetundra. Early stage exploration is fully funded by Anglo Platinum up to US\$10m, after which it has claw-back rights to take its interest to 60%. Lastly, drilling results from Eurasia' Baronskoye/Barachinsky licences in the central Urals have returned grades as high as 8.89g/t of palladium and gold over 1.5 metres.

Year End	Revenue (£m)	PBT (£m)	EPS (p)	DPS (p)	PE (x)	Yield (%)
12/06	0.0	(1.0)	(0.81)	0.0	N/A	N/A
12/07	0.0	(0.9)	(0.62)	0.0	N/A	N/A

Price 1.5p
Market Cap £2m

Share price graph



Share details

Code EUA
Listing AIM
Shares in issue 141.1m

Business

Eurasia Mining has interests in three exploration projects in Russia: an alluvial platinum group metals' (PGM) project in the Urals, platinum projects in the Kola peninsula and a bedrock PGM project also in the central Urals.

Bull

- Low-cost alluvial PGM deposit
- 'Minimal' capex requirement
- Susceptible to low tech mining method

Bear

- No public resource statement
- Political risk
- Currently loss making

Analyst

Charles Gibson 020 3077 5724
cgibson@edisoninvestmentresearch.co.uk

Investment summary: New prospect

The acquisition of a 50% interest in Benkala reduces Frontier's dependence on the performance of Naimanjal. Benkala is a significant copper porphyry deposit in the Urals gold-copper belt, which Frontier will progress at least to feasibility stage. Management believes that it will prove to be a company-transforming asset.

Naimanjal

Hitherto the company's most significant asset, Naimanjal consists of a central mining complex surrounded by six satellite gold projects within a 12km radius. Altogether, it comprises eight near surface, open pit gold-silver mines developed to produce 25,000oz Au pa. Indicated resources at Naimanjal amount to 3.5Mt at 0.73g/t Au and 17.31g/t Ag, and contain 82,000oz and 1.9Moz of gold and silver respectively. Inferred resources are 8.3Mt at 0.64g/t Au and 18.95g/t Ag, containing 170,000oz Au and 5Moz Ag (using a 0.5g/t cut-off). Ore produced passes through a three-stage crushing circuit before the gold is extracted via conventional heap leach cyanidation. Naimanjal has been beset with regulatory and permitting problems. As a result, it currently operates under a Pilot Production licence. This has the advantage of avoiding taxes and royalties but limits mining flexibility. Management has applied to increase the allowable tonnage under the Pilot Licence to 800,000tpa before seeking a full Commercial Licence. Nevertheless, the time spent operating under the Pilot Licence has improved management's understanding of the continuity of the geology of the deposit and improved grade control.

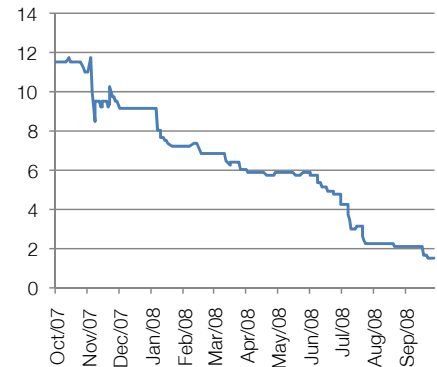
Benkala

Originally discovered in 1968, Benkala is located along a trend containing a large number of similar porphyry deposits. According to the Competent Person's Report compiled by Wardell Armstrong, the deposit comprises 47.75Mt of ore at a grade of 0.36% copper (Cu) in the oxide zone and 873.75Mt at a grade of 0.3% Cu in the sulphide zone. Early test work indicates that oxide ore up to a grade of 0.675% is amenable to extraction via heap leaching with sulphuric acid and flotation. Ten percent of the sulphide ore is similarly treatable at grades up to 0.4%. The company is therefore investigating the possibilities for developing (1) a large sulphide floatation operation (perhaps as a JV) or (2) a small oxide SX/EW operation followed by a small sulphide floatation circuit.

Year End	Revenue (US\$m)	PBT (US\$m)	EPS (US\$)	DPS (US\$)	PE (x)	Yield (%)
12/06	3.0	(2.6)	(0.01)	0.0	N/A	N/A
12/07	0.0	(4.3)	(0.03)	0.0	N/A	N/A

Price 1.5p
Market Cap £3m

Share price graph



Share details

Code FML
Listing AIM
Shares in issue 218.1m

Business

Frontier Mining was incorporated in 1998 for the purpose of exploring and developing gold and copper deposits in Kazakhstan and the countries of the CIS. It currently has one mining operation at Naimanjal, two projects at pre-feasibility stage (Benkala and Koskuduk) and one exploration prospect (Baitemir).

