SNOWDEN

TROY RESOURCES NL

Troy Resources NL: Andorinhas Project, Para State, Brazil

June 2007

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This report was prepared as a National Instrument 43-101 Technical Report, in accordance with Form 43-101F1, for Troy Resources NL by Snowden. The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in Snowden's services, based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended to be used by Troy Resources NL, subject to the terms and conditions of its contract with Snowden. That contract permits Troy Resources NL to file this report as a Technical Report with Canadian Securities Regulatory Authorities pursuant to provincial securities legislation. Except for the purposes legislated under provincial securities law, any other use of this report by any third party is at that party's sole risk.

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1 Summary

This Technical Report describes the Andorinhas project (the "Andorinhas Project), a mineral exploration and development project located in Para State in northern central Brazil. The Andorinhas Project is 100% owned and operated by Reinarda Mineração Ltda. (RML), a Brazilian entity which is 100% owned by Troy Resource Holdings, a BVI incorporated holding company 100% owned by Troy Resources NL (Troy), an Australian company. Troy acquired the Andorinhas Project from Agincourt Resources do Brasil Ltda (Agincourt) in November 2006 for a cost of US$10.1 M.

The Andorinhas Project hosts two gold deposits; Mamão and Lagoa Seca within concessions that cover an area of approximately 20,000 hectares. The gold mineralisation occurs as several deposits hosted in Archaean greenstones of the Carajás Mineral Province. The deposits have been worked in the past as both open cut and underground operations by illegal miners known as garimpeiro.

Troy is primarily focused on the definition of ore zones with the aim of mining the Lagoa Seca open pit and Mamão underground deposits concurrently. Exploration efforts will be directed to infill drilling for further reserve definition within the planned open pit at Lagoa Seca and at shallower mineralisation at Mamão to better define the underground accesses. An immediate priority is to complete sterilisation drilling for the plant site, tailings areas, and other site based infrastructure. The surface workings at Lagoa Seca and Mamão are flooded and pumps have been set up ready to dewater. Drill rigs arrived on site at the time of Snowden's site visit and drilling was expected to commence soon after.

Once the deposits are drilled out and mining begins, the exploration project will focus on the most prospective targets such as Babaçu and Lagoa Seca West. Regional exploration along the mineralised corridors will include surface soil sampling, auger soil sampling, rotary air blast (RAB), reverse circulation (RC) and diamond drilling (DDH) for resource definition.

Mineral Resources and Mineral Reserves (Table 1.1)

The Lagoa Seca deposit contains an Indicated Mineral Resource estimated at 699,600 tonnes at 2.8 g/t Au which includes a Probable Mineral Reserve of 480,200 tonnes at 3.1 g/t Au.

The Mamão deposit includes an Indicated Mineral Resource estimated at 815,600 tonnes at 9.9 g/t Au plus an Inferred Mineral Resource estimated at 81,600 tonnes at 6.4 g/t Au. The Mamão resource includes a Mineral Reserve of 747,000 tonnes at 8.7 g/t Au.

The Lagoa Seca West deposit contains an Indicated Mineral Resource estimated at 800,000 tonnes at 1.1 g/t Au plus an Inferred Mineral Resource estimated at 1,600,000 tonnes at 1.3 g/t Au. The Lagoa Seca West resource has not been converted into a Mineral Reserve.

Table 1.1 Andorinhas Mineral Resources and Mineral Reserves

	Probable Reserves			Indicated Resources[3]			Inferred Resources		
	KTonnes	Au (g/t)	Contained Au Ounces	KTonnes	Au (g/t)	Contained Au Ounces	KTonnes	Au (g/t)	Contained Au Ounces
Mamão	747	8.7	207,660	815.6[1]	9.86	258,500	81.6[2]	6.35	16,600
Lagoa Seça	480.2	3.1	48,320	699.6[1]	2.8	63,000	—	—	—
Lagoa Seça West	—	—	—	800	1.1	28,300	1,600[2]	1.29	66,400
Total	1,227.2	6.51	255,980	2,315.2	4.7	349,800	1,681.6	1.54	83,000

Notes:

(1) Reported at a cut-off of 2 g/t Au.

(2) Reported at a cut-off of 0.8 g/t Au

(3) The Indicated Mineral Resources are inclusive of Mineral Reserves.

It is Troy's intention to mine the Lagoa Seca deposit by open pit and to mine the Mamão deposit underground by a combination of hand held and small mechanised equipment.

A combined production rate of 250,000 tpa is planned from the open pit and underground for a mine life of 5 years. Snowden understands that Troy is required to process ore from each site separately to comply with royalty constraints.

Using a gold price of US$600/oz and the capital and operating cost estimates set out in Section 18 of this report, and excluding the purchase cost, the Andorinhas Project will achieve a discounted cash flow of US$22 M and US$28 M at a 10% and 5% discount rate respectively. The internal rate of return (IRR) is 51%, calculated excluding the sunk purchase cost.

In Snowden's opinion Troy has the background and experience of successful open pit mining in Brazil to execute this mine plan.

Snowden's review of the Andorinhas Project for this Technical Report has confirmed that Troy's preliminary plan for mining the Andorinhas deposits is reasonable.

Snowden recommends that Troy undertake the following work program as a matter of priority:

- dewater the Lagoa Seca and Mamão pits
- complete resource infill drilling at Lagoa Seca
- complete resource reassessment and infill drilling at the Lagoa West prospect
- undertake additional definition drilling of the M2 lode of the Mamão deposit for mine design work
- complete sterilisation drilling for the plant site, tailings areas, and other site based infrastructure
- undertake a detailed structural study of the Mamão and Lagoa Seca deposits

- undertake a comprehensive review of historic DDH drill core including re-logging with an emphasis on establishing geological controls on mineralisation
- submit Lagoa Seca DDH drill core samples for ICP assay
- collect bulk samples at Mamão and Lagoa Seca for detailed metallurgical and processing test work
- complete pit wall stability studies to steepen the walls of the Legoa Seca pit.

Other critical tasks include:

- identify and evaluate extensional resource targets at Lagoa Seca and Mamão to ensure additional mill feed
- undertake a study to confirm a suitable location for the tailings dam at Mamão
- metallurgical test work of ore at Melechete and M2 ore zones
- undertake petrographic study of the lithologies and mineralised zones
- undertake geotechnical and hydro geological studies including:
    - Identifying the quality of the underground water at Mamão and Lagoa Seca
    - Determine and monitor the flow of drainages upstream and downstream of the mine areas
    - Identifying the ground quality at the plant site
    - Geotechnical mapping of the Lagoa Seca and Melechete pits
    - Identifying the physical properties of the rock
    - Collecting a representative suite of samples at Mamão and Lagoa Seca for specific gravity determination
- construct a core shed to store and protect all project drill core, including coarse reject and pulp samples.

Additionally Troy should:

- retrieve and compile all data related to the project
- organise landowner agreements for the entire property
- undertake geological reconnaissance including mapping of the garimpeiro workings and any known areas of mineralisation
- acquire and interpret remote sensing and geophysical data and images
- undertake an aeromagnetic survey
- complete a reconnaissance soil and auger sampling program throughout the property to assess the effectiveness of this sampling method.

A total of US$3 M (A$3.39 M or BRL$5.37 M) is planned to be expended on exploration activities by Troy at the Andorinhas Project.

2 Introduction

This Technical Report has been prepared by Snowden Mining Industry Consultants (Snowden) for Troy Resources NL (Troy) in compliance with the disclosure requirements of Canadian National Instrument 43-101 (NI43-101).

The Qualified Persons for preparation of the report are Ms. P. De Mark, Mr. K. Lowe, Mr. F. Blanchfield and Mr. A. F. Ross, all employees of Snowden. Ms. De Mark (Senior Resource Consultant) visited the project site in March 2007. Mr. Blanchfield (Senior Mining Consultant), Mr. K. Lowe (Consultant Resource Geologist) and Mr. Ross (TC Manager) have not visited site.

The Andorinhas Project is a mineral exploration and development project located in Para State in northern central Brazil. The Andorinhas Project is 100% owned and operated by Reinarda Mineração, Ltda. (RML), a Brazilian company, which is 100% owned by Troy Resource Holdings, a BVI incorporated holding company with 60% owned by Troy Resources NL (Troy), an Australian company. However, applications for exploration licences in respect of the adjacent area have been made by Troy Resources Particacoes Ltda (Troy Brazil), a Brazilian company that 100% owned by Troy. Troy acquired the Andorinhas Project from Agincourt Resources do Brasil Ltda (Agincourt) in November 2006.

Unless otherwise stated, all currencies are expressed in US dollars ($).

The responsibilities of each author are shown in Table 2.1.

Table 2.1 Qualified Person's responsibilities

Author	Responsible for section/s
P. De Mark	14 – Data verification
K. Lowe	17 - Mineral Resources
F. Blanchfield	17 – Mineral Reserves
	18 – Other relevant data and information
A.F. Ross	All other sections

The sources of information and data used in the preparation of this report include:

• Reports prepared by Snowden for the previous owner of the Andorinhas Project

(Agincourt). These reports are referenced.

• Discussions with Troy personnel at site and in Perth, Australia.

• Personal site visit conducted by Ms. De Mark.

3 Reliance on other experts

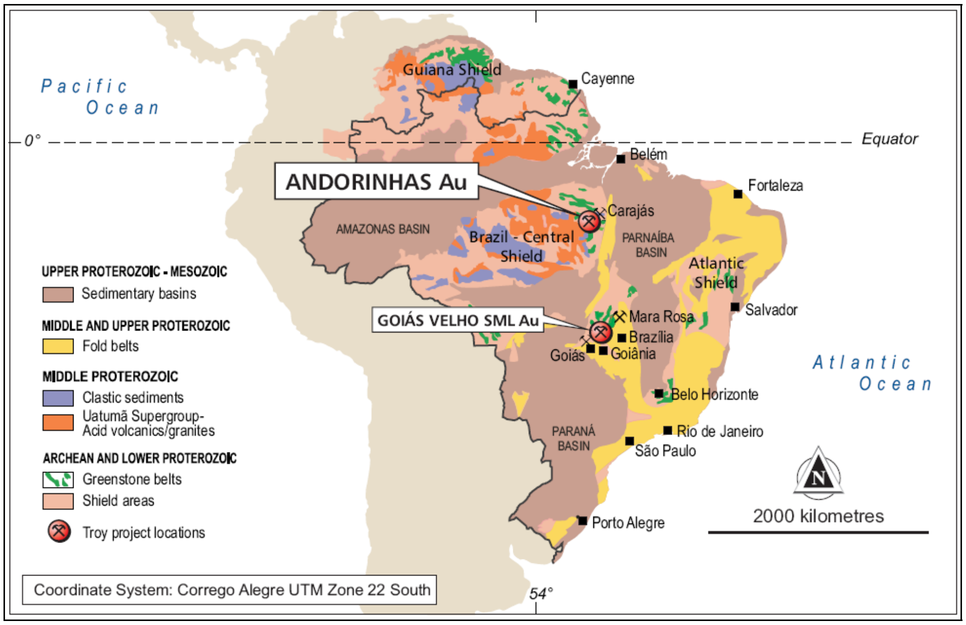
In respect of section 4, in so far as such sections describe the concessions held by Troy, and the royalties, surface rights, licences, authorizations, permits, environmental liabilities in respect of Andorinhas, the authors of this report have relied upon the opinion, dated November 2007, of Luis Azevedo of FFA Legal Simples Ltda, Av. das Américas, 700 - Cittá América, Bloco 8 - Loja 215 A - Barra da Tijuca, Rio de Janeiro - RJ - CEP 22640-100, in respect of those matters.

4 Property description and location

4.1 Andorinhas Project area

The Andorinhas Project is located at 49°48'59" W, 07°27'38" S (630,530E, 9,175,160N UTM zone 22 grid) in the central eastern area of Para State, 750 km south of the state capital of Belem (Figure 4.1).

Figure 4.1 Location map and regional geology of the Andorinhas Project



The Andorinhas Project area comprises exploration licences covering an area of 20,000 hectares and applications for exploration permits for two adjacent areas, which will bring the total Andorinhas Project area to around 35,237 hectares (Table 4.1 and Figure 4.2).

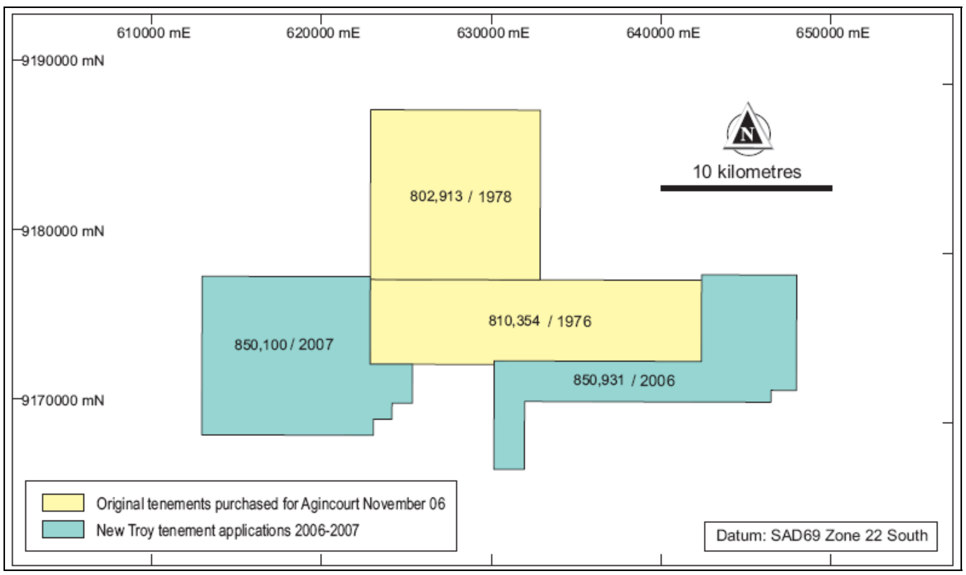
Exploration licence no. 7731 was granted on 17 October 1977 authorizing CVRD to explore for gold for 3 years within an area of 10,000 hectares, in the Municipality of Floresta do Araguaia and Rio Maria. This exploration licence was assigned to RML and registered to RML on 20 September 2005. Exploration licence No. 827 was granted on 4 February 1980 authorizing CVRD to explore for gold for 3 years within an area of 10,000 hectares in the Municipality of Floresta do Araguaia and Rio Maria. This licence was assigned to RML and registered to RML on 20 September 2005.

