Apollo Minerals (AON)

Active iron ore explorer with highly prospective projects in two major provinces in South Australia and Western Australia, providing strong corporate appeal and attractive development options

Recommendation: Speculative BUY

3rd November 2011

Gavin Wendt |Research Manager
gwendt@breakawayinvestmentgroup.com

Andrew McLeod |Research Analyst
amcleod@breakawayinvestmentgroup.com

Company Information

ASX Code	AON
Share Price A$	0.07
Ord Shares	157m
Options	51m
Market Cap A$	11m
Cash A$	1.5m
Total Debt	-

Board of Directors

Chairman	Tony Ho
Chief Operating Officer	Dominic Tisdell
Executive Director	Richard Shemesian
Non-executive Director	Matthew Rimes
Non-executive Director	David Nolan
Non-executive Director	Wayne Wu
Non-executive Director	Jianguang Wang

Substantial Shareholders

Tiger Resources Pty Ltd	19.2%
China Armco Metals Inc	18.6%
Black Swan Global Pty Ltd	9.4%
Hugo Natural Enterprises	6.1%

Company Details

Address	Level 9, 50 Margaret Street Sydney, NSW, 2000
Phone	+617 3852 4712
Web	www.apollominerals.com.au

12-month Price Chart

Source: Big Charts

Key Points

- ***Consolidation of position in key iron ore and base metals districts in both Western Australian and South Australian***
- ***Major infrastructure enhancements in Western Australia and South Australia enhance prospects for iron ore development***
- ***Mount Oscar drilling and metallurgical test-work provides encouraging results that will assist initial JORC resource estimation***
- ***Favourable outcome from the Federal Governments "Hawke Report" on the Woomera Defence Area enables exploration access***
- ***The Commonwealth Hill project area and wider region remain under-explored due to historic access impediments***
- ***Review of historic exploration at Commonwealth Hill confirms strong potential for direct-shipping and magnetite iron ore***

Apollo Minerals is a predominantly iron ore-focused exploration company, with large strategic acreage positions in two of Australia's highly prospective yet relatively under-explored provinces in Western Australian and South Australia. Considerable exploration progress is now being made.

In Western Australia, exploration work over the past 12 months has progressed the company's near-term target of an initial JORC-compliant iron ore resource. Meanwhile in South Australia, recent relaxing of access around the Woomera region has allowed Apollo to formulate exploration planning.

Company Overview

Apollo Minerals is primarily an iron ore exploration company that is in the process of fully appraising its vast acreage position in both Western Australia and South Australia, with the aim of identifying commercial iron ore deposits. Importantly, infrastructure enhancements will benefit Apollo's ambitions.

Apollo will look for further investment to progress its drilling programs, with the targeting of a long-term cornerstone investor. This will allow Apollo to clearly identify the value of its assets, as well as progressing long-duration environmental baseline studies and mine permitting, both in Western Australia and South Australia.

Importantly, Apollo has also strengthened its technical and executive capabilities, which provides the company with the full suite of skills necessary to develop its exploration projects into potential mining operations.

Investment Review

Apollo Minerals is an Australian iron ore exploration company listed on the Australian Securities Exchange (ASX: AON). The company is simultaneously advancing two 100%-owned projects - the Mount Oscar Project in the Pilbara region of Western Australia and the Commonwealth Hill Project in South Australia.

Apollo maintains two sizeable iron ore exploration projects

At Mount Oscar, Apollo Minerals has a total exploration target of 500 million tonnes of magnetite-bearing banded iron formation (BIF) grading 31-37% Fe. AON has defined a 5.6km long magnetite bearing banded iron formation at Mount Oscar and Mount Oscar East by aeromagnetic imaging, visual observations, sampling and some drilling

Mt Oscar is well placed logistically

The Mount Oscar Project is well placed, lying 25km south of the port of Cape Lambert and close to proposed multi-user Anketell Point port. The project is close to existing roads, rail and towns such as Karratha, the major regional centre.

Two drilling programs have so far been completed at Mount Oscar testing two magnetite targets. Both programs have returned encouraging intersection widths of up to 271 metres and iron head-grades of up to 37% Fe. Metallurgical test-work is ongoing with the intention of producing saleable concentrates from both targets.

Mt Oscar is in the neighbourhood of various large iron ore projects

Apollo's project is in a region dotted with large iron projects, including the Sino Iron project (CITIC): 2 billion tonnes, the Cape Lambert project (MCC): 1.6 billion tonnes and Balmoral South (Australasian Resources ASX: ARH)): 1 billion tonnes.

To put in perspective the potential of Mount Oscar, a simple comparison can be made to Aquila Resources (ASX: AQA), a A$2.2 billion company which has developed an iron ore resource of 742 million tonnes as a first stage from a much larger project inventory located about 165 miles from the Cape Lambert area.

AQA has already spent considerable resources on infrastructure studies that include a mine, rail line and new port at Anketell Point, which is located next to Cape Lambert. To develop this project to production will cost AQA approximately A$4 billion and will export 30 million tonnes of iron ore per year. The total capacity of the port will be up to 350 million tonnes and it will service the export needs of new iron ore mines from independent operators that could include Apollo.

US-listed China Armco holds a 19.9% stake and 15% off-take rights at Mt Oscar

China Armco Mining (AMEX: CNAM) during 2010 took up a shareholding of 12.5 million shares for 19.9% in AON for A$4.3 million and off-take rights for 15% of the iron ore produced at market price. CNAM is engaged in metals recycling and the distribution of metal ore, steel scrap, and non-ferrous metals within China. The money injected into AON will be spent on a major exploration program that will fully define the resource potential and prepare for a full feasibility study.

Apollo's Commonwealth Hill Project is assuming much greater prominence

Apollo Minerals' Commonwealth Hill tenements in South Australia are located close to some of the state's world-class uranium, iron ore and base metal projects including iron oxide-copper-gold-uranium (IOCGU) deposits at Olympic Dam and Prominent Hill.

The biggest catalyst for a re-evaluation of the State's iron ore potential came recently with the announcement by ASX-listed WPG Resources that it was selling its iron ore assets in South Australia to OneSteel for around $346 million.

Characteristics & Perceptions of Iron Ore

Iron is the fourth most abundant element in the Earth's crust and is usually found in ore deposits as an oxide. There are many iron minerals, but the only ones of worldwide importance are hematite (Fe_2O_3), magnetite (Fe_3O_4) and limonite (FeOOH). Other ores such as chamosite or pyrite are no longer important for iron production.

Most common use for iron ore is in the production of steel

Typically, it takes 1.5 tonnes of iron ore and 450kg of coke (an almost pure form of carbon processed from coking coal) to produce a tonne of pig iron, the raw iron that comes out of a blast furnace. Pure iron is quite soft, however adding a small amount of carbon makes it significantly harder and stronger.