Bull

- Market cap equates to US\$33/oz Au
- Naimanjal open along strike and at depth
- Potential Koskuduk resource of 1Moz gold (source: FML); planning feasibility for 25koz pa operation
- Copper resources at Beschoku and Yubileiny contain 2.6Mt contained Cu at c 1% (P1+C2 classification)

Bear

- Regulatory & permitting problems
- Relatively low grades

Analyst

Charles Gibson 020 3077 5724
cgibson@edisoninvestmentresearch.co.uk

Investment summary: Kazakh gold producer

Hambledon was loss making in H1 partly due to a boiler explosion, but nevertheless represents an interesting package of ex-Soviet assets cheaply priced.

Sekisovskoye

Located 40km from the regional capital and mined historically until 1986, Sekisovskoye comprises 244 mineralised zones within the northwest marginal zone of the Rudny Altai Palaeozoic metallogenic belt, exhibiting as a series of steeply dipping (65-80°), parallel lenticular structures striking NW/SE and dipping NE. The mineralisation is associated with hydrothermal alteration of the matrix and hydrothermal sulphide veining. This results in free milling gold with a very small percentage of refractory ore susceptible to conventional CIL recovery techniques. JORC indicated and inferred resources amount to 29.34Mt at 2.7g/t Au and 3.8g/t Ag, containing 2.6Moz and 3.6Moz of gold and silver respectively with no overburden and containing no or negligible concentrations of arsenic.

Mining plan

The deposit is being mined initially at 0.7Mtpa via an open pit to produce c. 40,000oz Au per annum. At the end of 2009 this will then be supplemented by an underground mine, which will ramp up to a capacity of 500,000tpa with 350,000tpa coming from the open pit to produce c100,000oz Au per annum at an estimated mining cost of US\$1.1/t and mill and treatment costs of US\$13/t. After the exhaustion of the open pit, operations will move exclusively underground producing c 100,000oz pa over six years at a grade of 5.1g/t.

Ognevka

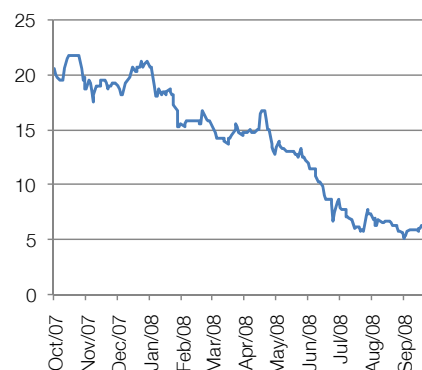
The Ognevka plant was bought out of administration by Hambledon in January 2007. Similarly close to Ostkamen, Ognevka processed pegmatite ores produced nearby until 1995 and comprises a 350,000tpa crush, grind and flotation circuit and a 200,000tpa gravity concentrator. In due course, management intends to exploit this facility for (1) retreatment of historic zinc clinker tailings rich in copper, gold, iron, silver and carbon, (2) the toll treatment of zinc clinkers currently produced in the region and (3) retreatment of 9.7Mt of historic lithium-rich pegmatite tailings (of which 8Mt is still owned by the state). It is also investigating obtaining mining rights.

Consensus estimates

Year End	Revenue (£m)	PBT (£m)	EPS (p)	DPS (p)	PE (x)	Yield (%)
12/06	0.0	(0.7)	(0.19)	0.0	N/A	N/A
12/07	0.0	(4.4)	(1.04)	0.0	N/A	N/A
12/08e	7.6	(2.0)	(0.4)	0.0	N/A	N/A
12/09e	19.7	5.2	1.1	0.3	4.7	5.9

Price 5.12p
Market Cap £24m

Share price graph



Share details

Code HMB
Listing AIM
Shares in issue 469.2m

Business

Hambledon operates the Sekisovskoye gold mine in east Kazakhstan. In addition, it owns the mineral rights at the adjacent Tserkova deposit, containing another 386koz of in-situ gold (C2+P1) resources as well as the Ognevka pegmatite plant, which used to produce 40% of the Soviet Union's tantalum and beryllium output.

Bull

- Good infrastructure in historic mining region.
- Potential profits of c US\$40m pa from Sekisovskoye.
- Total resource of 3.4Moz (Au equiv) equates to market cap of US\$14/oz.
- Operation sized for two month shut-down pa: potential to work year round.
- Capacity for another crusher and leach tank provide expansion potential

Bear

- Clay likely to disrupt operations in spring and autumn.