RML has been issued Special Authorizations in respect of both the Mamao and Lagoa Seca deposits (nos 810.354/76 and 802.913/78, respectively) for a one year period expiring on 24 May 2008. In addition, Troy has been issued a Utilization Bill (known as a trial mining permit) in respect of both deposits, allowing it to extract 50,000 tonnes of ore from each deposit for a period of six months commencing on 4 October 2007.

Table 4.1 Troy tenements

Expiration	Number	Area (ha)	Permit Type	Phase	Company Holder
24 May 2008	802.913 /78	10,000	Autorizacao de Pesquisa	Special Authorization with Trial Mine	RML.
24 May 2008	810.354 /76	10,000	Autorizacao de Pesquisa	Special Authorization with Trial Mine	RML.
Application	850.931 /06	5,344	Autorizacao de Pesquisa	Exploration Application	Troy Brasil Exploração Mineral Ltda.
Application	850.100 /07	9,893	Autorizacao de Pesquisa	Exploration Application	Troy Brasil Exploração Mineral Ltda.

Figure 4.2 Location of Andorinhas tenements



The Andorinhas Project is adjacent to an iron ore mine owned by Mineração Floresta do Araguaia (MFA), a subsidiary of SIDEPAR which operates an iron smelter based at Marabá. Little is known of the deposit except that it is of the order of 20 Mt of iron ore with grades of up to 68% Fe. The mining operations are located 400 m north of the Andorinhas tenements and about five km east-northeast of the Babaçu garimpeiro workings.

Other than the royalties described in section 4.2 below, Troy is not required to pay any amount to retain the property except that Troy is required to pay annual government tenement rentals of BRL$15,550/per granted tenement per year.

4.2 Royalties

The Andorinhas Project is subject to an agreement with Companhia Vale do Rio Doce (CVRD), which included an escalation clause related to reserve growth and payments to

CVRD. Troy however, has concluded a deal with CVRD whereby the escalation provisions have been replaced with the payment by Troy to CVRD of US$1 M plus a 2.5% NSR royalty on future production above 400,000 oz for the Andorinhas Project. The US$1 M cash payment to CVRD was withheld from the US$10.1 M purchase price paid to Agincourt.

The Federal Constitution has established that the states, municipalities, Federal District and the bodies of the direct administration of the Union (DNPM and IBAMA) are entitled to a percentage of the results of exploitation of mineral resources, or, alternatively, to receive royalties ("financial compensation") for said exploitation. Said compensation has been set at a maximum of 3% on the net income from the sale proceeds of the mineral product obtained after the last stage of processing and before its industrialization. The rate for gold is 1%.

Other than as set out above and the royalty to landowners referred to below there are no royalties, back-in rights, payments or other agreements and encumbrances to which the property is subject nor are there any obligations that must be met to retain the property.

4.3 Surface Rights

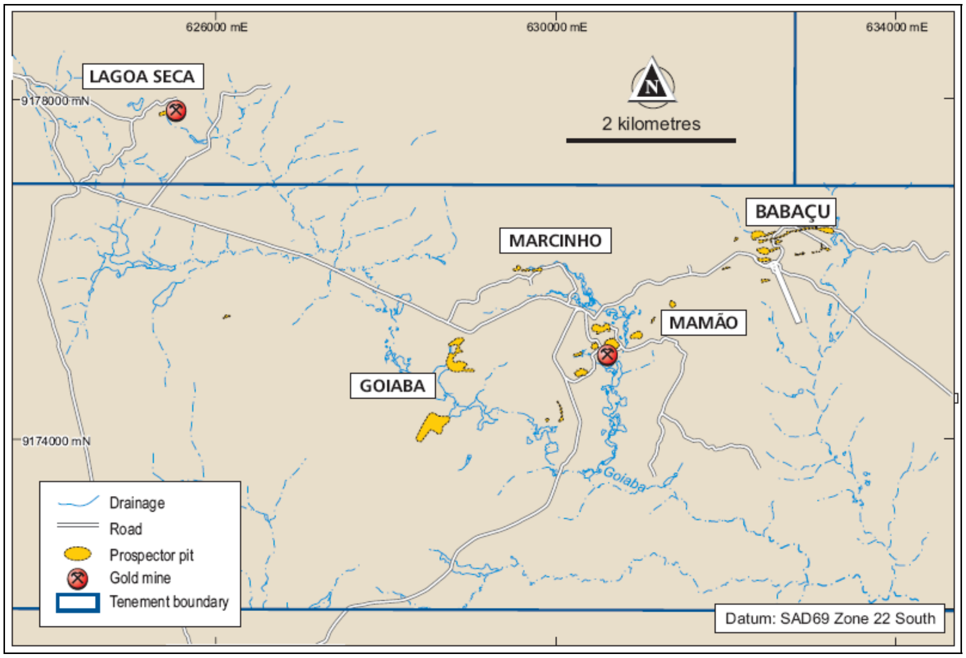
Compensation agreements have been reached with the Barbosa and Fagundes property owners whose land hosts the Mamão and Lagoa Seca deposits, whereby Troy will pay a 1.0% production royalty to the land owners in exchange for access rights to the property. The Mamão deposit and the Caninana and Babaçu prospects are located within the Barbosa property. The Lagoa Seca and Lagoa Seca West deposits are wholly located within the Fagundes property.

The Barbosa property also contains smaller properties owned by the Samuel and Bahiana families. No agreements have yet been made with these small property owners.

4.4 Former garimpeiro mining activity

The Andorinhas Project area contains at least five areas of significant garimpeiro mining activity, including Lagoa Seca, Mamão, Babaçu, Goiaba and Marcinho (Figure 4.3).

Figure 4.3 Location of garimpeiro workings



4.5 Required permits

As stated above, the DNPM has issued trial mining permits (Utilization Bills) to RML to allow 50,000 t of ore to be mined from each of the Mamao and Lagoa Seca tenements. The permits also allow the sale of the gold produced from the ore. If necessary they can be extended by an additional 50,000 t for each of the mines. The trial mining permits can potentially cover 1.5 years of mining. In connection with that trial mining permit Troy was also granted an interim operating licence from the environmental authorities, authorizing small scale mining operations (to a maximum of 50,000 tonnes from each of the mines), for a period of 12 months. Ultimately Troy must apply for, and be granted, a mining concession (see section 4.7 below) and a preliminary, implementation and operation environmental licence for full mining operations (see section 4.8 below).

4.6 General information on exploration and mining tenements

Each of RML and Troy Brazil are authorized by the DNPM of the Federative Republic of Brazil (Brazil) to operate as a mining company and is duly registered with the Registry of Commerce of the State of Para.

Mining rights under the Brazilian Mining Code of 1967 may take the form of (i) applications for prospecting, (ii) exploration permits or (iii) mining concessions.

Applications for prospecting must be filed with DNPM in order to grant to the interested party the right of preference in the exploration of the areas previously specified.

Pursuant to the laws of the Brazil, mining companies may request to the DNPM the issuance of an exploration permit covering areas they intend to explore. The request must be supported by an exploration plan and comply with certain other requirements.

Provided the area of interest is not already covered by a pre-existing application or exploration permit and that all requirements are met, DNPM shall then grant the permit on a first-come, first-served basis. Requests are sequentially numbered and dated upon filing at the DNPM to ensure fair treatment between the parties involved. Exploration permits are granted for 3 years, renewable upon request for no longer than one additional three year period, and subject to an annual charge payable to the DNPM based on the size of the area and the term of the licence. Exploration is required to commence within 60 days of the issuance of the permit.

Among other things, the discovery of any other mineral substance not included in the exploration licence must be communicated to the DNPM. Upon conclusion of the exploration a final report must also be filed stating geological findings and an assessment of the economic and technical feasibility of the area. If the final report is approved the holder of the exploration permit has one year to apply for a mining concession for the intended area. Said application must include a mining plan and a development plan.

The holder of a mining concession must, among other things, commence the work provided for in the development and mining plan within 6 months from the grant of the concession and not suspend development and mining operations for more than six consecutive months. The holder of a mining concession must also report annually to the DNPM on activities, production and sales.

Subject to complying with its conditions, a mining concession entitles the holder thereof, to mine the area of the mining concession indefinitely until full depletion of the deposit.

In certain circumstances the holder of an exploration licence may apply for a special authorization effectively permitting exploration activity notwithstanding a mining concession has not been granted because the feasibility of the project has not been established.

In addition, it is possible to extract mineral prior to the grant of a mining concession pursuant to a Utilization Bill (also known as a trial mining permit). A utilization Bill is effective for a period of six months or longer and permits a limited and specified amount of ore to be extracted.

4.7 Environmental status and permitting

The Brazilian licensing process can involve two levels: Federal or State. Whenever a mining concession is entirely located within a state of Brazil, the State Environmental Protection Agency (EPA) is responsible for issuing the licences. When the Mining Concession covers more than one state, or if the mining projects has a major national or regional environmental impact, the Federal Environmental Agency (IBAMA) is responsible or the issuing the licences. For the Andorinhas Project, the Para EPA is responsible for issuing the licences, inspection and control.

Three types of licences can be obtained and are described herein.

4.7.1 Preliminary licence

A preliminary licence is obtained at the planning stage of a project. An Environmental Impact Assessment (EIA) and a plan for the restoration of degraded areas are prepared and submitted to the State Environmental Protection Agency (EPA). In this phase, a public meeting may be required before issuance of the Preliminary Licence by the EPA.

The issuance of a Preliminary Licence indicates that the regulatory agency and community approved the EIA.

4.7.2 Implementation licence

An implementation licence is required prior to commencement of construction and may only be issued after an environmental management plan has been presented to, and approved by the EPA.

4.7.3 Operation licence

Mining and processing may only occur following the issuance of an operation licence. This operation licence is granted once the terms of the construction for the project have been completed and the authorities are satisfied that development and construction were carried in accordance with the conditions of the implementation licence and that the environmental management plan has been correctly implemented. This phase corresponds to the final construction stage of the mine.

A Licence to Operate has been granted by SECTAM, the Para state government agency responsible for the environment. This operation licence is numbered 0264/2007 and is valid until 22 May 2008. The full operation licence is pending the final mining approval from the DNPM.

4.8 Environmental liabilities

Under Brazilian law, mine operators are responsible for the reclamation of any degraded areas, regardless of whether the current operator is responsible for the degradation. Troy intends to rehabilitate mine workings concurrently with mining, and to rehabilitate drill sites and drill access roads on an ongoing basis. Upon completion of mining, the mill, tailings dam, waste dumps, and office areas will be rehabilitated.

Other permits generally required by mining companies may include:

- water use right/permit
- army and federal police permits
- deforestation permit
- discharge permit
- hazardous transportation/disposal permit
- archeological recovery permit

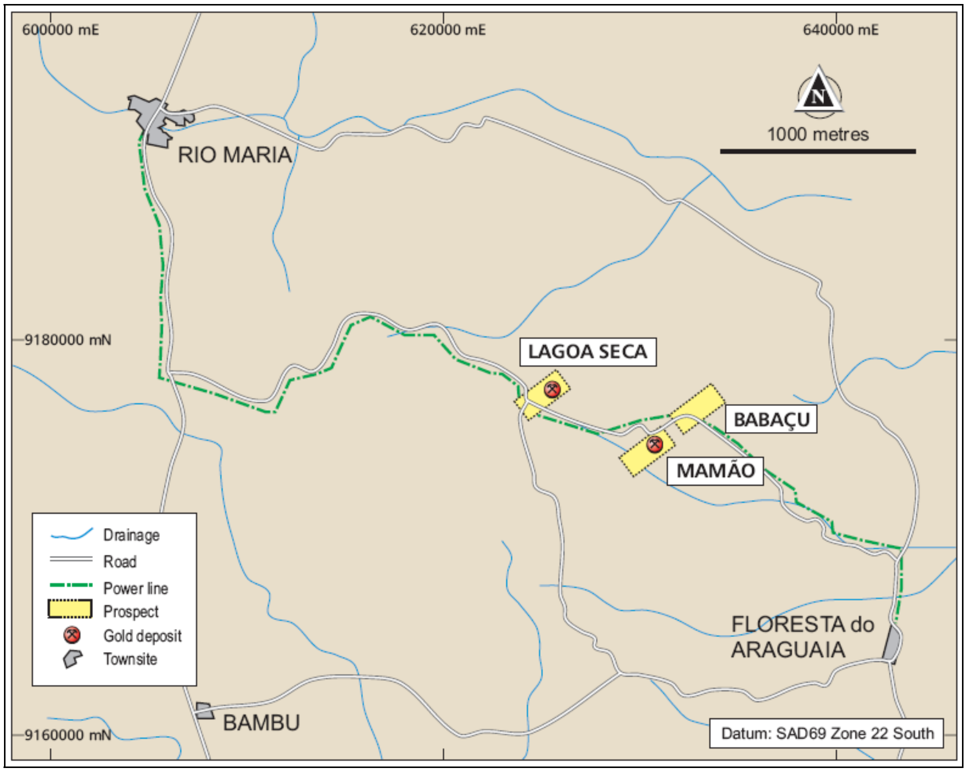
Property boundaries are located by survey.