Western Australia's Pilbara region still dominates the domestic iron ore industry

Western Australia dominates the Australian iron ore industry with nearly 97% of total production. The Pilbara region is particularly significant with 79.5% of Australia's total identified resources and 92.4% of production. Other significant iron ore mines also operate in the Northern Territory, South Australia, Tasmania, Queensland and New South Wales.

Magnetite vs Hematite

Hematite (Fe_2O_3) is an iron oxide mineral that contains 70% Fe. Hematite deposits vary widely in grade and until recently, most deposits needed to have an average grade of more than 60% to be economic. However some deposits can now have iron grades of 56-59% and can still be commercially viable. Magnetite (Fe_3O_4) is also an iron oxide mineral containing 72% Fe. Magnetite ore however generally has a lower iron content than that of hematite and must be upgraded to make it suitable for steel making.

Magnetite requires beneficiation, however it usually commands a premium in price

Processing involves crushing, screening, grinding, magnetic separation, filtering and drying. The final product is a high iron grade magnetite concentrate (+65% Fe) with typically low impurities. Further processing involves the agglomeration and thermal treatment of the concentrate to produce pellets which can be used directly in a blast furnace. The additional processing cost for the magnetite concentrate can generally be offset by the premium price which it attracts from steel mills due to the high iron content.

Market perception of magnetite

Traditionally, Australia has associated 'iron ore' with DSO quality hematite, which has been underpinned the development of the Pilbara region as one of the world's great iron ore provinces. As a result, magnetite has typically been greatly misunderstood and undervalued by the market.

60% of global steel production is sourced from magnetite projects which today are capable of producing high-quality concentrate grading up to 68-69% Fe. This is higher grade than many of the Pilbara hematite lump and fines ores currently being produced.

Magnetite is becoming a more sought-after product

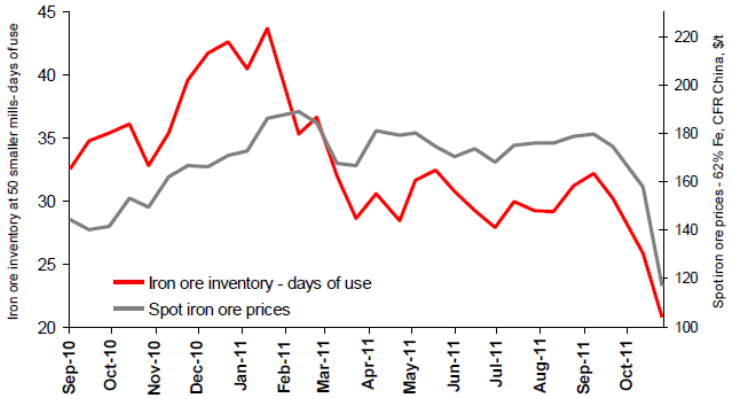
It is also well established that hematite grades are generally declining globally and impurity levels are rising while the demand for quality, premium steel from China and India is continuing to increase. **With hematite grades declining, high-grade magnetite concentrate is becoming an increasingly sought-after product.**

The Outlook for Iron Ore

The WSA forecasts world steel demand to grow by 5.4% in 2012

The World Steel Association recently released its October 2011 Short Range Outlook for 2011 and 2012. It forecasts steel use will increase by 6.5% to 1,398 mmt in 2011, following growth of 15.1% in 2010. In 2012, it is forecast that world steel demand will grow further by 5.4%.

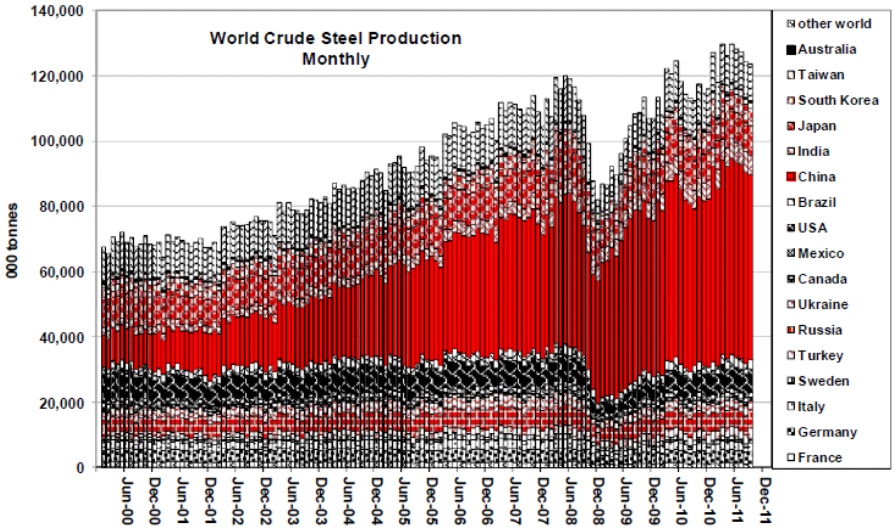
The Association expects to see growth performance varying widely across regions. The recovery of steel demand in the developed world will likely be slow, whilst most of the emerging and developing world should continue to enjoy robust growth in demand.



Iron Ore Prices & Iron Ore Inventories, Source: Mysteel, TSI

China's steel demand growth in 2012 is forecast to be 6%

China's apparent steel use in 2011 is expected to increase by 7.5% to 643.2 mmt following 8.5% growth in 2010. In 2012, steel demand is expected to maintain 6.0% growth, which will bring China's apparent steel use to 681.6 mmt. In 2011, India's steel use is forecast to grow by 4.3% to reach 67.7 mmt due to economic growth. In 2012, the growth rate is forecast to accelerate to 7.9%.



Source: World Steel Association

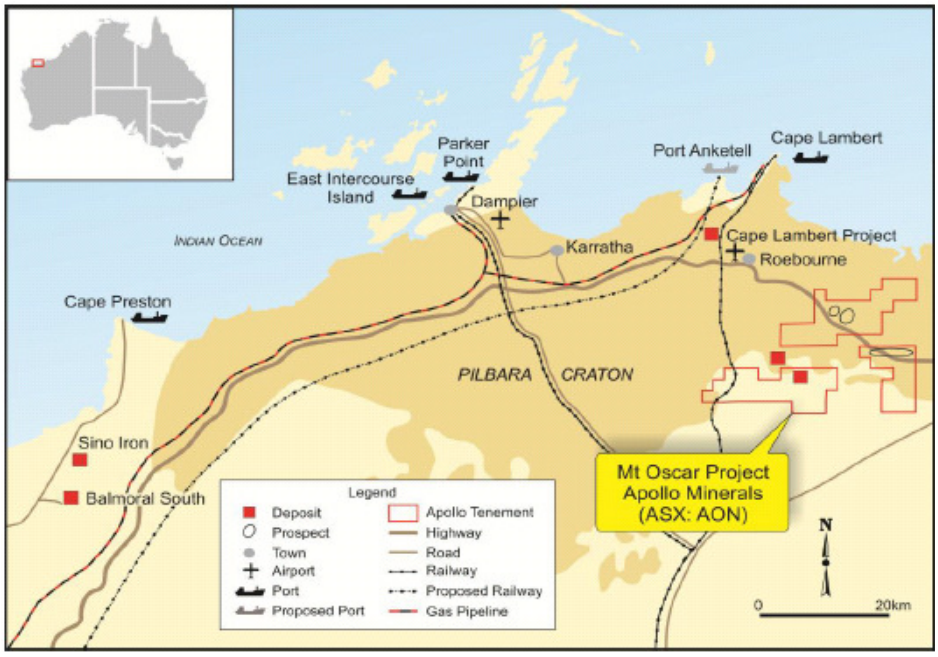
Emerging economies are the key to steel demand