Analyst

Charles Gibson 020 3077 5724
cgibson@edisoninvestmentresearch.co.uk

Investment summary: Mayskoye transformation

There are three components to Highland's current assets. One mine is fully operational; Mnozovershinnoe in the Khabarovsk region. Three are development projects; Novoshirokinskoye (in the Chita region), Taseevskoye (Chita) and Mayskoye (Chukotka) and six are exploration areas; Belaya Gora (Khabarovsk), Iska (Khabarovsk), Maya Inikan (Khabarovsk), Lubavinskoye-Malo-Federovskoye (Chita), Sovinoye (Chukotka) and Unkurtash (Kyrgyzstan). Total resources at Highland's projects amount to 53.3Mt of ore at a grade of 7.7g/t gold and 20.3g/t silver; these contain 13.2Moz of gold and 34.8Moz of silver under the Russian classification system (B+C1+C2). Including its 48.25% stake in Novoshirokinskoye, Highland has total attributable resources of 12.4Moz of gold and 21.3Moz of silver.

Mnozovershinnoe

The total resource base at Mnozovershinnoe consists of 6.4Mt of ore at a grade of 11.1g/t gold (Au) and 14.3g/t silver (Ag), containing 2.3Moz of gold and 2.9Moz of silver (B+C1+C2). In the year to December 2007 the mine produced 0.5Mt of ore from open pit operations at a grade of 6.81g/t and 0.6Mt from underground at a grade of 4.16g/t. Recoveries were 89.84% (c 91.18%) to give total production of 156,474oz of gold, compared with 151,146oz in 2006 – a rise of 3.5% – at a cash operating cost of US\$432/oz (c US\$361/oz), up 20%. Total operating costs were US\$480/oz (c US\$402/oz). In 2008, the company expects production from Mnozovershinnoe to increase to 155-165,000oz. At the half-year stage, production was up 18% to 68,813oz and management expressed confidence that it would meet its target. At the same time, capital is being invested in the adsorption and thickening circuits of the plant in order to increase recoveries further and to reduce reagent consumption.

Mayskoye

Mayskoye is Highland's flagship project, with measure & indicated resources of 6.839Mt at 11.5g/t containing 2.553Moz Au and inferred resources of a further 15.020Mt at 9.9g/t containing 4.769Moz Au. A feasibility study and mine plan have been completed and construction started. Commissioning is scheduled for 2010 with production of 250,000oz from 2011 onwards. In the meantime, exploration to further increase the resource base is ongoing.

Consensus estimates

Year End	Revenue (US\$m)	PBT (US\$m)	EPS (US\$)	DPS (US\$)	PE (x)	Yield (%)
12/06	92.0	25.1	0.084	0.0	9.1	N/A
12/07	112.1	17.4	0.064	0.0	11.9	N/A
12/08e	148.2	35.8	0.066	0.0	11.6	N/A
12/09e	195.2	50.8	0.093	0.0	8.2	N/A

Price 41.75p
Market Cap £136m

Share price graph



Share details

Code HGM
Listing AIM
Shares in issue 325.1m

Business

Highland Gold was incorporated in 2002 for the purpose of acquiring, consolidating and developing a portfolio of quality gold mining assets and the goal to become the most profitable gold mining company in Russia. To achieve this, it has developed an exploration pipeline focused on identifying low-cost, open-pit, bulk mining operations with 30,000m of drilling planned in 2008 alone.

Bull

- Market cap equates to US\$32 per gold resource oz (excl. other metals)
- Net cash
- Novoshirokinskoye production in 2009
- Mayskoye production in 2011
- Taseevskoye start-up in 2013
- Potential multi-million oz deposit at Lyubov
- 1.2Moz C1+C2 at Belaya Gora

Bear

- Only 33.1% free float

Analyst

Charles Gibson 020 3077 5724
cgibson@edisoninvestmentresearch.co.uk

Investment summary: Imminent BFS

Kryso has two assets, but by far the most advanced is the Pakrut gold project. Located on the site of old Soviet workings, the Pakrut deposit has been reinterpreted from a single ore body to a series of sub-parallel pinching and swelling mineralised zones within the host rock. Drilling highlights include 123m at 6.16g/t and 6.5m at 37.39g/t. The deposit remains open at depth, to the east and north.

Ongoing exploration and resource delineation

By 2008, over 12,000m of drilling had been completed at Pakrut (including 80 diamond holes), over 1,500m of the original, Soviet era adit refurbished and 600m of underground development excavated. More than 19,000 samples have been prepared, 5,000 of which have been assayed. During 2008, the company has drilled below the adit level and plans to drill the lower southern and eastern extensions of the Pakrut mineralisation, both from surface and from underground. To date a resource of 21.4Mt of ore has been outlined at Pakrut, at a grade of 2.53g/t and containing 1.7Moz gold, of which 13.4Mt at 2.71g/t containing 1.2Moz Au is classified as 'measured and indicated' resources (at a cut-off grade of 0.5g/t).