See the figures in section 5 for location of known mineralized zones, mineral resources and mineral reserves and mine workings, existing tailings ponds, waste deposits and important natural features and improvements relative to outside property boundaries.

5 Accessibility, climate, local resources, infrastructure and physiography

The Andorinhas Project is close to the town of Rio Maria (Figure 5.1), approximately 100 km northeast of the city of Redenção and 750 km south of the State capital of Belem.

Figure 5.1 Plan of Andorinhas power line



The closest city with an air service is the regional city of Redenção, 100 km from site. The closest large city is Marabá, 317 km to the north, which is served by a domestic airport. The municipal centres are the towns of Rio Maria and Floresta do Araguaia which are accessed from the main highway linking Marabá to the north and Redenção to the south.

The project is accessed via a 14 km sealed road and then a 30 km dual lane dirt road. Alternative access to Floresta is via mostly narrow dirt roads and via Bambu to Redencao, mainly on narrow dirt roads.

There is a 700 m long landing strip at site, which is partially overgrown by grasses but is in reasonable condition.

The average rainfall is 2,200 mm per year and up to 440 mm per month during the wet season from January to May. During the wet season, low lying areas are subject to flooding. There are flooded historical surface workings at Mamão and Lagoa Seca that are scheduled for dewatering, however it is not anticipated that rainfall will significantly affect the mining and operating season.

The project area is located at 240 m above sea level, in flat to hilly terrain cleared of trees in places for grazing of cattle.

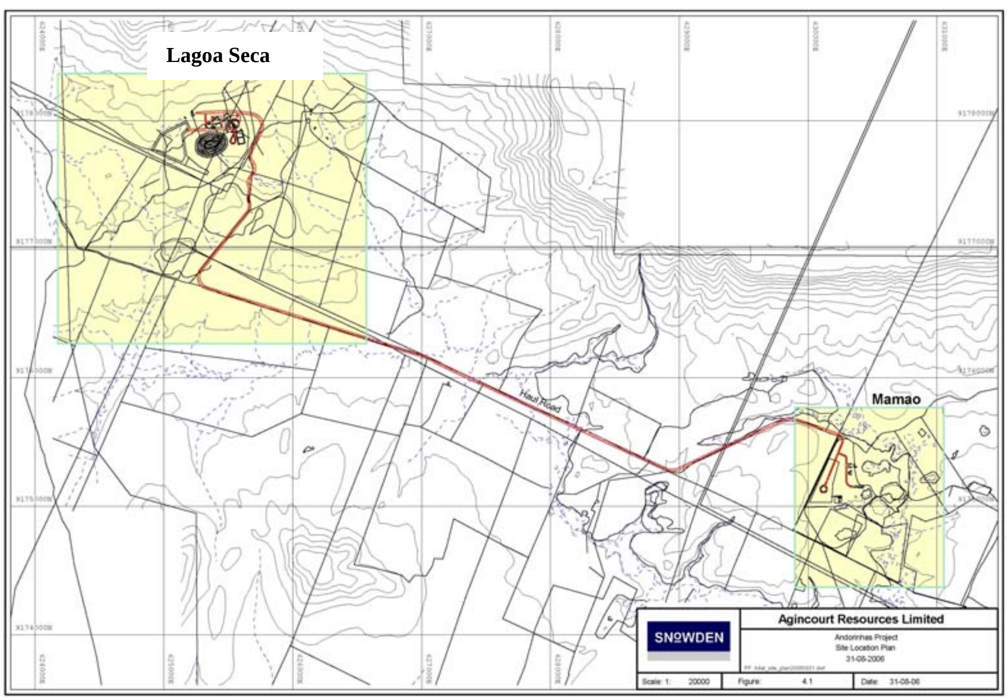
There is an existing 500 kV overhead power line to Mamão that passes close to Lagoa Seca. The line begins at the substation in the city of Rio Maria (16,000 population) and continues along the main highway 14 km south to the turn off for Fazenda Rio Novo where it follows the road past Lagoa Seca to Mamão (Figure 5.1). The line extends to the town of Floresta do Araguaia and is the town's only source of power. Rio Maria will be the supply base for the operation and a source of labour.

There is abundant surface and subsurface water supply in the area and previous studies (Reliance, 2004) identified that adequate water supply can be provided by a fresh water well system. During the start up period, it is expected that the mill can run on water obtained from the dewatering of the open pits.

Upon reaching agreement with the remaining small landowners, Troy will have sufficient surface rights over the Andorinhas project area for proposed mining operations.

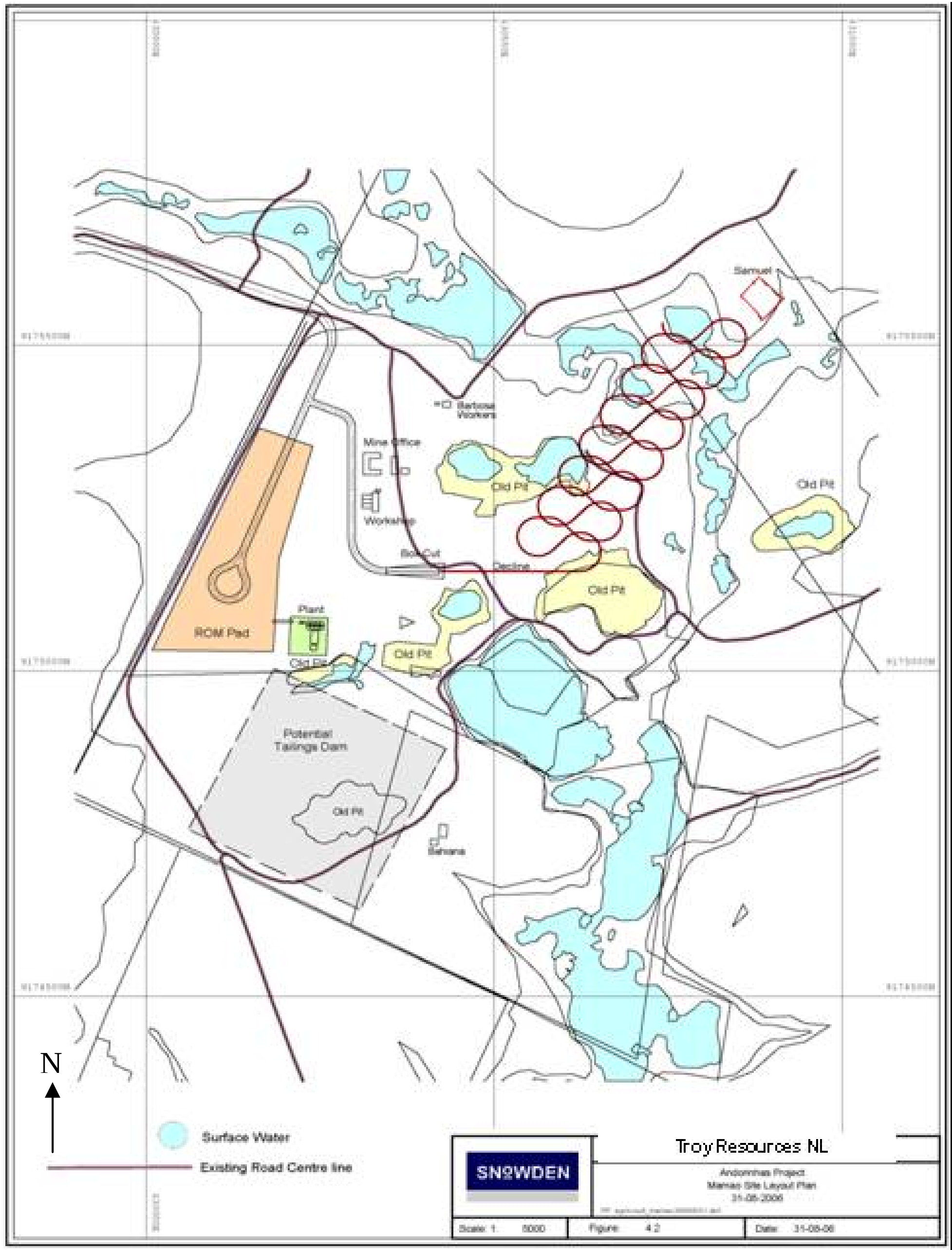
The main processing facilities and site administration offices and stores will be located at Mamão. Open pit ore will be hauled by truck from Lagoa Seca to Mamão on the haul road shown in Figure 5.2, which largely follows the alignment of the existing road. The Lagoa Seca-Mamão haul road will be upgraded to suit two to three trucks transporting an average of 500 tonnes per day on day shift only.

Figure 5.2 Plan of haul road between Lagoa Seca and Mamão



The main process plant, infrastructure and offices at Mamão will be located west of the numerous flooded pits, streams and water-logged ground as shown in Figure 5.3.

Figure 5.3 Mamão site layout plan

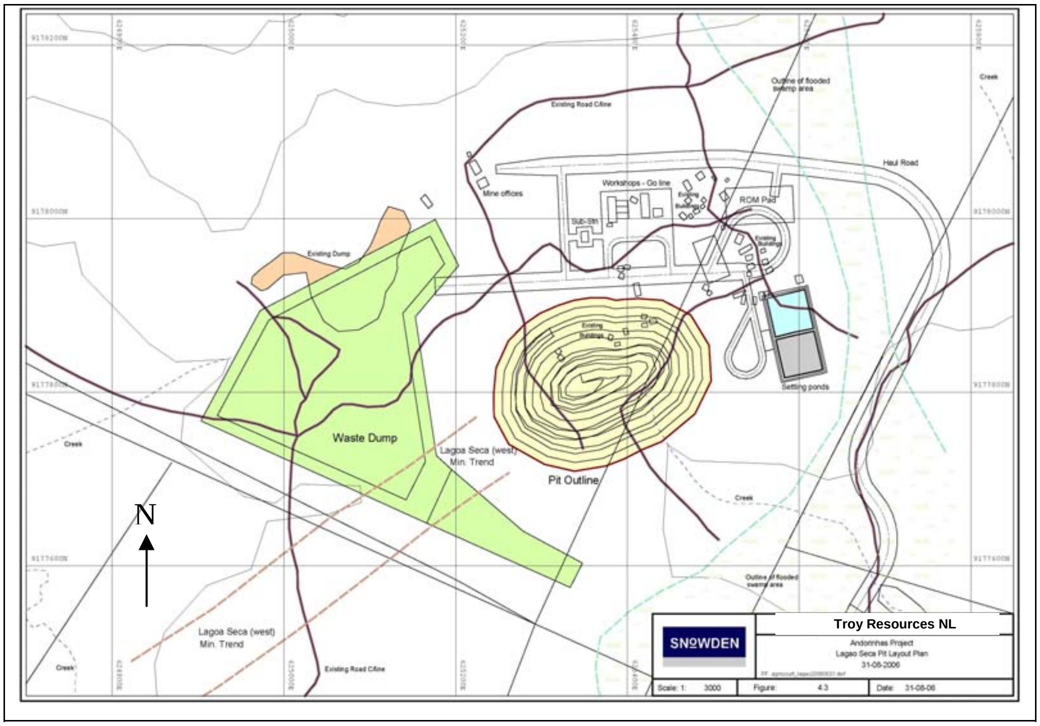


The 20 m wide haul road from Lagoa Seca will lead into a 10 m wide roadway ascending the run of mine (ROM) stockpile. The ROM has been sized to accommodate ore from Lagoa Seca and the Mamão underground, including a turning loop for the haul trucks. Ore will be fed directly into the mill, located immediately east of the ROM stockpile. A second road will lead to the main mine office, stores and workshops located northeast of the process plant. This road will continue on to the box cut, which will access the underground decline.

Water from underground at Mamão will be pumped to the open pits immediately south of the portal to settle sediment prior to re-use or release to the environment. A pontoon and pumps will be installed in the pit and provide mine service water.

An open pit will be mined at Lagoa Seca as shown in Figure 5.4. A waste dump with a capacity of approximately 1,000,000 m³ is planned immediately south and southwest of the pit. A 5 m high bund (which includes the waste dump) will be constructed around the pit to provide short-term flood protection and will act as a long term abandonment bund. Surface topsoil will be stripped from the pit and waste dump area and stockpiled for rehabilitation after mine closure.

Figure 5.4 Lagoa Seca pit layout plan



In summary Troy has planned for sufficient potential tailings storage areas, water disposal areas and processing plant sites.

6 History

The following historical information in Table 6.1 sets out the prior ownership changes of the Andorinhas Project and is excerpted and compiled from reports by CVRD (2002), Golden Star Resources (2004), Reliance (2004), and Agincourt (2006) and includes the prior ownership of the Andorinhas Project. Additional details are presented in Section 10.

Table 6.1 Summary of exploration and development under prior ownership

Year	Exploration summary
1973	Companhia Vale do Rio Doce (CVRD) undertakes regional reconnaissance and identify two important base metal geochemical anomalies.
1975	CVRD discover gold mineralisation by field mapping at Babaçu and by soil sampling at Mamão and Lagoa Seca.
1982 to 1989	Garimpeiro (illegal miners) mine multiple surface zones of oxide mineralisation and excavate an underground ramp at the Melechete deposit at Mamão. An estimated 626,000 tonnes of ore grading 8 g/t Au is mined, producing 160,000 oz Au.
1986	CVRD drill 15,000 m to evaluate the remaining resources, estimated at 1.5 Mt of ore at 8.8 g/t Au.
1991	CVRD file a new mining licence application.
1994 to 1998	CVRD enter a joint venture with Southern Star Resources (SSR) a wholly-owned subsidiary of Golden Star Resources. SSR conduct 15,000 m of DDH drilling. SSR subsequently withdraws from the joint venture.
1998 to 2004	Garimpeiro rework tailings from the Mamão ramp.
2004	Reliance Minerals Limited (Reliance) acquires an option to purchase the property from CVRD, and undertake a scoping study and resource and reserve estimate.
2005	Consolidated Minerals Ltd takes over Reliance.
2005 to 2006	Agincourt acquires the property from Consolidated Minerals Ltd and completes 6,000 m of drilling at Mamão and Lagoa Seca. A description of the exploration and development work undertaken by the previous owners is detailed in Section 10 of this report.
November 2006	Troy acquires the property from Agincourt and forms RML to operate the project. RML applies for trial mining, environmental and an extension to exploration permits.