The WSA's current forecast suggests that by 2012, steel use in the developed world will still be at 15% below the 2007 level whereas in the emerging and developing economies, it will be 44% above. In 2012, the emerging and developing economies will account for 73% of world steel demand in contrast to 61% in 2007.

Mount Oscar Iron Ore Project, Western Australia

Apollo Minerals holds a 100% stake in three Exploration Licences comprising the Mount Oscar Project in the Pilbara Region of Western Australia. The project is located 45km from the busy commercial and industrial centre of Karratha 1,560km north of Perth and encompasses an area of 273 sq km. Roebourne is the nearest small community, lying 20km to the north of the project.

Apollo holds 273 sq km of prospective iron ore acreage in the Pilbara region of Western Australia



Mt Oscar Project Location, Source: Apollo Minerals

Multiple infrastructure projects in close proximity to Mount Oscar

Multiple infrastructure projects in close proximity to the Mount Oscar Project are either in place or in advanced feasibility stages. These developments will allow Apollo Minerals to position its interests in line with a number of emerging producers with similar requirements.

Access to the Mount Oscar Project from the west is from the Roebourne/Harding River Dam road with the turn-off 12km from Roebourne and then dry weather station track access for 6km. The route crosses the Harding River which is dry for most of the year and flows only after significant rainfall events such as the passing of a cyclone.

The Robe River heavy railway leading to the Cape Lambert load out facility also passes through the western portion of the Project area.

Geology

The Mount Oscar Magnetite Project is located in the north-western part of the Pilbara Craton. The hematite-magnetite mineralisation found at Mount Oscar lies within the Cleaverville Formation occurring as banded iron formation (BIF) interbedded with cherty and fine-grained clastic sedimentary rocks. Dolerite sills are very common. The magnetite-bearing rocks at the Mount Oscar Project outcrop strongly over an oval-shaped area measuring some 5km by 2km.

The BIF horizons are strike-continuous for up to 5.5km and are locally up to 160m thick within E47/1379. Although of variable thickness, the magnetite-rich portion of the BIF is commonly in excess of 60m wide. Magnetite mineralisation occurs in both tenement E47/1379 and adjoining tenement E47/1217 to the west. BIF of the Cleaverville Formation also occurs at Mount Oscar East prospect within E47/1304.

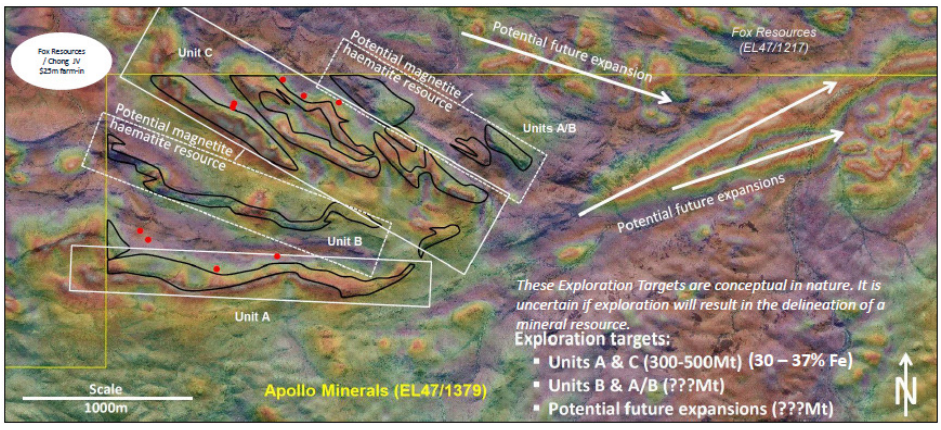
Exploration Work

High grade Fe rock chip sample results

Apollo Minerals completed a rock-chip sampling program in 2008 within the prospective portion of E47/1379. Eighty samples were collected with a highest iron grade reported of 55.82% Fe. Four samples reported over 50% Fe and 22 exceeded 40% Fe. These results are considered high for a magnetite style of mineralisation as assays from 30% Fe to 40% Fe are more commonly reported from rock chip samples of magnetite mineralisation.

Apollo Minerals completed a rock-chip sampling program over a portion of the Mount Oscar East prospect in November 2010. Fifteen of sixteen samples collected reported head grades in the range 32.80 - 41.36% Fe with low Al_2O3. The arithmetic average head grade of 35.6% Fe is the same as that reported from sampling of Mount Oscar in 2008. On the basis of rock chip assays alone the iron mineralisation at Mount Oscar East is of a similar tenor to that at Mount Oscar.

Two RC drilling programs have been completed by Apollo during 2008 and late 2010 respectively. The initial drill program in 2008 was designed to target the highest magnetic amplitudes in horizons C & D, with five holes drilled on four drill profiles on 200-metre spaced sections that tested an 800m strike horizon. Down-hole intercepts of magnetite mineralisation ranged from 16m to 168m, with iron grades ranging from 31.9% to 36.9%, with an average iron grade of 35.2% Fe.