Completed PFS and ongoing BFS

An internal pre-feasibility study (PFS) has been completed and Kryso has now advanced to conducting a bankable feasibility study (BFS) at Pakrut, targeting 100,000oz of annual production. The basis of the PFS was similarly a 4,000t per day operation that produces 100,000oz gold pa at a rate of recovery of 90%. Capex was estimated to be US\$65m and cash costs (including royalties) US\$291/oz to give a project net present value (NPV) of US\$115m and an internal rate of return of 67% over a six year mine life.

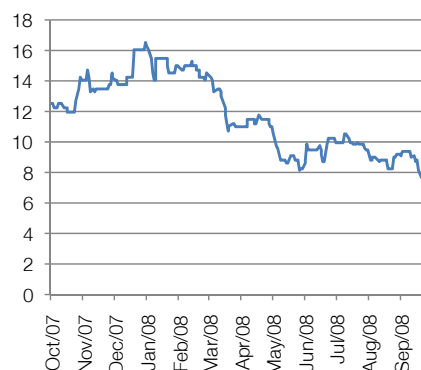
Hukas

Located within the Kailaikum-Sauksai structural zone, Hukas contains three significant TEM anomalies, similar to other gabbronorites in the area.

Year End	Revenue (US\$m)	PBT (US\$m)	EPS (US\$)	DPS (US\$)	PE (x)	Yield (%)
12/06	0.0	(0.3)	(0.0059)	0.0	N/A	N/A
12/07	0.0	(0.9)	(0.0125)	0.0	N/A	N/A

Price 6.4p
Market Cap £6m

Share price graph



Share details

Code KYS
Listing AIM
Shares in issue 89.2m

Business

Kryso was established in order to explore and develop mineral deposits in central Asia, with a particular focus on gold bearing deposits previously identified during the Soviet era. To date, the company's two principal assets are the Pakrut gold project and the Hukas nickel prospect in Tajikistan.

Bull

- PFS completed at Pakrut
- BFS underway
- Market cap equates to US\$8.4 per total resource ounce
- Full production potentially as early as 2010
- Mean grades of 2.86% Ni plus Cu, Co & PGE's shown at Hukas

Bear

- Net cash US\$1.6m at Dec 07

Analyst

Charles Gibson 020 3077 5724
cgibson@edisoninvestmentresearch.co.uk

Investment summary: Emerging silver producer

Located close to the Julietta (Bema) and Dukat mines, Goltsovoye has the potential to be the seventh largest, highest grade silver mine in the world. Phase 1 of a bankable feasibility study on Zone 1 of Goltsovoye was concluded by Wardell Armstrong International (WAI) in February 2007. Ovoca already has a mining licence for the deposit valid until 2012. In addition it has recently signed a non-binding term sheet for a US\$92.7m facility with a major Russian bank to cover its capital costs.

History, geology and mineralogy

Discovered in 1979, Goltsovoye underwent exploration and metallurgical test work between 1980 and 1984, including a feasibility study, before it was trial mined from 1989 to 1993. Located in the Pestrinsky Ore Cluster, the Goltsovoye ore field covers an area of 12.5km², with silver-lead (Ag-Pb) mineralisation hosted in Upper Cretaceous volcanic rocks, down thrown against Triassic sediments by the Tapiskiy fault. The ore field consists of six known ore zones (1, 1-A, 2, 3, 4 and 5) striking NE to SW over a combined strike length of over 5km. The mineralogy is complex, with the silver contained in galena and a sulphurantimonite of silver. In addition most orebodies also contain oxide and supergene enriched ore.

Goltsovoye reserves and resources

Total resources (C1+C2+P1) over all six ore zones amount to 3.5Mt at 23oz/t and contain 81.3Moz of silver according to the Russian system of classification. In addition, WAI has calculated a measured and indicated JORC resource of 1.4Mt at 32.7oz/t containing 44.5Moz Ag at Zone 1 out of a total JORC resource (incl. 'inferred') of 2.4Mt at 28.8oz/t containing 69Moz in Zones 1 & 2.

Forecast production of 5.8Moz silver pa

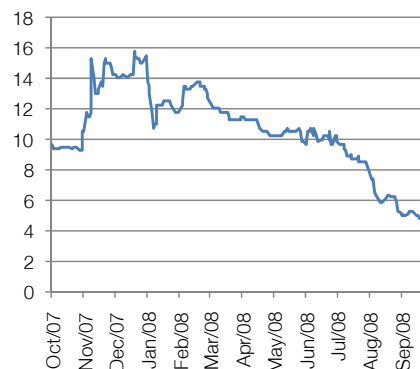
The mining plan concluded by Scott Wilson Mining currently encompasses only Zone 1 and envisages a 260,000tpa operation producing 5.8Moz over six years. On account of the 12km of development via three adits undertaken during the Soviet era, total capex (including a contingency) was estimated by WAI at US\$94.6m. Combined with low cash costs of US\$4.11/oz Ag, WAI calculated a 'base' case NPV for the project of US\$76m. Nevertheless, ongoing exploration of the resource is likely to extend the life of mining operations 'considerably' beyond six years.