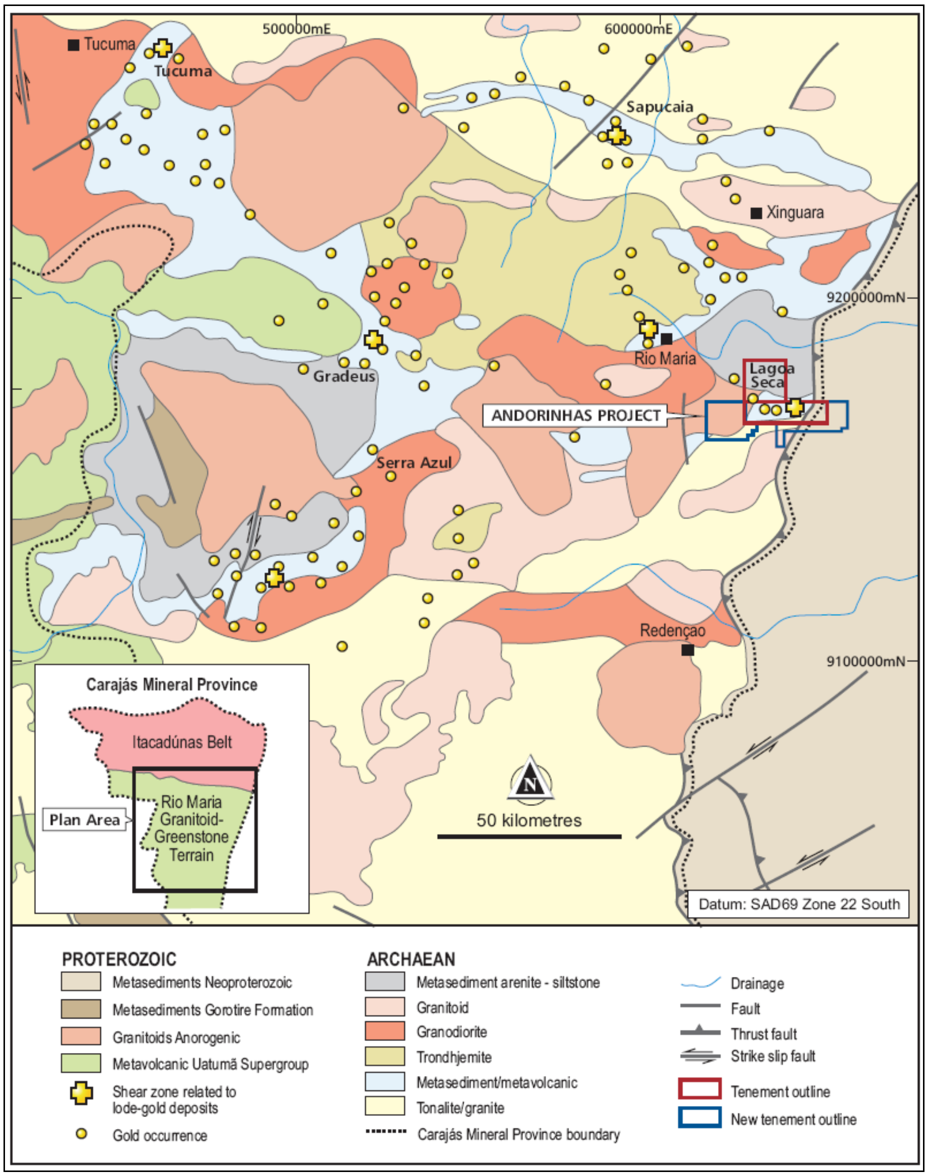
A description of the exploration and development work undertaken by the previous owners is detailed in Section 10 of this report.

7 Geological setting

7.1 Regional geology

The Andorinhas Project lies within the Serra dos Carajás mineral province which covers an area of approximately 6,000 km² in the eastern part of the Amazon craton (Figure 7.1).

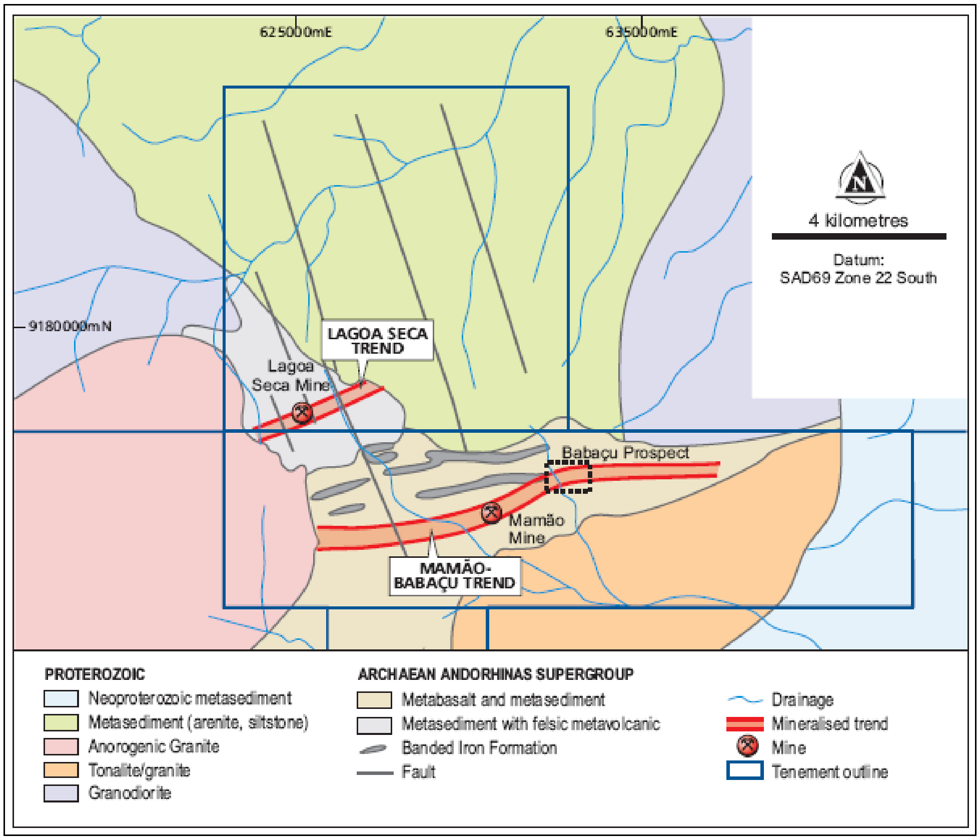
Figure 7.1 Regional geology map of the Carajás Mineral Province



The Carajás province was originally identified in the late 1960's as one of the world's largest iron-ore fields. Following the discovery of extensive iron-ore reserves within this previously unexplored, densely rainforest-covered area, numerous other metalliferous deposits have been identified including; manganese, alumina, nickel, tin, gold, platinum group elements and copper. More recently, the area has been recognised as a major copper-gold province, after the discovery of a number of world-class iron oxide, copper-gold deposits, and an emerging nickel laterite district, making Carajás an important and under-explored metallogenic province.

The Carajás province lies at the southeastern margin of the Southern Amazon craton, and is represented by granitoid-greenstone terrains, intracratonic basins, and high grade metamorphic complexes. The Carajás province comprises two Archaean tectonic blocks; the northern Itacaiúnas belt, a tectonic block that hosts the Carajás basin, and the southern Rio Maria granitoid-greenstone terrain represented by the Andorinhas Supergroup, host to the Andorinhas Project (Figure 7.2).

Figure 7.2 Andorinhas local geology and tenement boundaries



The Rio Maria granitoid-greenstone terrain and the Itacaiúnas belt can be differentiated in terms of both their geological setting and associated mineral deposits.

The Itacaiúnas belt and Carajás basin form a structural province consisting of the major east-west to northwest-southeast trending Carajás and Cinzento strike-slip fault systems.

The Rio Maria granitoid-greenstone terrain is composed largely of east, northwest, and northeast trending shear zones around dextral strike-slip faults that have affected chiefly the supracrustal rocks. Synformal structures along the shear directions, previously interpreted as synclinoria, are considered to be transpressive duplexes. The larger duplexes are related to east trending shear zones consisting of sedimentary rock cores bordered by thrust faults.

7.2 Local geology

The area comprises the Andorinhas Supergroup, a greenstone sequence in the Rio Maria granitoid-greenstone terrain and is composed of ultramafic and mafic metavolcanic rocks, intercalated with iron formations at the base (Babaçu Group) and chemical and clastic metasedimentary rocks at the top (Lagoa Seca Group) (Figure 7.2).

Large Archaean batholiths transect the greenstone rocks. Many alkaline to sub-alkaline A-type granitoid stocks and batholiths were emplaced in the Paleoproterozoic.

Similar greenstone sequences (Tucumã, Gradaus, and Sapucaia Groups) occur elsewhere in the Carajás province.

The project area is located in the basal part of the southern limb of the Andorinhas syncline, a major regional fold closure.

7.3 Property geology

The project lies within the Andorinhas greenstone belt. This is a typical volcano-sedimentary sequence with a basal sequence of felsic-intermediate metavolcanics interbedded with metasedimentary rocks and an upper mafic metavolcanic dominated sequence that is metamorphosed to upper greenschist facies.

There are two mineralised trends known as the Mamão-Babaçu trend and the Lagoa Seca trend. The shear zones follow the regional east-northeast trend.

7.3.1 Mamão

In the Mamão area, mineralisation is hosted within sheared metavolcanics, with secondary structural deformation controlling mineralised shoots that trend in a north-northeast direction.

7.3.2 Lagoa Seca

At Lagoa Seca, hydrothermal alteration and gold mineralisation occur within the Lagoa Seca shear zone. The shear cuts the Lagoa Seca Group, the upper unit of the Andorinhas greenstone belt.

The Lagoa Seca Group at the Lagoa Seca deposit area comprises meta-sedimentary and meta-ultramafic units.

The high grade lenses are located at the contact of meta-greywacke lenses and hydrothermally altered meta-ultramafic rocks.

7.3.3 Lagoa Seca West

The Lagoa Seca West deposit trends east-northeast and occurs as a continuation of Lagoa Seca deposit to the west. The deposit forms a continuation of the Lagoa Seca deposit along-strike of the Lagoa Shear Zone and is characterized by three separate mineralised zones that strike roughly east-west and exhibit a subvertical orientation. The zones are readily identifiable by the presence of a strong shear fabric developed within a zone of strong biotite-pyrite alteration.

8 Deposit types

The Itacaiúnas belt to the north of the project area is currently believed to contain by far the largest variety and accumulation of mineral deposits of the Carajás Mineral Province, and is recognised for its giant supergene-enriched iron and manganese deposits. The Itacaiúnas belt is also a premier copper-gold province, hosting large (>200 Mt) iron-oxide, copper-gold (Mo-Ag-U-REE) deposits and smaller (<50 Mt) copper gold (W-Sn-Bi) deposits. The Serra Pelada deposit, a rare world class sediment hosted Au-Pd-Pt deposit, also lies within the Itacaiúnas Belt, and, along with the other deposits, is hosted by the Archaean volcano-sedimentary rocks of the Carajás basin.

All of the deposits along the belt occur within a west-northwest trending fault corridor about 150 km long and up to 80 km wide centered on the Carajás Fault. The largest deposits (200 to 1000 Mt at 1 to 1.4% Cu and 0.3 to 0.9 g/t Au) including Salobo, Igarapé Bahia-Alemão (located approximately 150 km north of Andorinhas), Cristalino, and Sossego-Sequerinho, are Archaean iron oxide copper gold deposits. Smaller (<50Mt at <2% Cu and <1 g/t Au) Paleoproterozoic copper-gold deposits include Breves, Águas Claras, Gameleira and Estrela.

In contrast to the Itacaiúnas belt, the older Rio Maria granitoid-greenstone terrain that includes the project area, hosts orogenic lode-gold mineralisation. The major gold deposits (<17 t Au) in this block include Sapucaia, Cumaru, Babaçu, Tucumã and Inajá. These are characteristically base-metal-poor gold deposits, in contrast to the Itacaiúnas belt copper gold deposits, and generally occur in structurally controlled quartz veins within the greenstone belt rocks and granitoids.

The Lagoa Seca gold deposit however, shows more similarities to the copper gold deposits of the Itacaiúnas Belt than the lode-gold deposits that characterise the Rio Maria granitoid-greenstone terrain. This occurrence may represent the first known example of this style of mineralisation within the belt.

See Section 9 for detailed description of geological model and concepts being applied in the investigation and on which the basis for exploration is planned.