Mt Oscar Exploration Targets, Source: Apollo Minerals

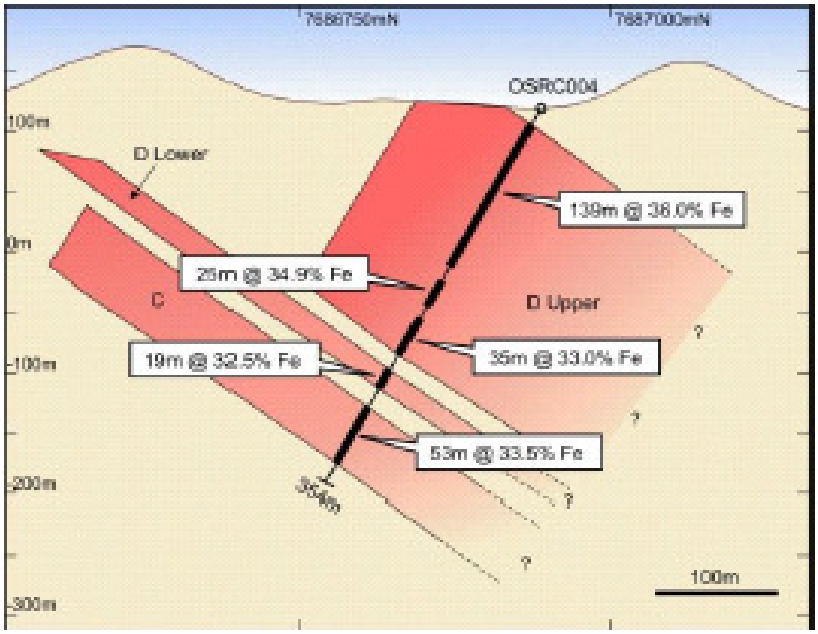
Mineralisation open both along strike and at depth

The mineralisation remains open both at depth and along strike, with the deepest holes extending to a vertical depth of 300 metres. Shallow cumulative intercepts of 271m @ 34.8% iron and 192m @ 35.9% iron were returned from a depth of 14m in OSRC004 and 25m depth in OSRC001 respectively.

Apollo Minerals second drilling program was undertaken at Mount Oscar over BIF Unit A South during early November 2010. Four holes were drilled for 732m and intercepts of magnetite-bearing BIF were recorded in three of the four drill-holes. Drilling of Unit A was planned as this unit was seen to host some slightly coarser, albeit still fine-grained magnetite, than that seen in Units C and D.

The same structure extends into Fox Resources' acreage

In addition, Fox Resources (ASX: FXR) immediately to the west has reported a JORC resource estimate of 72.4Mt @ 34% Fe based on 27 RC holes and 7 diamond holes in TMI anomalies 1 and 2, which are along strike from Apollo Mineral Unit A South. Total BIF intersections were 106m, 111m and 66m in holes from west to east. The BIF horizon comprises strongly jaspilitic, pink to red BIF that is variously magnetite-bearing.



Mt Oscar Drilling Program Results, Source: Apollo Minerals

Apollo's 2010 drilling program tested a different magnetite-bearing horizon that extends beyond E47/1379 to the northwest into adjacent tenements where it has been drilled and tested more extensively by Fox Resources. It has previously reported that the magnetite encountered in its drilling is amenable to conventional treatment to produce a saleable concentrate.

Work conducted by Fox on magnetite located immediately adjacent to and along strike from Apollo Minerals' ground has produced a concentrate of 63% Fe and 7.5% SiO2. Apollo is confident that the ongoing test-work on samples from this drilling program will produce similar results to those achieved by Fox.

Exploration target of 300 – 500Mt of magnetite ore at Mt Oscar

Currently, Apollo has an exploration target of 300 – 500Mt of magnetite at 30 – 37% Fe over a combined strike of 6km at its Mt Oscar Main iron ore project. Recent work suggests a total of 11km of strike is prospective for both styles of iron ore mineralisation at Mt Oscar Main.

Furthermore, Apollo has completed modeling and analysis of its Mt Oscar East iron ore project located 7km east of Mt Oscar Main. This work has highlighted the potential for large volumes of itabirite-style iron ore mineralisation in addition to the magnetite mineralization already identified.

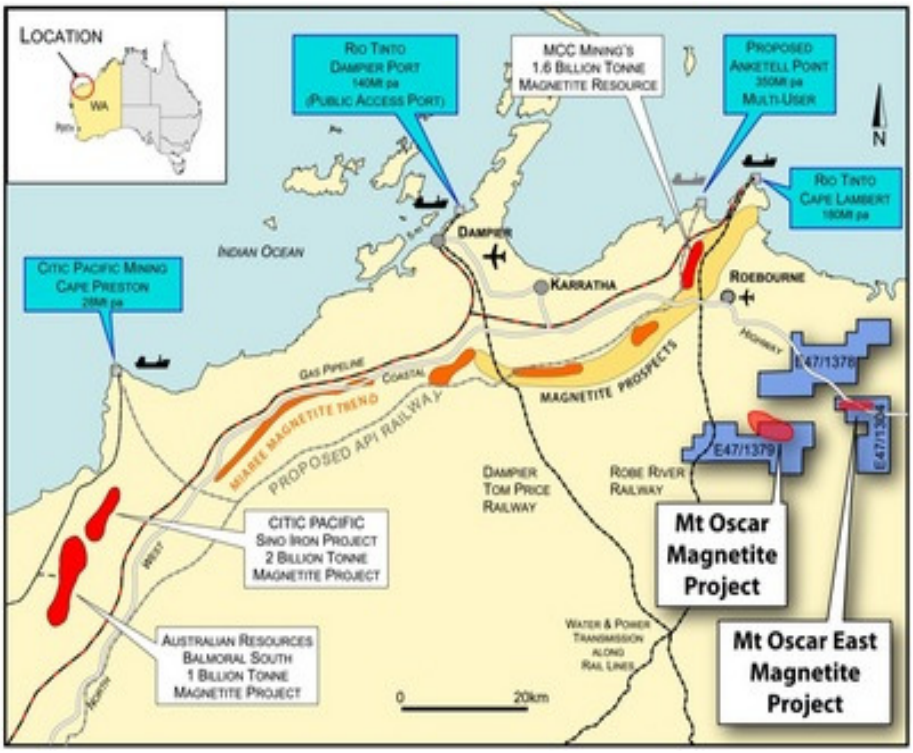
Additional target of 50 – 150Mt of magnetite ore at Mt Oscar East

The current magnetite exploration target for this property is 50 – 150Mt of magnetite at 30-37% Fe. Apollo is now planning to conduct a ground gravity survey on its Mt Oscar East property to attempt to identify significant quantities of near surface, directly shippable ore (DSO) similar to that delineated in the Roper Bar district of the Northern Territory.

Infrastructure Access

Excellent infrastructure availability

The Mount Oscar Project is located immediately next to major shipping ports and excellent infrastructure at Cape Lambert port. Mount Oscar sits on the rail line to the port at Cape Lambert, which is only 19 miles away, so limited infrastructure capital will be required as the area has already been developed by Rio Tinto (ASX: RIO), Australia's largest iron ore miner and also the world's second-largest.



Pilbara Regional Iron Ore Projects, Source: Apollo Minerals

Rio is upgrading its port capacity

Rio Tinto has upgraded the port to handle 80 million tonnes of iron annually and has new approvals to increase that amount to 130 million - with early plans to eventually push that to 320 million tonnes from all of its operations in the Pilbara.

Numerous emerging regional iron ore players

The massive increases in port capacity will also help open up export routes for small independent iron ore players like Apollo. Apollo's project is situated in a region containing many large iron projects, including the Sino Iron project (CITIC): 2 billion tonnes, the Cape Lambert project (MCC): 1.6 billion tonnes and Balmoral South (Australasian Resources ASX: ARH)): 1 billion tonnes.