Consensus estimates

Year End	Revenue (€m)	PBT (€m)	EPS (c)	DPS (c)	PE (x)	Yield (%)
12/06	0.0	(5.2)	(1.41)	0.00	N/A	N/A
12/07	0.0	(0.9)	(0.22)	0.00	N/A	N/A
12/08e	0.0	(4.0)	(1.00)	0.00	N/A	N/A
12/09e	0.0	(6.0)	(1.00)	0.00	N/A	N/A

Price 3.7p
Market Cap £16m

Share price graph



Share details

Code OVG
Listing AIM
Shares in issue 433m

Business

Ovoca is domiciled in Dublin and run out of Moscow. It has a portfolio of advanced stage exploration and development assets in Russia. These include 100% of the Goltsovoye deposit in the Omsukchan district of Magadan in Eastern Russia as well as the Kolomozero-Voronya greenstone gold and the Pellapkh Co-Mo deposits in the Kola peninsula.

Bull

- Equivalent to > 1Moz gold deposit
- High grade (equiv 14g/t gold)
- 80% of ore body above ground
- Low cost (equiv < US\$300/oz gold)
- Market cap at 50% discount to NPV
- 132Mt 0.06% Mo Pellapakh deposit 'free'

Bear

- Development risk

Analyst

Charles Gibson 020 3077 5724
cgibson@edisoninvestmentresearch.co.uk

Investment summary: Quadrupling production

Up to now the company's production at Amantaytau has been from its oxide, open pit operations. In the half year to June 2008, output was 23,689oz gold (Au). However, its flagship project is to develop the underground sulphide ores. A bankable feasibility study to this effect, completed by Wardell Armstrong International in June 2008, forecast output from these deposits of 230,000oz pa from mid-2010. Including expanded production of 75,000oz pa from the Vysokovoltnoye and Asaukak open pits and their satellites, total output is forecast to quadruple in two to three years to over 300,000oz pa at lower unit costs.

Underground sulphide project resources

Resources attributable to Oxus amount to 48.65Mt at 2.3g/t Au and 16.7g/t silver (Ag) containing 3.604Moz Au and 26.137Moz Ag. Of the contained gold ounces, 13% are in the measured category, 54% in the indicated category and 33% in the inferred category. In addition, there are a further 4.794Moz Au and 179.857Moz Ag in Russian P1 and P2 reserves attributable to the company. The greatest value in the total resource base lies in the Severny and Centralny deposits, which contain a production reserve of 7.16Mt at 7.55g/t containing 1.74Moz Au.

Mining plan

The ore bodies will be accessed by two parallel declines and mined by cut and fill and limited sub-level stoping mining methods. The existing CIP plant will be modified to take sulphide ore. The ore itself will be processed by flotation into a concentrate before being bio-digested using Goldfields, South Africa technology and leached in CIL tanks. The plant is being commissioned in two phases. The first will comprise a single flotation bank and two biox modules (the first of which will be commissioned in Q409), to treat 750,000tpa. This will be increased to 1.2Mtpa in the second phase in mid-2010. Flotation recoveries are forecast at 96% and CIL recoveries 92% to give an overall recovery rate of 88%.

BFS financials

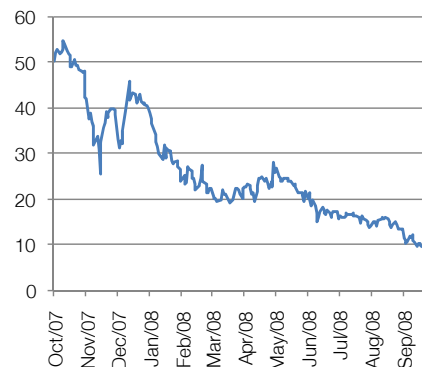
With Q110 opex of US\$86.30/t ore or US\$402/oz Au and capex of US\$167.8m initially plus US\$48.7m over a life of seven years, the project has a net present value of US\$266m at a 10% discount rate and an internal rate of return of 51%, with payback in 24 months. The project is to be 100% debt funded.