9 Mineralisation

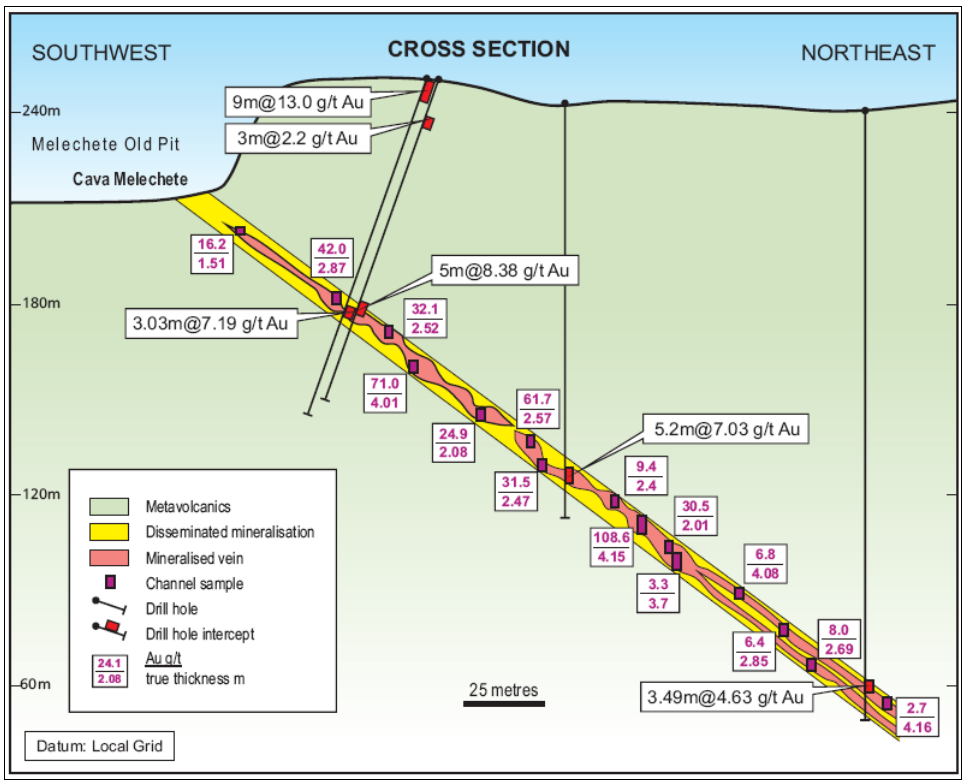
Mineralisation is of two differing styles: quartz-carbonate-sulphide shear hosted reefs in the Mamão area, and disseminated sulphide mineralisation hosted within a broad shear zone at the Lagoa Seca area.

9.1 Mamão

At Mamão the following stacked zones of gold mineralisation, from the base to the top of the sequence, are defined as the Maria Bonita, Arame, Melechete, M1, Mandioca and M2 deposits. The M2 and Mandioca deposits are interpreted to have merged into one mineralised zone, following recent drilling and modeling.

The mineralised zones occur along east-northeast trending shear zones dipping -30° to -60° to the north. These shear zones are interpreted as surfaces of reverse movement that were re-activated at a later stage by normal displacement (Figure 9.1 and Figure 9.2). Gold mineralisation is associated with sulphide-rich fluids that percolated through the shear zones.

Figure 9.1 Melechete cross section



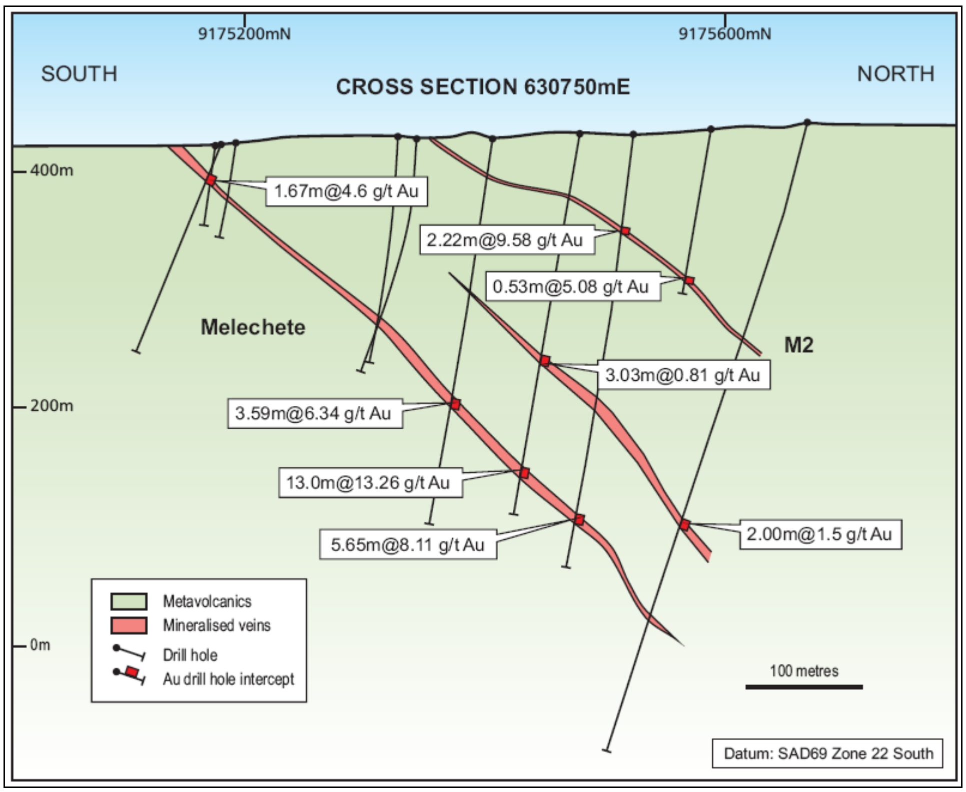
The mineralised zones present as quartz veins and veinlets that cut quartz-carbonate-plagioclase-amphibole-chlorite schist (metamorphosed mafic volcanic rocks). The mineralised zones show a strong mylonitic foliation marked by the preferential orientation of chlorite crystals and by the alteration of quartz-carbonate-rich bands with chlorite-rich bands. The mineral assemblage of the zones consists of pyrite, quartz, carbonate and chlorite, occurring as replacement products of the original mineral assemblage and indicates strong hydrothermal alteration.

Most of the quartz veins were formed during this alteration process and are oriented parallel or sub-parallel with the mylonitic foliation. Their thickness varies from one cm to 2.5 m with an average thickness around 0.2 m.

There are at least three different types of quartz veins in the shear zones including: ribbon veins introduced along the mylonitic foliation; massive replacement veins formed in portions of the shear zone with intense silicification and complete replacement of the original mineral assemblage; and quartz tension gashes formed in all stages of the alteration process. The most intense mineralisation is associated with massive silica replacement and quartz veining.

The Mamão Mineral Resource estimate includes the Melechete, Mandioca (M2) and Arame deposits. The Melechete deposit trends 060° (grid), and comprises a single tabular zone, mineralised for 500 m along strike and down dip for at least 600 m. The shoot has a northeast plunge with thicknesses ranging from one m to 9 m.

Figure 9.2 Mamão cross section at 630750mE



Mandioca (also known as M2) trends 055° (grid), and is mineralised for 650 m along strike and down dip for at least 300 m. Mandioca plunges further northwards to the north-northeast with a mineralisation thickness averaging just over two m.

Arame trends further eastward than Melechete and plunges more steeply. The strike continuity is limited to 200 m.

High grade and low grade zones of mineralisation have been interpreted. The high grade zones represent the main mineralised reef and generally exceed average grades of 5 g/t Au, whereas the low grade mineralised zones are regions of contact alteration.

9.2 Lagoa Seca zone

In the Lagoa Seca area, drilling and surface mapping has traced a northeast trending structural zone for approximately 1.7 km. Within the zone there are at least six separate shears defined and these vary from 60 m to over 600 m in length and range in thickness from less than one m to over 12 m.

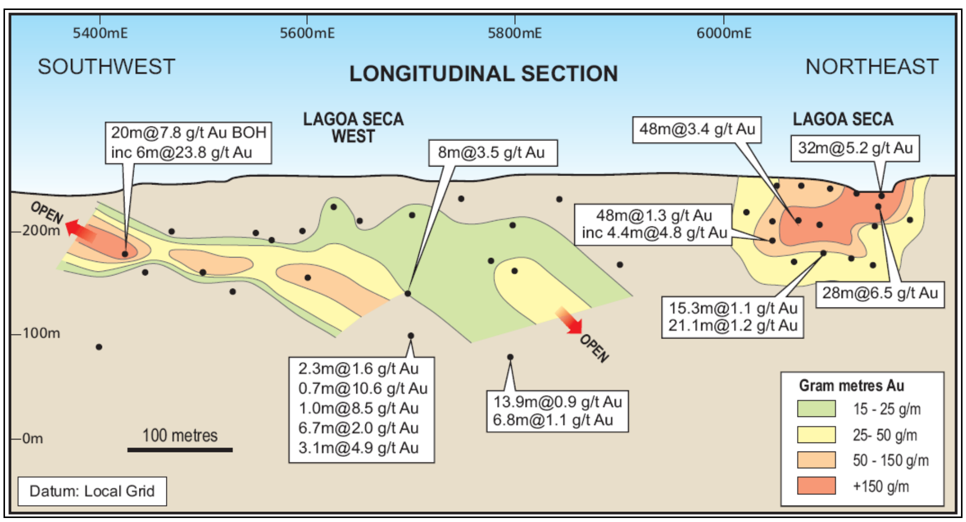
The shear zones show weak to moderate mylonitic textures with quartz-chlorite-epidote-carbonate alteration. The shears are near vertical and are parallel to sub-parallel to foliation.

The sulphides associated with mineralisation are mainly disseminated pyrite with lesser amounts of pyrrhotite and magnetite. Veining is typically narrow and consists predominantly of quartz-carbonate-pyrite and carbonate pyrite veinlets. Mineralisation is related to disseminated sulphides, hosted within a broad shear zone. Gold appears to be associated with fine-grained pyrite, however higher grade gold intercepts are also associated with thicker quartz-pyrite veining.

The deposit is believed to be the only greenstone belt hosted lode gold deposit in the Carajás province that is not dominated by quartz veins and not associated with basic metavolcanic rocks.

The main targets for resource delineation within the structure are Lagoa Seca West and Lagoa Seca (Figure 9.3 and Figure 9.4). Economic gold mineralisation has been defined only at the Lagoa Seca portion of the deposit where the average thickness of the mineralisation is 28 m. Average mineralisation thickness at Lagoa Seca West is approximately 12 m.

Figure 9.3 Lagoa Seca West to Lagoa Seca longitudinal section



Lagoa Seca contains the bulk of the gold mineralisation within a broad shear zone up to 40 m wide and 200 m long. Both the shear zone and gold mineralisation appear to be associated with, or near, the contacts between metasediments and ultramafic flows and are constrained to the north and south by rhyodacite flows. Gold mineralisation is located at, or near, the surface and appears to pinch out at depth (Figure 9.4).

The Lagoa Seca deposit trends east-northeast (grid 060°), and comprises at least three high grade parallel, sub-vertical tabular zones, with smaller mineralised pods to the south. The higher grade zones vary from 0.5 m to 6 m in true thickness (Figure 9.5).