Aquila Resources is developing the Anketell port

A simple comparison can be made with Aquila Resources (ASX: AQA), a A$2.2 billion market-cap company that has so far proven up an iron ore resource comprising 742 million tonnes as a first stage from a much larger project inventory, situated 165 miles from the Cape Lambert area. Aquila has already spent considerable resources on infrastructure studies that include a mine, rail line and new port at Anketell Point, which is located next to Cape Lambert.

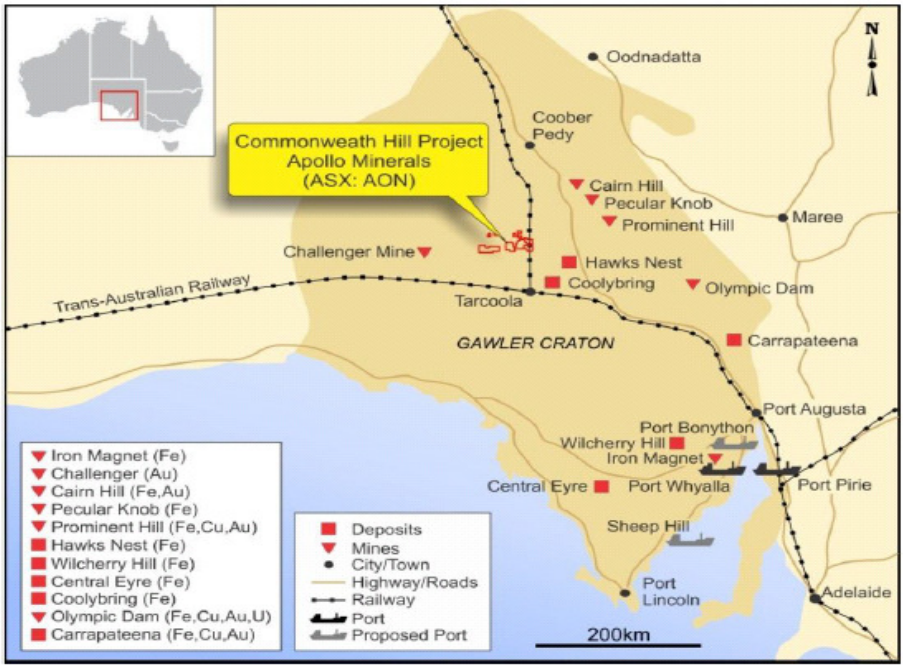
The total capacity of the port will be up to 350 million tonnes and it will service the export needs of new iron ore mines from independent operators that could include Apollo. The port has received both State approval and the Federal Government recently granted major project facilitation status to help speed up the development which is currently planned to ship its first ore in 2013.

Commonwealth Hill Iron Ore Project, South Australia

Prospective for iron ore, base metals, gold and uranium

Apollo holds a 100% stake in three Exploration Licences encompassing 750 sq km within the Commonwealth Hill area in central South Australia. The tenements lie within the Gawler Craton, 90km to the north of Tarcoola. The area is highly prospective for a range of targets including iron ore, copper, gold and uranium. The Olympic Dam, Prominent Hill and Challenger gold mines are all in close proximity, as are a number of iron ore exploration projects.

Apollo holds 750 sq km of acreage within the Gawler Craton of South Australia



Commonwealth Hill Project Location, Source: Apollo Minerals

The Commonwealth Hill tenements encompass a number of aeromagnetic anomalies which were targeted for possible iron ore resources by the South Australian Department of Mines and Energy (SADME). Three specific targets were identified for detailed work, comprising the Sequoia, Wirrida and Gina prospects.

Three specific targets were previously identified by SADME

Exploration Work

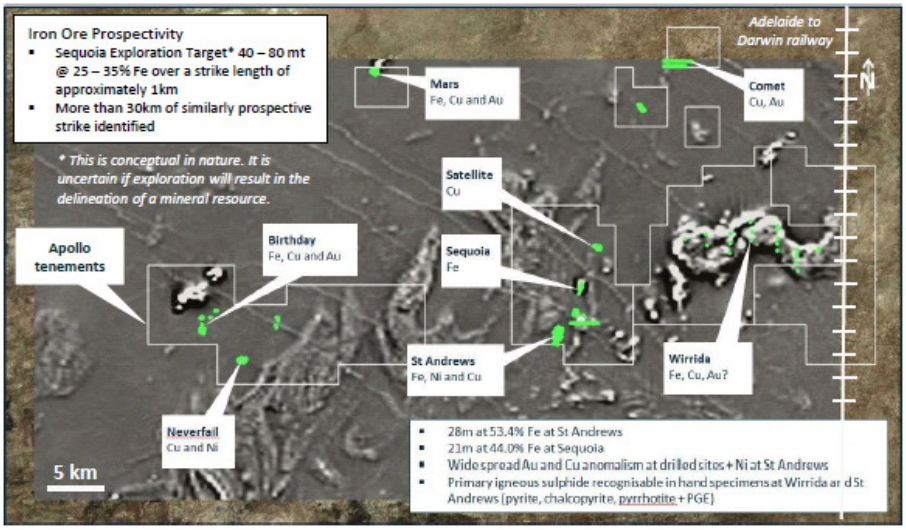
At Sequoia, government-sponsored drilling defined an Inferred Resource of 22 million tonnes at 28.4% Fe (non JORC-compliant), with weathering to 45m depth. Apollo Minerals recently released an Exploration Target of 40 – 80Mt @ 25 – 35% Fe over this deposit which strikes for approximately 1 km, with recent reinterpretation of the historic drilling suggesting average grades of circa 32% Fe.

Shallow drilling at Wirrida and Gina failed to locate ore-grade iron mineralization, but encouragingly iron grades continued to increase as drilling progressed through the oxide zone. This drilling also enhanced the prospectivity for nickel, copper, platinum-group elements and gold.

Wirrida is the most prospective iron ore target at this stage

The company's main target is the Wirrida Complex which was identified as a strong positive total-magnetic-intensity (TMI) anomaly in data collected by SADME in 1992-93. SADME subsequently investigated the Complex to determine whether potential existed for significant iron ore resources. In 1995-96 the strong TMI anomalies were followed up with ground magnetics, shallow reverse circulation (RC) drilling, and geochemical, petrological and physical analyses of rocks.

The Complex again attracted attention for iron ore during 2009 when Apollo's then joint venture partner, Western Plains Resources, commissioned ground magnetic and gravity profiles over the TMI anomalies. Data was recorded on eight lines spaced at approximately 400m intervals, with station spacing at 10m for the magnetics and 50m for the gravity.