Consensus estimates

Year End	Revenue (US\$m)	PBT (US\$m)	EPS (c)	DPS (c)	PE (x)	Yield (%)
06/07	2.3	(18.9)	(6.3)	0.00	N/A	N/A
06/08	2.7	(41.2)	(11.2)	17.98	N/A	123
06/09e	7.5	-	0.6	0.00	24.4	N/A
06/10e	-	-	5.2	0.00	2.8	N/A

Price 8.0p
Market Cap £31m

Share price graph



Share details

Code OXS
Listing AIM
Shares in issue 381.4m

Business

Founded in 1996 and listed on AIM in 2001, Oxus Gold is the only company of its type to locate its primary operations in Uzbekistan. As such, it has a 50% interest in Amantaytau Goldfields (AGF), located in the Kyzylkum region in the Tien Shan gold belt, 40km south of Murantau.

Bull

- Market cap = US\$15 per JORC Au oz
- First sulphide gold in 09
- Sulphide deposits open at depth
- Courts rejected tax authorities' claims
- Litigation claims re Eurogold and arbitration re Kyrgyz Republic settled
- Strategic shareholding by Uzbekistan's largest private company, Zeromax

Bear

- Harsh winter weather
- Execution and funding risk

Analyst

Charles Gibson 020 3077 5724
cgibson@edisoninvestmentresearch.co.uk

Investment summary: Growing output

Peter Hambro is the second largest gold producer in Russia. It is also one of the most experienced and has operated in Russia since the company was founded in 1994. It now has 5,000 employees and attributable production in 2007 of 297,300oz, at a cash operating cost of US\$143/oz.

Reserves & resources

The company has delineated a total resource of 20Moz (B+C1, C2+P1), according to the Russian system of classification. Its most advanced project, Pokrovskiy was commissioned in 1999 and is one of the largest open pit gold mines in Amur. It forms the backbone of the company's operations.

Pokrovskiy

Peter Hambro's strategy is the modular expansion of production. To date, the overwhelming majority of the company's output has come from Pokrovskiy. There, ore is processed via a resin-in-pulp (RIP) plant (1.7Mtpa capacity) with a heap leach (0.3Mtpa capacity). Head grades are typically of the order of 3.6-3.8g/t at an average cash cost around US\$200/oz. After the exhaustion of the Pokrovskiy open pit in 2012, the mill and plant will process ore from other satellite operations, currently the subject of ongoing exploration work.

New projects: Pioneer, Malomir and Yamal

Located 20 miles from Pokrovskiy, Peter Hambro's Pioneer operation comprises four mineralised zones and up to five pits that feed a sizeable heap leach facility and an RIP plant. Commissioned in September 2007 with a capacity of 1Mtpa, the addition of further RIP processing lines will increase this to 3.5Mtpa by the end of this year and then to 6Mtpa by 2010, at grades of 1-2g/t. The Malomir project meanwhile has a production target of 5Mtpa at grades between 2.5g/t and 3.5g/t, while that at Yamal is 1.5Mtpa at approximately 1.2g/t.

Increasing production profile

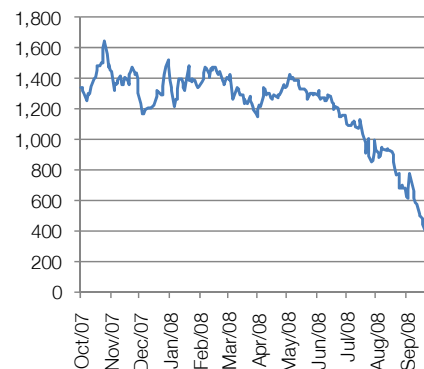
Notwithstanding a six month delay at Malomir, the company forecasts attributable production of 0.9Moz in 2010 and 1Moz in 2011 (including JVs).

Consensus estimates

Year End	Revenue (US\$m)	PBT (US\$m)	EPS (US\$)	DPS (US\$)	PE (x)	Yield (%)
12/06	157.8	45.1	0.398	0.0	18.2	N/A
12/07	226.4	55.2	0.476	0.14	15.2	1.9
12/08e	312.5	140.7	1.205	0.30	6.0	4.1
12/09e	514.5	319.7	2.415	0.40	3.0	5.5

Price 395p
Market Cap £320m

Share price graph



Share details

Code POG
Listing AIM
Shares in issue 81.2m

Business

Founded in 1994 and listed on AIM in 2002, Peter Hambro Mining's principal assets are in the Amur region of Russia. It is currently in the midst of an expansion and also has operations in the Yamal, Buryatiya, Magadan, Sakha, Chita and Irkutsk regions as well.