Figure 9.4 Lagoa Seca longitudinal section

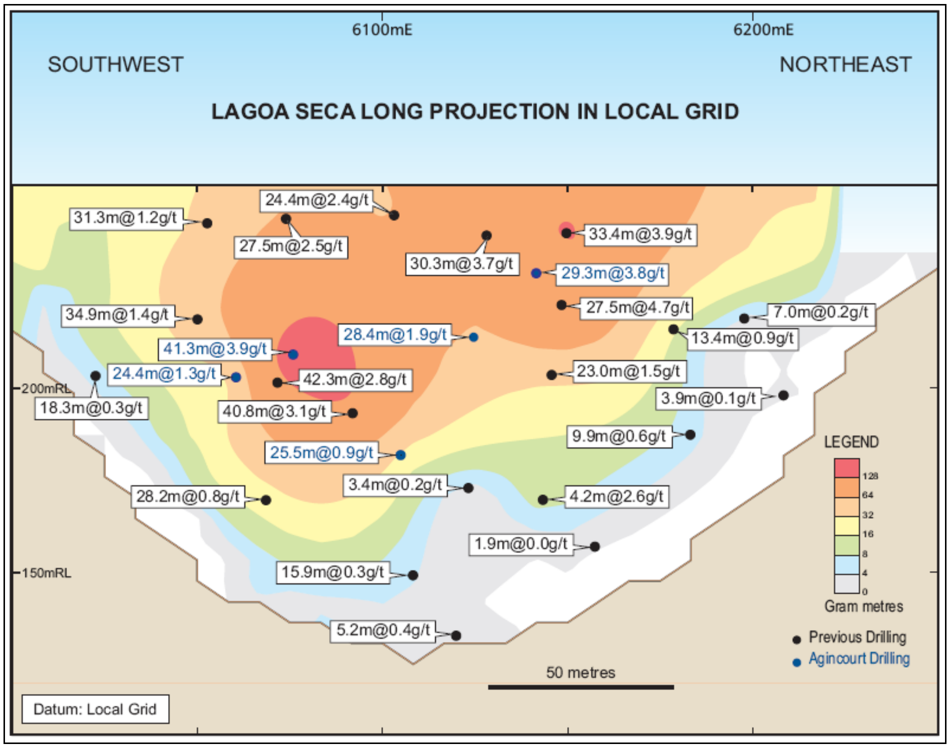
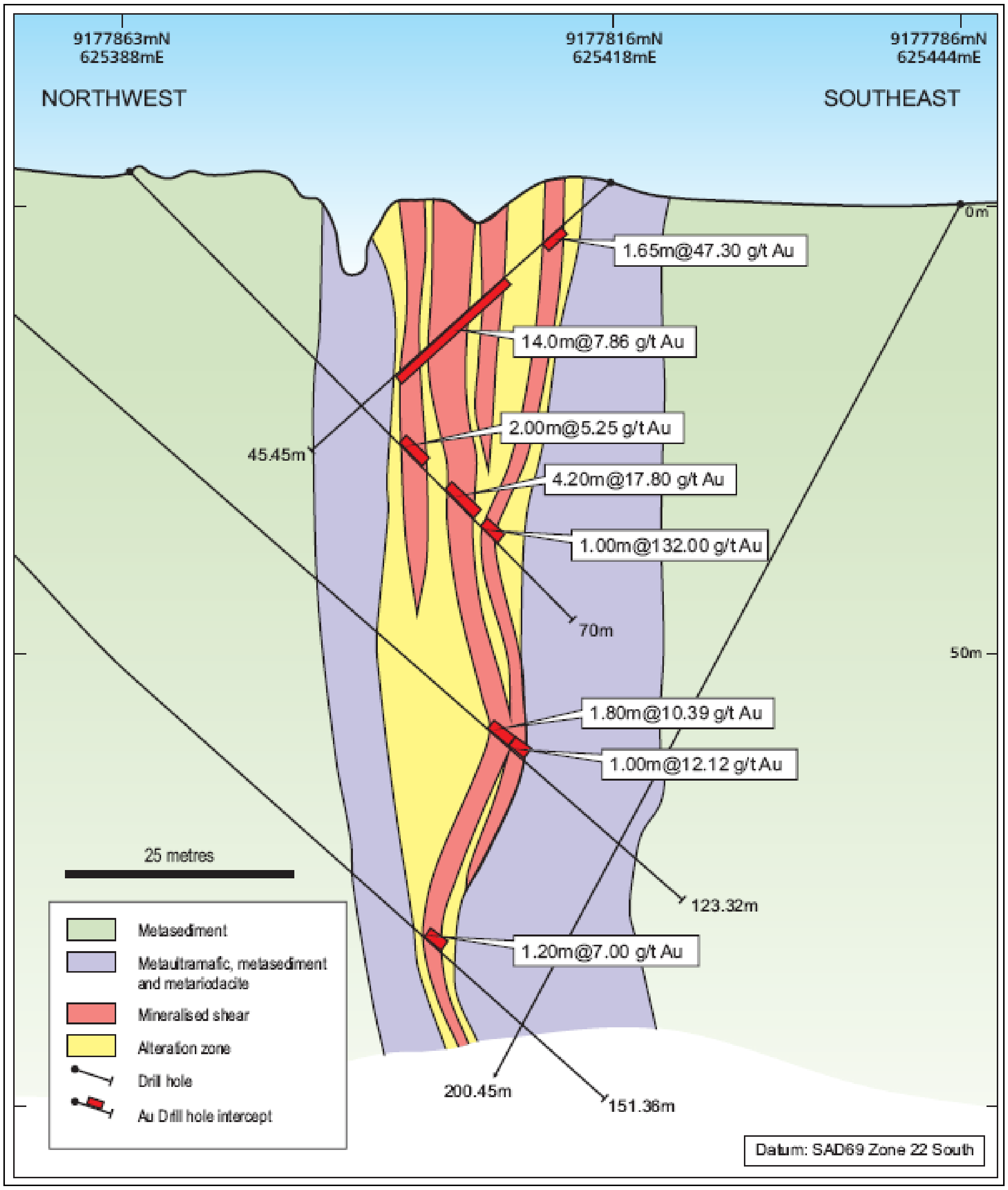


Figure 9.5 Lagoa Seca cross section



10 Exploration

10.1 Previous exploration summary

10.1.1 Exploration by CVRD from 1973 to 1994

The Andorinhas Project commenced in 1973 when Companhia Vale do Rio Doce (CVRD) identified two important base metal geochemical anomalies. In 1975, an electromagnetic and gamma aero-geophysical survey was undertaken over an area of 900 km^2. Geological field mapping lead to the discovery of gold mineralisation at Babaçu in 1975. Mamão and Lagoa Seca were subsequently identified through soil sampling. In 1978, CVRD set up a pilot plant which functioned for five years.

In 1982, an estimated 10,000 garimpeiro overran the area and mined multiple surface zones of oxide mineralisation. The Barbosa property owners excavated an underground ramp at the Melechete deposit at Mamão using a room and pillar method. By 1989 the garimpeiro had mined an estimated 626,000 tonnes of ore grading 8 g/t Au, producing 160,000 oz of gold. Thereafter the garimpeiro operations declined as the mining became uneconomic, and became more organised in the hands of local landowners.

In 1986 CVRD drilled 15,000 m and estimated a resource of 1.5 Mt grading 8.8 g/t Au . This is regarded as a historic resource estimate under NI43-101. This estimate does not use CIM resource categories, is not reliable or relevant. A recent resource estimate is presented in Section 17 of this report.

CVRD filed a new mining licence application in 1991.

During this phase of exploration, CVRD carried out numerous exploration programs including:

- 1,445 line km of electromagnetic and gamma aero-geophysical surveys including 410 line km over the prospects.
- ground geophysics including 26 line km of induced polarization (IP) surveys and 52 line km of magnetics.
- 604 km of topographic surveying.
- 724 km of geological mapping at scales of 1:25 000, 1:10 000, 1:2 500 and 1:2 000.
- 29,975 soil geochemistry samples taken on 200 m by 400 m, 100 m by 40 m, 50 m by 20 m, and 25 m by 10 m grids, and analysed for Au, Ag, As, Cu, Zn, Ni, and Cr.
- 15,053 soil geochemistry samples from panned concentrate taken over 200 m by 40 m and 100 m by 40 m grids.
- 1,813 trench samples.
- 1,230 rock samples.
- 118 m of test pits.
- 209 channel samples from underground garimpeiro workings.
- 14,696 m of DDH drilling including 31 drillholes at Mamão, 13 drillholes at Babaçu, and 47 drillholes at Lagoa Seca.

In late 1994, CVRD sought tenders for joint venture development of the Andorinhas Project.

10.1.2 Exploration by SSR from 1995 to 1998

In December 1994, Southern Star Resources (SSR), a wholly-owned subsidiary of Golden Star Resources (GSR), evaluated the property and entered the bidding process CVRD had initiated to joint-venture the property. In December 1995, CVRD announced that SSR was selected as the successful bidder to explore and possibly exploit the gold deposits at Andorinhas in association with CVRD.

In 1996, SSR reached agreements with several key land owners of two of the principal target areas, Mamão and Babaçu. One landowner, José Barbosa, had developed and was working an underground mine following the Melechete ore zone in the Mamão area.

SSR conducted 15,000 m of DDH drilling, extending the limits of the Melechete zone and further defining four other zones at Arame, Mandioca, M1, and M2. SSR employed Kilborn International Inc (Kilborn) to conduct metallurgical test work and to prepare resource estimates. In 1997, Kilborn reported Indicated Mineral Resources at Mamão of 506,540 tonnes grading 13.33 g/t Au for 217,110 ounces of gold. This estimate is regarded as historical under NI43-101 guidelines. This estimate does not use CIM resource categories, is not reliable or relevant. Refer to Section 17 for a recent resource estimate.

SSR also conducted surveys including:

- 1,820 line km of aero-geophysics including helicopter-borne electromagnetics/magnetics (HEM).
- 240 km^2 of aerial photographic coverage.
- 215 line km of ground geophysics including IP, magnetics, and controlled source audio-frequency magnetotellurics (CSAMT).
- geological mapping over 372 km^2.
- 393 km^2 of topographic surveying.
- 12,200 m of auger drilling.
- 1,926 channel samples.
- 869 km of track cutting.

SSR failed to meet contract stipulations of proving a resource of one million ounces, and dropped the project in late 1998 after 30 months of exploration and study.

10.1.3 Activities by garimpeiro from 1998

After SSR departed, a few garimpeiro returned but concentrated their efforts on the reworking of tailings from the Mamão ramp.

10.1.4 Exploration by Reliance in 2004

In May 2004, Reliance Minerals Limited (Reliance) acquired an option to purchase the property from CVRD, and undertook a scoping study and Mineral Resource and Mineral Reserve estimate in late 2004 (Table 10.1).

Table 10.1 Reliance 2004 Mineral Resource estimate

Deposit	Indicated		Inferred	
	Tonnes	Grade (g/t Au)	Tonnes	Grade (g/t Au)
Melechete	300,000	8.17	116,800	18.8
Barbosa mine pillars	40,000	14.0	-	-
Arame	-	-	17,900	41.2
M2	-	-	20,100	13.7
Lagoa Seca One	290,000	5.2	-	-
Total	**630,000**	**7.1**	**154,800**	**20.7**

This resource estimate is believed to be reliable and relevant however it is superceded by the reserve and resource estimate in Section 17 of this Report.

Reliance also conducted assessments including:

- collating and reviewing all available data, both in digital and hardcopy formats from CVRD and any other available sources.
- validating the drillhole database and loading data into Gemcom mining software.
- a site inspection including an assessment of the existing facilities, landforms, climate, and operating environment.
- surface sampling around the project area.
- inspection of previously drilled DDH drill core, including some re-logging, re-sampling and re-assaying.
- RQD measurements of core to determine the likely operating condition of any underground mining.
- collection of samples for density analysis to verify the density used in previous resource estimations by SSR and CVRD.
- assessment of the QAQC process used by the SSR assay laboratory.
- reviewing the draft Tenement Assignment and sending it to CVRD for comment.
- verifying the status of the concessions through the relevant government agencies.
- reviewing the previous agreements, specifically the compensation agreement between SSR and the landowners.
- obtaining legal opinion on the liability of previous environmental damages at the site.
- obtaining SSR Landowner agreements.
- validating wireframes of the mineralised zones against the drillhole database.
- broad verification of Mineral Resource estimates completed by SSR.

- undertaking a scoping study to assess the economics of the project.

10.1.5 Exploration by Agincourt from 2005 to 2006

In January 2005, Consolidated Minerals Ltd (CML) took over Reliance; in the same year Agincourt acquired the project through the purchase of CML's exploration assets.

Agincourt collected 30 rock chip samples for gold assay and 11 samples for iron assay. A total of 634 auger holes for 2,184 m were drilled at Caninana, Lagoa Seca, and the tailings dumps at Lagoa Seca and Mamão. The auger was generally drilled at 25 m spacing on lines greater than 100 m apart. Agincourt also drilled 37 DDH drillholes for 6,637 m at Caninana, Lagoa Seca, and Mamão.

Agincourt completed 6,000 m of drilling at Mamão and Lagoa Seca in 2005. In September 2006, Snowden completed a scoping study and Mineral Resource estimates for these two areas for Agincourt and reported the estimates in line with the JORC Code guidelines (JORC 2004). At Mamão, Snowden reported Indicated Mineral Resources of 816,000 tonnes at 9.9 g/t Au above a cut-off of 2 g/t Au, and Inferred Mineral Resources of 81,000 tonnes at 6.4 g/t Au above a cut-off of 2 g/t Au. At Lagoa Seca, Snowden reported Indicated Mineral Resources of 700,000 tonnes at 2.8 g/t Au above a cut-off of 0.8 g/t Au. This resource estimate is believed to be reliable and relevant however, it is superceded by the resource estimate at Section 17 of this report.

10.2 Previous exploration of key prospects

10.2.1 Lagoa Seca West prospect – exploration and resource details

Location: 9177500mN / 624900mE, Zone 22 South (Figure 10.1).

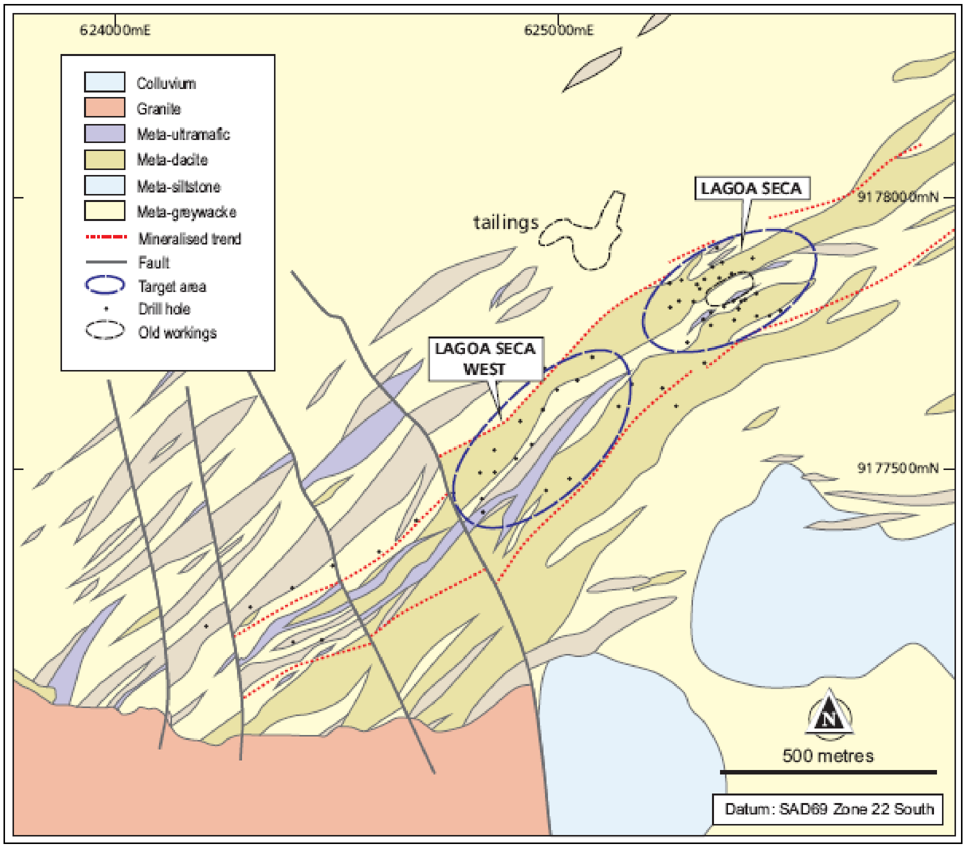
The Lagoa Seca West prospect is a target that trends east-northeast and occurs as a continuation of Lagoa Seca deposit to the west. Limited wide-spaced drilling (43 holes for 6,135 m) has been completed to date. Troy considers this area to be a high priority target for additional exploration work.