Southern Geoscience Consultants (SGC) modelled the ground magnetic data to determine the location and orientation of magnetite-rich layers within the Complex to assist in the design of an exploration program to assess the iron ore potential. This modelling indicates that the shallow RC drilling completed by SADME in 1995-96 did not intersect the magnetic source rocks and the magnetic susceptibility values recorded in the drill logs would not account for the TMI response observed in the airborne and ground magnetic surveys.

SGC reported that "The modeling of the ground magnetic data has demonstrated the potential for considerable intersections of magnetite-rich layers and the inference of a near-surface altered or weathered zone that could possibly contain iron-rich, non-magnetic mineralization." Review and summation of the SGC and Western Plains sponsored geophysics has led Apollo to believe that there is over 30km of strike with similar prospectivity to their Sequoia prospect, which indicates potential for a future +1Bt resource.

Previous work over the Wirrida Complex has also outlined the potential to host base metal and precious metal mineralisation associated with sulphide zoning within the layered intrusion. This potential will also be assessed in the future, with SGC recommending an airborne electromagnetic survey (AEM).

South Australia is increasingly becoming a more important iron ore player

Three Significant Recent Developments Underline Regional Potential

Events over the past few months have given cause for investors to stop and have a major re-think about South Australia and its potential to host a vibrant iron ore industry. The State has so far played host to a range of iron ore juniors, but the reality has not yet lived up to expectation. Companies are only now making the transition to production. Where the market has had its doubts relates to the issue of whether South Australia could host a viable and successful iron ore industry over the longer-term. Could South Australia compete with the likes of Western Australia, the historic home of iron ore production in Australia?

Logistical challenges and infrastructure disappointments, combined with a lack of any sort of production track record, meant investors have essentially stayed on the sidelines. That is until now.

WPG project purchase by OneSteel

1. The biggest catalyst for a re-evaluation of the State's iron ore potential came recently with the announcement by WPG Resources (ASX: WPG) that it was selling its iron ore assets in South Australia to OneSteel (ASX: OST) for around $346 million.

This one transaction alone has caused a major investor rethink and provided hope and confidence for South Australian iron ore players. It demonstrates that major companies have confidence with respect to both regional iron ore quality as well as the ability to successfully commercialise projects.

Port access is improving

2. Port access has been one of the biggest issues holding back prospective iron ore developments, but things are now changing fast. OneSteel plans to mine WPG's ore, initially from its Peculiar Knob mine and then export it via its own port at Port Whyalla. Other emerging producers are looking at port access through places like Adelaide and Port Pirie.

Woomera restrictions eased

3. Another major development occurred during May, when the Commonwealth Government released the final report (Hawke Report) from its enquiry into mining and military activities in the Woomera Prohibited Area (WPA) in South Australia. The key recommendation was to open the area up to mining and exploration with access conditions set in relation to the sensitivity of the natural resources project's site within the WPA.

Apollo is one of the first companies with ground access

Apollo announced in late October that it had entered into a Deed of Access (DoA) with the Australian Department of Defence, allowing Apollo to explore the full extent of its Commonwealth Hill property. Apollo is therefore one of the first exploration companies to be granted access for mineral exploration since the Commonwealth Government announced plans to adopt the recommendations of the Hawke Review.

The company's DoA allows Apollo to enter and work within the WDA, subject to notification of timing for access, people entering and of equipment to be used. It is expected that the agreed DoA will convert into a new deed within six months, after the new WDA access framework has been agreed between the key stakeholders and fully implemented.

Apollo has already begun work on developing its iron ore, base and precious metals projects on the property, with the first aboriginal heritage clearance survey now also complete. Results from the survey were another positive step for exploration and development and the company aims to build a strong relationship with the Antakarinja Matu-Yankunytjatjara, Traditional Owners.

Mobilising soon for its maiden drilling program

Apollo will soon begin mobilisation for its maiden JORC drilling program at Sequoia and the next phase of geophysics, including evaluation of the St Andrews Direct Shipping Ore (DSO)-style mineralisation prospect, where previously drilling encountered 24m at 57% Fe including very high grade iron of 70% Fe over 4m. Mine permitting related environmental baseline studies are also expected to commence during the December quarter.

Apollo is currently evaluating the potential to develop a medium-sized iron mine on the property. Previous work has highlighted the possibilities of producing premium quality iron concentrates and sinter fines products. Drilling has identified both coarsely crystalline magnetite and Direct Shipping Ore (DSO) style mineralisation including 24m at 57% Fe inclusive of 4m at 70% Fe.

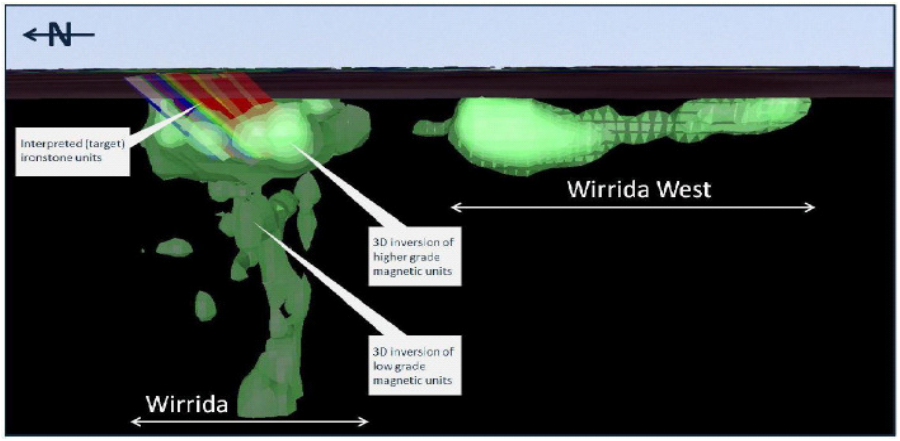
Fast-tracking exploration and appraisal

Apollo has recently outlined a clear plan to fast-track its Commonwealth Hill Iron Project towards production. The goals of the 2012 exploration and development program at Commonwealth Hill are to:

- Define a maiden JORC compliant resource on the coarse-grained, near-surface magnetite of the Sequoia prospect
- Determine the strike potential of the St Andrews Direct Shipping Ore (DSO) prospect where previous drilling has intersected 24m @ 57% Fe (including 4m at 70% Fe), and further develop the mineralisation model
- Evaluate the base and precious metals potential of the Sequoia and St Andrews prospects
- Explain the value proposition of developing the Sequoia prospect as part of larger iron ore developments on these properties
- Identify the next round of iron ore drill targets
- Pursue agreements for necessary infrastructure access including port and rail services, and
- Ensure that the Commonwealth Hill iron project can continue to be fast-tracked to production by beginning critical path environmental studies and mine permitting activities.