Bull

- Increasing production profile
- Low unit cash costs
- Unhedged
- Mkt cap = US\$220 per measured & inferred ounce, but US\$47 per (B+C1, C2+P1) ounce
- Early mover advantage

Bear

- Russian resource classification system not favoured by investors

Analyst

Charles Gibson 020 3077 5724
cgibson@edisoninvestmentresearch.co.uk

Investment summary: Phosphate mine

Sunkar listed in London on 30 June 2008 and placed shares at 120p. The group's principal asset, Chilisai, forms part of one of the largest phosphate deposits in the former Soviet Union. The company's resources of 800Mt are capable of supporting mining operations at 10Mtpa for 56 years.

Chilisai history

The Chilisai deposit was explored in the Soviet era, when an official estimate of 1.2bn tonnes of phosphate containing rock was approved. Large-scale trial mining and processing operations were established in the 1980s, but later abandoned after the collapse in agricultural output in the 1990s.

Geography

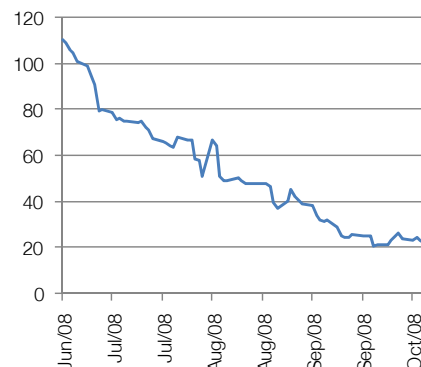
The deposit is located immediately west of Kandagash, ie the main freight hub on the north-south road, the Moscow-Tashkent railway, the Orsk-Atytrau railway and the Bukhara/Ural gas pipeline. As such, it is close to both a low cost source of sulphur in the form of the North Caspian oil and gas operations and extensive infrastructure that link it to its key future markets of China, Russia and the central Asian republics.

Geology & mining method

The ore contained within the licence area is configured as a practically continuous, thin (approximately one metre), flat-lying, shallow sedimentary layer under approximately three metres of overburden. The ore body is easily distinguishable from the overburden by its colour. Historic reports show a P₂O₅ content of 10.1% with little variation. The overburden will be stripped by scrapers and bulldozers, before the ore is mined using a surface miner to minimise dilution. Initially, ore will be mined at a rate of 1,000t per day (or 200ktpa), before being beneficiated to 17% P₂O₅ and sold as low-grade fertiliser. In due course, it is intended that production will be increased to 10Mtpa, to produce 1.76Mtpa of diammonium phosphate (DAP). According to the competent person's report, a DAP price of US\$804/t FOB US Gulf and capex of US\$740m generates a project NPV of US\$3.3bn at a 12.5% discount rate.

Price 22p
Market Cap £35m

Share price graph



Share details

Code SKR
Listing AIM
Shares in issue 159.8m

Business

Sunkar is a UK registered company with a 90% interest in Temir-Service LLP. The latter was awarded the tender to mine phosphates on the Chilisai deposit by the Ministry of Energy & Mineral Resources in Kazakhstan in 1994. The ambition is in due course to become an integrated phosphate fertiliser manufacturer.

Bull

- BFS underway
- Production envisaged in Q3 '08
- Simple, low-cost mining method

Bear

- Relatively low grade deposit
- Early stage: 'metallurgical' testwork ongoing
- Mining licence requires ongoing investment

Analyst

Charles Gibson 020 3077 5724
cgibson@edisoninvestmentresearch.co.uk

Investment summary: Asacha production in 09

Located on the Pacific 'Ring of Fire' – an area known to be conducive to epithermal gold/silver deposits – Asacha is likely to be either a caldera or a large eroded volcano. The ore body comprises a series of parallel north-south veins that dip steeply to the east in two systems. The company has classified these as low sulphidation adularia and sericite epithermal-type banded quartz veins. Offshoots and splays are a common feature of the veins. Nevertheless, despite the structural complexity of the area, the veins are undeformed and continuous along strike. The ore is non-refractory and free milling, with 95% susceptible to direct cyanidation.

Asacha

Resources at Asacha amount to 1.28Mt at 17.0g/t Au and 41.5g/t Ag, containing c700,000oz of gold and 1.71Moz Ag (at 4g/t Au cut off). Following completion of a feasibility study, development at Asacha started in 2007, but was later reviewed in the light of the delays and inflation currently characterising the mining industry generally. As a result, it was decided to commission the mine in two stages.

In the first, production will start at 70,000 tonnes (t) and 12,000oz of gold in 2009, rising to 150,000t and 56,000oz Au in 2010. In the second, production will be increased to 200,000tpa and 68,000oz Au in 2011, before rising to 95-111,000oz over the course of the next four and a half years under the influence of higher grades. In addition, power will now be supplied by a 35kV power line, with three containerised 1MW units as back up. Capital expenditure has been estimated at US\$107m, of which some US\$39m was outstanding as at July 2008. Recently, the company raised US\$12.4m via an equity placing and also negotiated a US\$8.2m debt-for-equity swap. Cash costs have been estimated at US\$210/oz before US\$32/oz of silver credits. Total costs are an estimated US\$530-540/oz. To date, the existing main development adit has been expanded and more than 300m of mine development completed.