The Lagoa Seca West zone is characterized by three separate mineralised zones that strike roughly east-west and exhibit a subvertical orientation. The zones are readily identifiable by the presence of a strong shear fabric developed within a zone of strong biotite-pyrite alteration.

The historic exploration data used to estimate the Lagoa Seca West resource included 43 DDH holes for 6,135 m and channel and trench samples. The northeast portion of the target is drilled at predominantly 25 m spacing along the strike but the drill density decreases towards the eastern and western extremities of the deposit. The best historic gold intersections were drilled in the northeast part of the zone and include F-04/LS; 7 m at 20.60 g/t Au, F-20/LS; 3 m at 7.88 g/t Au and F-47/LS; 3.45 m at 9.94 g/t Au. These higher grade intersections are surrounded by a number of adjacent drillholes that returned wider zones of lower grades.

The Snowden 2006 estimate reported an Indicated Mineral Resource of 800,000 tonnes at 1.1 g/t Au and an Inferred Mineral Resource of 1,600,000 tonnes at 1.3 g/t Au. Further infill RC drilling is planned for Lagoa Seca West. This resource estimate is believed to be reliable and relevant however it is superceded by the reserve and resource estimate in Section 17 of this Report.

Figure 10.1 Lagoa Seca prospect



10.2.2 Marcinho-Caninana trend

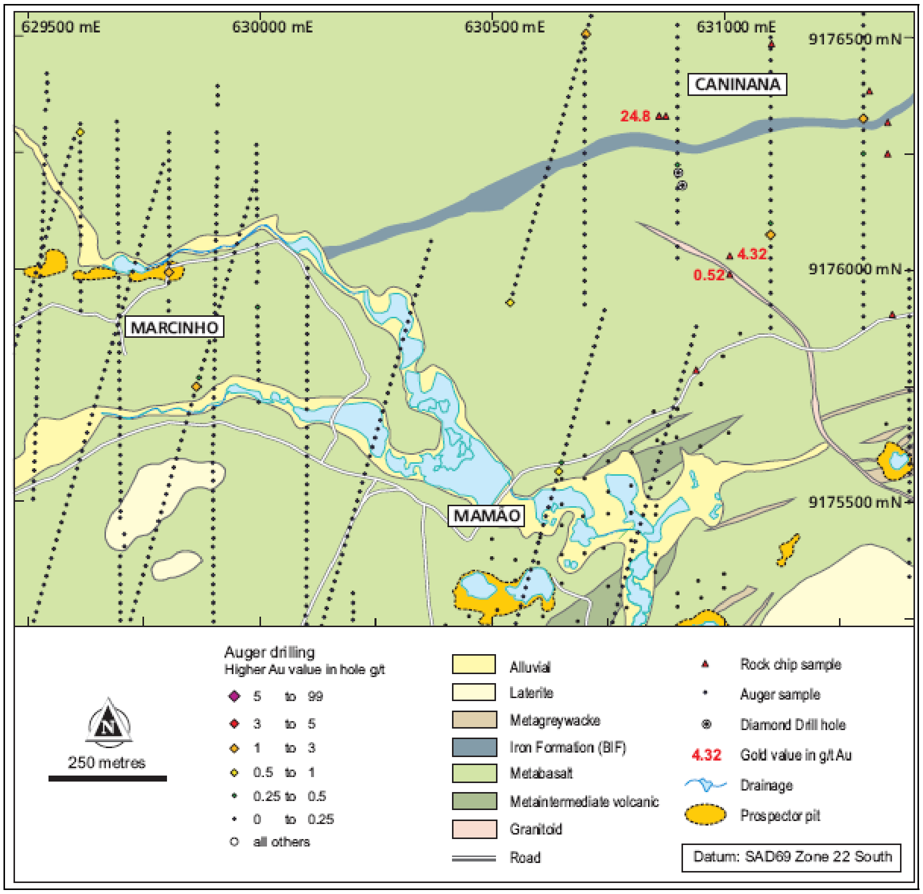
Location: 9176000mN / 629720mE - 9176200mN / 631000mE, Zone 22 South (Figure 10.2).

The Marcinho – Caninana gold trend is an east-northeast striking 2.5 km long trend defined by the Marcinho open pit and gold anomalies of the Caninana prospect.

The trend is associated with a north dipping sequence of iron formation within metabasalts located about 0.5 km north of main Mamão – Babaçu shear zone. At the west end of the trend there are the Marcinho garimpeiros pits that form a 350 m long east-west zone. Little historical information is available and field reconnaissance is planned to assess the exploration potential and develop an exploration program to evaluate the opportunity.

The eastern portion of the trend consists of a series of scattered, weakly anomalous single point geochemical sample results from both reconnaissance rock chip grab sampling and grid based soil auger sampling. Two DDH holes for 332 m were drilled in the Caninana area. This earlier drilling targeted outcropping banded iron formation with abundant pyrite. The peak rock chip grab sample assay obtained from the BIF graded 24.8 g/t Au. The DDH drilling failed to intercept significant mineralisation however the collar positions appear to have been sited too far south resulting in the holes cutting the footwall of the shear and missing the BIF target. A detailed geochemical exploration and geological mapping program is planned to better define the drill targets.

Figure 10.2 Marcinho – Caninana trend



10.2.3 Babaçu prospect

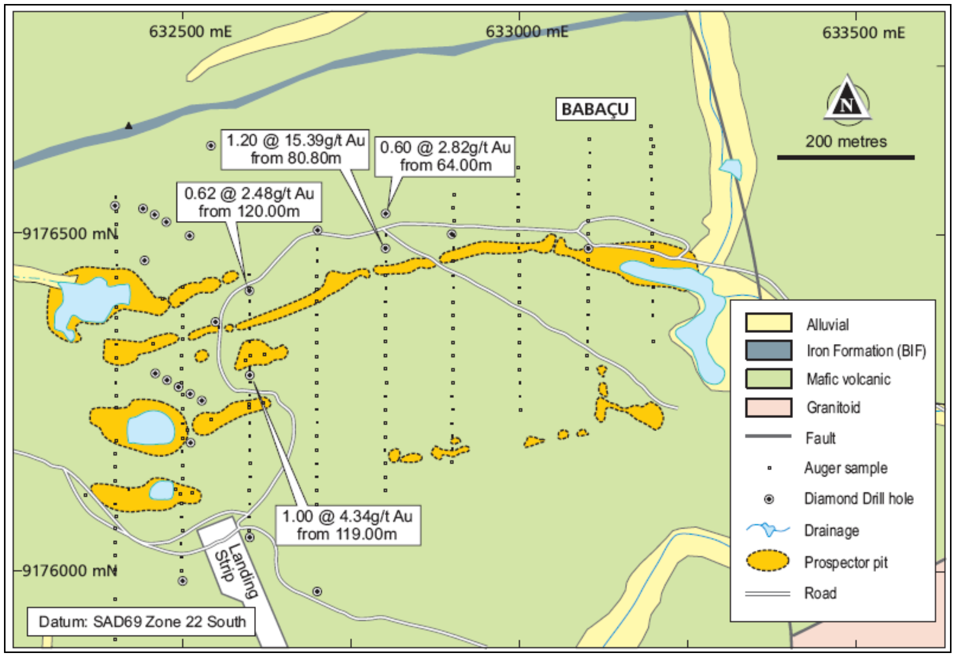
Location: 9176400 mN / 632670 mE Zone 22 South (Figure 10.3).

The Babaçu prospect is an east-west striking zone of continuous prospector pits with limited modern exploration and sparse drilling to date over a length of 1 km. The Babaçu prospect is located 2 km along strike from the northeast of the Mamão deposit.

Earlier examinations of the workings by previous explorers indicate that the garimpeiros focused their efforts on at least 4 parallel zones dipping to north. The pits are currently flooded and are reported to extend to depths of 25 m.

Earlier exploration by CVRD consisted of shallow auger drilling on a 100 m by 20 m grid followed by limited DDH drilling. The auger drilling failed to define any new mineralisation but clearly defined the limits of the anomalous zones associated with the shear zone. The best DDH gold intercept reported was from BBF-61, located at the centre of the structure; resulting in a gold assay of 1.2 m @ 15.39 g/t Au from a depth of 80.8 m.

Figure 10.3 Babaçu prospect



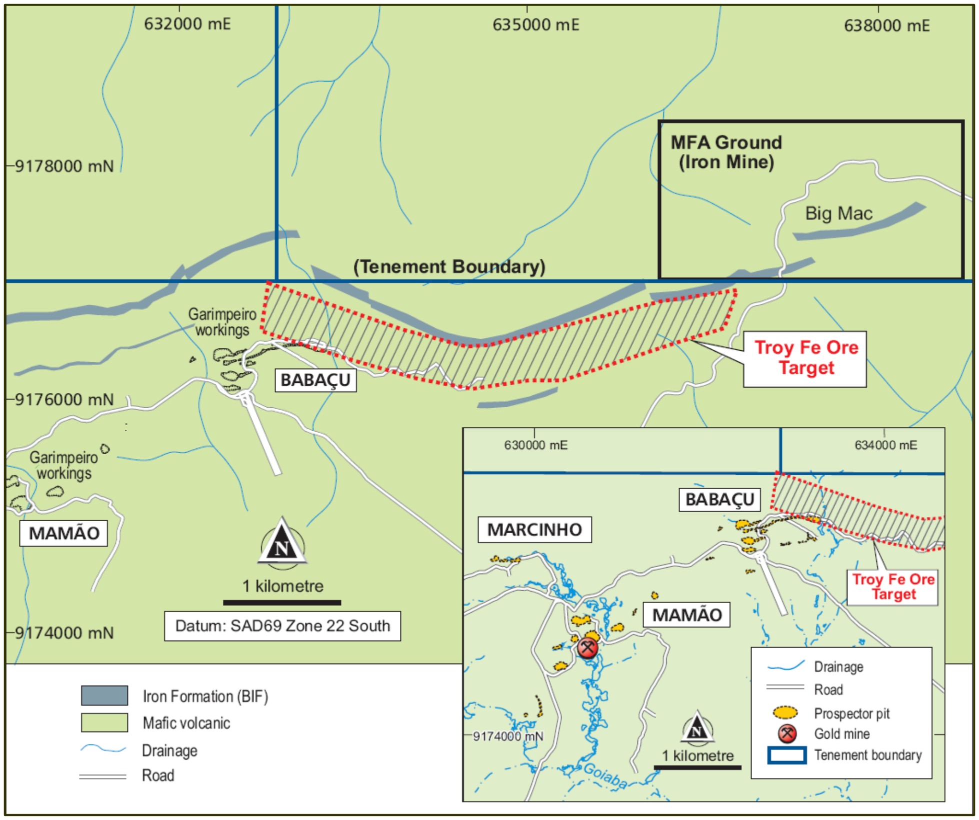
10.3 Iron ore deposit

Agincourt had recognised the occurrence of colluvial iron ore on the Andorinhas leases and completed a limited program of selected rock "float" sampling as detailed in their press release of 27 April 2006. Agincourt completed reconnaissance prospecting on the Andorinhas property focussed on the area adjacent to and along strike from the Big Mac Iron Mine owned by MFA Sidepar, a Brazilian company that currently operates within a lease immediately to the northeast of the Andorinhas Project.

There is no information on the Sidepar operation for inclusion in this Technical Report.

Geological mapping by previous explorers at Andorinhas has identified a number of parallel, east-west striking banded iron formations "BIFs" within the area north of the Mamao – Babacu Trend which are the source of the colluvial iron. Better delineation of these formations will require a detailed aeromagnetic survey to be followed by surface exploration programs to identify targets for drill testing (Figure 10.4).

Figure 10.4 Iron ore target



10.4 Gold exploration by Troy from 2006 to present

In November of 2006, Troy acquired the Andorinhas Project from Agincourt after conducting a due diligence study. Troy applied for environmental licences and extensions to exploration and trial mining permits. In preparation for upcoming work, Troy staff is collating and validating existing data, re-logging existing drill core, finishing a surface topography survey, and planning infill drilling at Lagoa Seca and sterilisation drilling at Mamão. This work is being carried out by Troy employees who have had similar experience at Troy's other Brazilian mining and exploration properties.

11 Drilling

11.1 Drilling by CVRD from 1973 to 1994

CVRD drilled 91 diamond core (DDH) drillholes for a total of 14,696 m including 31 holes at Mamão, 47 drillholes at Lagoa Seca, and 13 drillholes at Babaçu. No records of the drilling procedures are available, and not all of the drilling information is available. Table 11.1 lists the DDH drilling summary by prospect for those drillholes with available information, and that were used in the September 2006 Mineral Resource estimate (Section 17).

Table 11.1 CVRD DDH drilling summary by prospect

Prospect	Number of holes	Total metres
Mamão	15	1,923
Lagoa Seca	24	3,143
Lagoa Seca West	23	3,540
Babaçu	13	1,759
Total	**75**	**10,364**

11.2 Drilling by SSR from 1995 to 1998

SSR conducted 12,200 m of auger drilling and 15,000 m of DDH drilling, extending the limits of the Melechete zone and further defining four other zones at Arame, Mandioca, M1, and M2. No records of the drilling procedures are available, and not all of the drilling information is available. Table 11.2 shows the DDH drilling for those drillholes with information, which were used in the September 2006 Mineral Resource estimate.