Commonwealth Hill straddles the Adelaide to Darwin Railway line, 120km south west of the opal mining centre of Coober Pedy, 30km east of the Challenger Gold Mine, 70km southwest of Cairn Hill and 100km west of the Prominent Hill IOCG mines and 100km west of the Peculiar Knob DSO iron ore mine. The railway connects Commonwealth Hill directly with several ports capable of shipping ore.

The Titan Base Metals and Precious Metals Project is part of Apollo's large Commonwealth Hill holding (including the namesake Commonwealth Hill Iron Project) covering 750 sq km across three tenements in the central Gawler Craton.



Profile of Wirrida Intrusive's Magnetic Signature, Source: Apollo Minerals

Three specific targets have been identified for detailed work, comprising the Sequoia, Wirrida and Gina prospects. As mentioned earlier, a significant amount of surface and near-surface exploration work has already been carried out on the properties by both a previous owner, Minotaur Gold NL, and a consortium of industry and government under the 1990s South Australian Steel and Energy project (SASE).

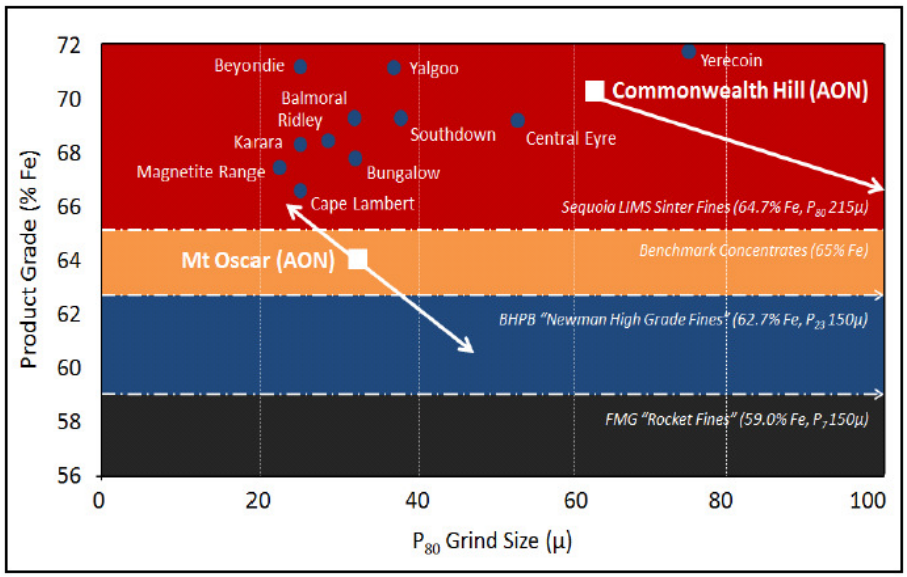
Minotaur Gold focused on follow-up drilling of surface calcrete-hosted gold anomalies, while SASE focused on shallow drill testing of two of the eastern magnetic-high anomalies.

Four styles of mineralization are present

In light of the recent Carrapateena (Fe, Cu and Au i.e. IOCG) discovery and nearby developments of the Prominent Hill (IOCG) and Cairn Hill (Fe and Cu) mines, Apollo has begun reviewing the potential for iron ore-associated base and precious minerals deposits on the properties. Based on the historic exploration, four separate styles of mineralisation are evident on the properties, comprising Fe, Cu and Au (IOCG); Cu and Au; Fe, Ni and Cu (nickel sulphides); and Fe (BIF).

Apollo recently announced the completion of a review of magnetic geophysics and historic exploration drilling data, which has identified strong potential for large volumes of iron mineralisation at Commonwealth Hill. Historic gold focused exploration drilling by previous explorers uncovered near-surface Direct Shipping Ore (DSO) grade mineralisation with RC hole SAT004C intersecting 24m of 56.4% Fe from 12m including 4m at 70.4% Fe from 20m at the St Andrews Prospect.

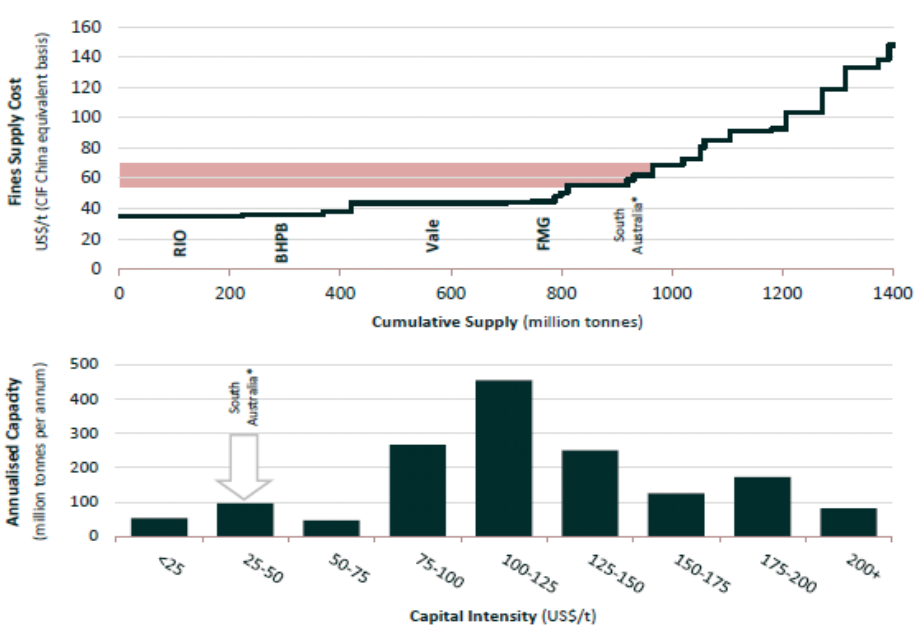
Previous test-work showed Sequoia mineralisation is readily beneficiated to a premium quality concentrate or liberated sinter fines. Concentrate testing at a P_{80} of 63µm gave a Fe recovery of 88% and a grade of 70.3% Fe, 3.7% SiO_2, 0.29% Al_2O_3 and 0.005% P from a head grade of 37.2% Fe, 41.0% SiO_2, 1.36% Al_2O_3 and 0.079% P. Sinter fines testing at a P_{80} of 215 µm gave 64.7% Fe, 7.4% SiO_2, 0.6% Al_2O_3 at a mass yield of 44.7%.



Project Product Quality Comparison, Source: Apollo Minerals

Fines product option

It is expected that production of a fines product will be achievable at significantly lower capital and operating costs than projects focused on only concentrates.