Rodnikova

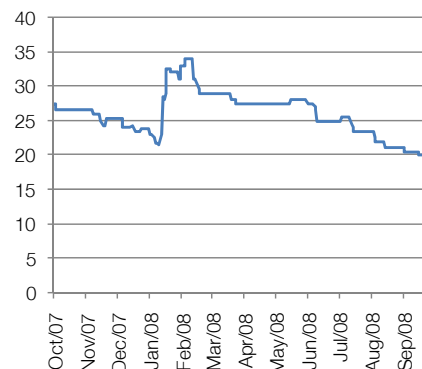
Similar in location and geology, Rodnikova is some years behind Asacha in terms of development. Thus far, a 27-hole drilling programme covering 5,374m has delineated a JORC resource of 1.53Mt at 7g/t Au and 59g/t Ag, containing approximately 347,000oz Au and 2.91Moz Ag (4g/t cut off).

Consensus estimates

Year End	Revenue (US\$m)	PBT (US\$m)	EPS (c)	DPS (c)	PE (x)	Yield (%)
12/06	0.0	(5.4)	(13.54)	0.00	N/A	N/A
12/07	0.0	(4.3)	(10.47)	0.00	N/A	N/A
12/08e	0.0	-	(11.00)	0.00	N/A	N/A
12/09e	10.3	(8.6)	(10.00)	0.00	N/A	N/A

Price 17.5p
Market Cap £15m

Share price graph



Share details

Code TSG
Listing AIM
Shares in issue 84.9m

Business

TSG was established in 2000 and listed on AIM in November 2003. Following the sale of two projects (Veduga and Bogunay) for US\$40m in June '07, the company is focusing on Asacha and Rodnikova in Russia's Far East, with a combined JORC resource of c 1.0Moz of gold (Au) and 4.6Moz silver (Ag).

Bull

- High grade
- Low projected cash costs
- 300koz Au potential in northern extension to Asacha

Bear

- Bureaucratic risk (eg permitting)
- Low free float – 51.96% of share capital owned by UFG, 29.74% by AngloGold Ashanti

Analyst

Charles Gibson 020 3077 5724
cgibson@edisoninvestmentresearch.co.uk

EDISON INVESTMENT RESEARCH LIMITED

Edison is Europe's leading independent investment research company. With a team of 50 including over 30 analysts supported by a department of supervisory analysts, editors and assistants, Edison writes on more than 200 companies across every sector. Working directly with corporates, investment banks and fund managers, Edison's research is read by every major institutional investor in the UK, as well as by the private client broker and international investor communities. Edison was founded in 2003 and is authorised and regulated by the Financial Services Authority.

DISCLAIMER

Copyright 2008 Edison Investment Research Limited. All rights reserved. This report has been prepared and issued by Edison Investment Research Limited for publication in the United Kingdom. All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable, however we do not guarantee the accuracy or completeness of this report. Opinions contained in this report represent those of the research department of Edison Investment Research Limited at the time of publication. The research in this document is intended for professional advisers in the United Kingdom for use in their roles as advisers. It is not intended for retail investors. This is not a solicitation or inducement to buy, sell, subscribe, or underwrite securities or units. This document is provided for information purposes only and should not be construed as an offer or solicitation for investment. A marketing communication under FSA Rules, this document has not been prepared in accordance with the legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research. Edison Investment Research Limited has a restrictive policy relating to personal dealing. Edison Investment Research Limited is authorised and regulated by the Financial Services Authority for the conduct of investment business. The company does not hold any positions in the securities mentioned in this report. However, its directors, officers, employees and contractors may have a position in any or related securities mentioned in this report. Edison Investment Research Limited or its affiliates may perform services or solicit business from any of the companies mentioned in this report. The value of securities mentioned in this report can fall as well as rise and are subject to large and sudden swings. In addition it may be difficult or not possible to buy, sell or obtain accurate information about the value of securities mentioned in this report. Past performance is not necessarily a guide to future performance.

Edison Investment Research is authorised and regulated by the Financial Services Authority.
Registered in England, number 4794244.

EDISON INVESTMENT RESEARCH LIMITED

Lincoln House, 296-302 High Holborn, London, WC1V 7JH

Telephone +44 (0)20 3077 5700
Facsimile +44 (0)20 3077 5750

Email enquires@edisoninvestmentresearch.co.uk
Web www.edisoninvestmentresearch.co.uk