Selected Operational Benchmarks, Source: Macquarie Research, Apollo Minerals

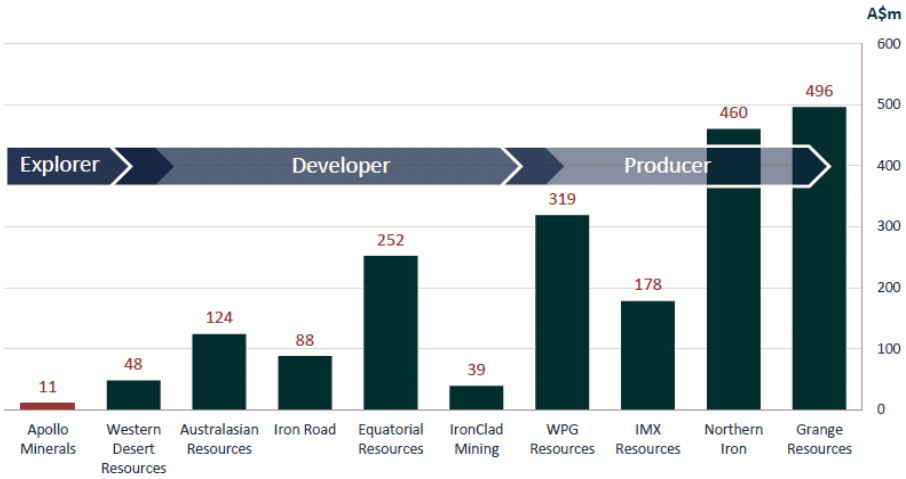
A rough cost guide for magnetite projects is in the order of A$200/annual tonne; meaning a potential capital cost of ~$2 billion for a project aiming for production of 10Mtpa. Apollo is however looking at a range of products covering DRI pellet feed to high quality sinter fines, all at high levels of iron recovery and at relatively coarse grinds. This would significantly reduce capital and operating costs.

Potential for DSO and other product credits

Commonwealth Hill products are expected to be comparable, if not significantly easier to beneficiate than most banded ironstones as it is generally thought to be a coarsely crystalline, metamorphosed BIF mineralization. Potential also exists for DSO-style mineralisation and to gain metal credits for other commodities associated with Commonwealth Hill Fe mineralisation e.g. copper, gold or nickel, as per IMX Resources at its nearby Cairn Hill Fe, Cu and Au mine.

Potential operating margins of $65 - $70/t

Apollo could conceivably look at a 1Mtpa operation with modest capital costs and operating margins of $65-$70/t (using an iron ore price of US$150/t), utilising a modular plant concept. Atlas Iron (ASX: AGO) commenced production in 2008 at a rate of 1Mtpa and has since ramped up to 6Mtpa and a market value of $2.8billion.



Selected Peer Group Value Comparisons, Source: Apollo Minerals

Board of Directors

Independent Chairman

Tony Ho has more than 30 years' experience as a senior executive and director of mainly listed companies. His background is in finance and positions he has held include Chief Financial Officer of Volante Group Ltd, one of the largest Australian-owned ASX-listed computer services companies; Executive Director and Chief Financial Officer of Arthur Yates & Co Limited; Executive Finance Director of Downtown Duty Free Pty Limited; and Chief Financial Officer of ASX-listed M.S. McLeod Holdings Limited.

Currently Mr Ho is a non-executive director and chairman of the Audit and Compliance Committee of Dolomatrix International Limited, a non-executive director and chairman of the Audit Committee of Greenland Minerals & Energy Limited. Mr Ho is also the Deputy Chairman of Quality Improvements Council Limited which is the company that provides accreditation audit services to the Community Health and Community Services sectors in Australia and New Zealand.

Chief Operating Officer, Executive Director

Dominic Tisdell is a mining engineer with 15 years' experience in mining, resources M&A and management consulting with Rio Tinto, Mitsubishi Corporation and Accenture. At Rio Tinto he held key management roles during development of West Angeles and Nammuldi iron ore mines. He has also acted as an advisor on investments totalling $3.25b including CAP SA, AREVA Mongol, Kintyre Uranium, New Saraji Coking Coal and Coal & Allied. Mr Tisdell has held prior directorships with the Australian Uranium Association and MDP Uranium.

Executive Director

Richard Shemesian has more than 15 years experience in the resources sector, providing corporate and strategic advice for a number of resources companies, with a particular focus on companies listed on either the Australian Securities Exchange or the Alternative Investment Market of London. He has played a significant role in a number of companies that have transformed into producers or have been acquired by way of takeover, including ASX-listed Redport which was succesfully taken over by Canadian listed Mega Uranium for A$125m in 2006 and Iron Ore producer Aztec Resources Ltd (acquired by Mt Gibson Ltd in 2007).

Non-Executive Director

Matthew Rimes is an MBA qualified mining engineer with more than 30 years experience in a range of commodities including gold, copper, nickel and iron ore. He worked with North Ltd from 1989, and then subsequently with the Rio Tinto group following the takeover of North Ltd in 2000. Over the last fifteen years he has held roles with Iron Ore Holdings and Robe River Mining Company, including senior executive and operational positions at both of Robe's operations at Pannawonica and West Angelas.

Mr Rimes joins the Apollo Board after recently serving as Managing Director of Iron Ore Holdings Limited. During his time at IOH, the company successfully progressed a strategy of proving up its iron ore resources in its Pilbara tenements. The company also worked on fast-tracking project feasibility studies and infrastructure access options at its various projects with the aim of establishing valuable technical and commercial development solutions. At the time of Mr Rimes' resignation, the company had a market capitalisation of approximately $220 million.

Analyst Verification

We, Gavin Wendt and Andrew McLeod, as the Research Analysts, hereby certify that the views expressed in this research accurately reflect our personal views about the subject securities or issuers and no part of analyst compensation is directly or indirectly related to the inclusion of specific recommendations or views in this research.

Disclosure

Breakaway Investment Group (AFSL 290093) may receive consultancy fees and commissions on sale and purchase of the shares of Apollo Minerals and may hold direct and indirect shares in the company. It has also received a commission on the preparation of this research note.

Disclaimer

Any observations, conclusions, deductions, or estimates of figures that have been made by Breakaway Research and the Breakaway Investment Group in this report should not be relied upon for investment purposes and the reader should make his or her own investigations. This publication has been issued on the basis that it is only for the information and exclusive use of the particular person to whom it is provided. Any recommendations contained herein are based on a consideration of the securities alone. In preparing such general advice no account was taken of the investment objectives, financial situation and particular needs of a particular person. Before making an investment decision on the basis of this advice, investors and prospective investors need to consider, with or without the assistance of a securities adviser, whether the advice is appropriate in light of the particular investment needs, objectives and financial circumstances of the investor or the prospective investor. Although the information contained in this publication has been obtained from sources considered and believed to be both reliable and accurate, no responsibility is accepted for any opinion expressed or for any error or omission that may have occurred therein.

Breakaway Investment Group
AFSL 290093 ABN 84127962387
T+61292621363
F+61292792727
PO Box H116 Australia Square
Sydney, NSW 2001
Suite 505, 35 Lime Street,
Sydney, NSW 2000