Table 11.2 SSR DDH drilling summary by prospect

Prospect	Number of holes	Total metres
Mamão at Melechete underground	81	238
Mamão surface	61	12,890
Lagoa Seca West	8	1,068
Babaçu	12	1,904
Total	**162**	**16,100**

11.3 Drilling by Agincourt from 2005 and 2006

11.3.1 Auger drilling

Agincourt drilled a total of 634 auger holes for 2,184 m in Caninana, Lagoa Seca, and the tailings dumps at Lagoa Seca and Mamão (Table 11.3). No records of the auger drilling procedures are available.

Table 11.3 Agincourt auger drilling summary by prospect

Prospect	Number of holes	Total metres
Caninana	96	498
Lagoa Seca	383	1,331
Lagoa Seca Tails	47	100
Mamão Tails	108	256
Total	**634**	**2,184**

11.3.2 DDH drilling

Agincourt drilled a total of 37 DDH holes for 6,637 m at Caninana, Lagoa Seca, and Mamão (Table 11.4).

At Caninana, the target was an outcropping banded iron formation with abundant pyrite clasts, but both holes returned no significant gold assays.

Drilling at Lagoa Seca was intended to both extend and infill known resources over a strike length of approximately 215 m. At Mamão, drillholes were targeted to extend known resources on both the Melechete and the M2 structures over a strike length of approximately 550 m. No records of the drilling procedures are available, although the drill core is available and in good condition.

Table 11.4 Agincourt DDH drilling summary by prospect

Prospect	Number of holes	Total metres
Caninana	2	332
Lagoa Seca	21	2,492
Mamão	14	3,813
Total	**37**	**6,637**

11.4 Drilling results

Several of the more notable mineralized intercepts from Mamão and Lagoa Seca are provided in Table 11.5 and Table 11.6. The widths represent actual mineralization intercepted down the hole and not true widths.

Table 11.5 Notable intercepts from Mamão

	Hole	UTM East	UTM North	From (m)	To (m)	Width (m)	Au (g/t)
M2	RBD011	630855.96	9175632.87	129.80	131.80	2.00	37.69
M2	RBD017	630848.51	9175694.02	156.55	159.70	3.15	15.26
M2	MAF-70	630696.50	9175470.06	283.79	292.00	7.21	6.17
M2	MAF-72	630699.98	9175550.92	109.43	111.75	2.32	18.52
Melechete	MAF-64	630750.22	9175475.68	287.00	298.00	11.00	15.17
				295.00	298.00	3.00	50.69
Melechete	MAF-63	630800.00	9175478.07	301.40	305.15	3.75	12.13
Melechete	MAF-74	630750.08	9175522.43	327.65	332.28	4.63	9.77
Melechete	MAF-34	630560.00	9175219.92	91.40	94.00	2.60	17.36
Melechete	MAF-15	630681.35	9175198.17	77.06	79.55	2.49	16.00
Melechete	MAF-58	630699.88	9175390.34	224.10	228.85	4.75	7.99
Melechete	MAF-62	630649.99	9175325.24	164.50	168.20	3.70	8.10
Melechete	MAF-17	630714.94	9175177.37	45.50	48.56	3.06	8.76

Table 11.6 Notable intercepts from Lagoa Seca

	Hole	UTM East	UTM North	From (m)	To (m)	Width (m)	Au (g/t)
Lagoa Seca	RBD027	625316.6	9177840	34	84	50	4.75
				53.3	62.6	9.3	13.56
	F01-LS	625328.9	9177855	63	80	17	8.73
	F05-LS	625388.8	9177864	43	70	27	6.66
				51	57	6	21.02
	F-06/LS	625312	9177843	48	95.7	46.7	3.5
				67	74	7	7.98
	F-38/LS	625370.8	9177889	94.8	99	4.2	30.15
	F-39/LS	625394	9177813	12	43	31	5.05
				24.5	39	14.5	7.32
	F-42/LS	625370.9	9177803	20.5	32	11.5	6.09
	F-45/LS	625418.2	9177816	7	37	30	5.63
	RBD026	625412.1	9177815	24	40	16	7.62

12 Sampling method and approach

12.1 Sampling methods by CVRD from 1973 to 1994

No records of the sampling methods by CVRD during this period are available.

12.1.1 Sample risk factors

Snowden has noted that there is no CVRD drill core available for inspection and that there are no available records of the sampling methods. Snowden considers that the sample risk factor associated with samples collected by CVRD during this period is moderate. Snowden recommends that Troy reduce the sample risk factor by obtaining the drill core and undertake geological logging, check duplicate sampling, and conduct twin drillhole validation.

12.1.2 Density determinations

CVRD collected a total of 29 samples for density measurements. Density was measured by the water displacement method though it is not known whether the samples were coated in wax. The average density determined for Mamão was 2.78 t/m^3; 2.81 t/m^3 for Babaçu, and 2.93 t/m^3 for Lagoa Seca.

12.2 Sampling methods by SSR from 1995 to 1998

12.2.1 Underground channel samples

Underground channel samples were collected from the Melechete lens at Mamão using a pneumatic diamond saw, hammer, and chisel. The channel locations were chosen by project geologists who attempted to follow an ideal sampling grid of 20 by 20 m centres.

Whenever possible, the channels were cut perpendicular to the mineralised zone and from hangingwall to footwall. The length of the channel samples varied from 0.20 to 1.50 m, respecting lithological boundaries. The average sample width was 50 mm and the average depth was 33 mm. All underground channel samples were taken from fresh rock.

The walls were scaled for safety reasons and washed in order to minimise contamination before marking the channels and sampling. During sampling, two workers were involved in the process - one for cutting the samples and the other for collecting the sample with an aluminum tray. Once sampling was completed, the sample material was transferred to a labeled plastic bag. The aluminum tray was carefully cleaned between samples to avoid contamination.

12.2.2 DDH drill core samples

Core samples were collected by DDH drill rigs in three different core sizes: HW (diameter of 76 mm), HQ (diameter of 63 mm) and NQ (diameter of 47 mm). Core recovery and RQD were calculated by a SSR technician.

Where possible, a technician oriented fresh rock core according to the main structural surface in the area. Based on this orientation, core from subsequent runs was assembled together and a straight marker line was drawn on all pieces with arrows pointing to the bottom of the hole. This marker line helped to avoid rotation of the core and facilitated the interpretation of structural features. The core was placed in boxes, with markers between runs. Boxes were covered and transported to the core shed at camp.

A downhole survey was completed for each SSR drillhole to measure spatial deviation. One of two methods was employed: Maxibor (electronic) or DDI Reflex Fotobor (mechanical). Measurements were taken every 3 m from the collar to the bottom of each hole. For a few holes, a check survey was completed to ensure there was no discrepancy between the two methods. The check surveys were completed using the Tropari method.

At the sample preparation facility, the saprolite core was scraped to remove drilling mud, and washed to enhance textural features; fresh rock core was sawn in half along the orientation marker line using a diamond saw; the core was then ready to be logged and sampled.

Most core was sampled after it was logged. However, the core from mineralised zones was sampled before logging was completed in order to obtain assay results for mineralised intervals as soon as possible. The sample length varied from 0.50 to 2.00 m, respecting lithologic boundaries. Core samples were collected in labeled plastic bags; the sample breaks and the sample numbers were also written on the remaining portion of the core. After sampling, the core was photographed and the core boxes were stored at the SSR camp.

12.2.3 Sample risk factors

Snowden considers that SSR's sampling method and approach are consistent with current industry practices. Therefore Snowden is of the opinion that there is a low risk associated with SSR's sampling.

12.2.4 Density determinations

Six density samples taken from underground at Melechete returned an average density of 2.7 t/m^3. No information regarding the measurement method is available.

12.3 Sampling methods by Agincourt from 2005 and 2006

12.3.1 Auger drill samples

Agincourt drilled 634 auger holes for 2,130 m at Caninana, Lagoa Seca, and the tailings dumps at Lagoa Seca and Mamão. The auger lines were generally spaced at 25 m intervals on lines greater than 100 m apart. Chip trays were collected for all auger holes and were stored in a shed near Lagoa Seca. No further information is available regarding auger drill sampling method.

12.3.2 DDH drill core samples

No records of the sampling methods by Agincourt for this period are available, although it is known that samples were taken along geological intervals.

12.3.3 Sample risk factors

While no documentation is available regarding Agincourt's sampling practices, the Agincourt drill core is in good condition, and will be re-logged and re-sampled by Troy. Based upon the condition of the drill core Snowden is of the opinion that there is a low risk factor associated with the DDH sampling by Agincourt during this period.

13 Sample preparation, analyses, and security

13.1 Sample preparation, analyses, and security by CVRD from 1973 to 1994

There is no information available regarding the sample preparation, analyses, and security by CVRD for this period.

13.2 Sample preparation, analyses, and security by SSR from 1995 to 1998

13.2.1 Laboratories

All sample preparation and analyses for the project were carried out by independent laboratories. From 1995 to 1997, SGS do Brazil laboratory located at Belo Horizonte prepared and analysed all samples, and the GEOLAB laboratory located at Belo Horizonte analysed check samples. Overseas laboratories including Chemex and Bondar Clegg were also used to cross check results. In March, 1997, SGS Laboratories set up a sample preparation facility on site with two sample dryers, one jaw crusher and one Labtechnic pulveriser (bowl mill), and prepared all subsequent samples, which were sent to SGS Laboratories in Belo Horizonte for analyses and GEOLAB in Belo Horizonte for check analyses. In 1997 SGS gained ISO accreditation ABNT NBR ISO 9001 which is the Brazilian version of international ISO 9001 standard.

13.2.2 Underground channel samples

All underground channel samples were processed in SGS's Belo Horizonte laboratory; they were sent by road transportation as they were collected, and each sample batch had a sample list for control purposes. At the laboratory, the samples were dried, crushed, quartered and a 250 to 300 g charge was pulverised. After pulverisation, the 250 to 300 g charge was sieved in a 150 gauge sieve and both – 150 mesh and + 150 mesh fractions were analysed. The weight of the +150 mesh charge varied from sample to sample depending on its hardness; this charge was analysed by fire assay with atomic absorption finish. The – 150 mesh fraction was quartered and a 50 g charge was analysed by fire assay with atomic absorption finish. When the result exceeded 5 ppm, another 50 g charge was analysed by fire assay with gravimetric finish for confirmation purposes.

13.2.3 DDH drill core samples

Core samples were initially prepared at the SGS laboratory in Belo Horizonte following the same procedures described above for the underground channel samples. Once the SGS sample preparation facility was established at the camp, all samples from mineralised intersections were entirely pulverised before quartering. The analytical method was changed from screen fire assay to standard fire assay with atomic absorption finish with a repeat fire assay with gravimetric finish for all results above five ppm Au. At the sample preparation laboratory in camp, there were two main procedures:

- Unmineralised samples were dried, crushed, quartered and a 250 g to 300 g charge was pulverised and sent to SGS in Belo Horizonte for analysis.
- Mineralised samples were dried, crushed, pulverised, quartered and a 250 g to 300 g charge was sent to SGS in Belo Horizonte for analysis.

The mineralised samples were sent by air freight and the unmineralised samples were sent by road freight to the laboratory.

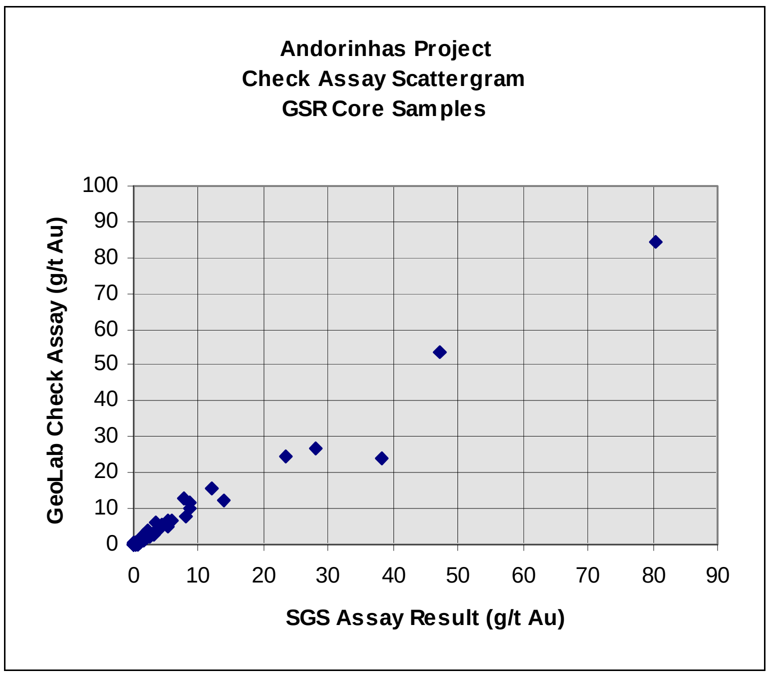
13.2.4 Quality control measures

Check assays

A second party laboratory (GEOLAB) was used to check SGS's results. Five percent of all samples processed and analysed by SGS were sent as check samples to GEOLAB. In addition, all samples from mineralised intersections were sent to GEOLAB as check samples. Blanks and standard samples were sent with all sample batches to both SGS and GEOLAB.

As of the end of July 1997, a total of 19,409 drill core samples were submitted to SGS for assay and a total of 1,159 check assays were sent to GEOLAB for a second laboratory check assay analysis. Figure 13.1 shows the results of the check assays, which have a correlation coefficient of 0.99.

Figure 13.1 SSR drill core check assay results



13.3 Sample preparation, analyses, and security by Agincourt in 2005 and 2006

There is no available information regarding the sample preparation, analyses, and security by Agincourt for this period, except for limited data from quality control measures.

13.3.1 Quality control measures

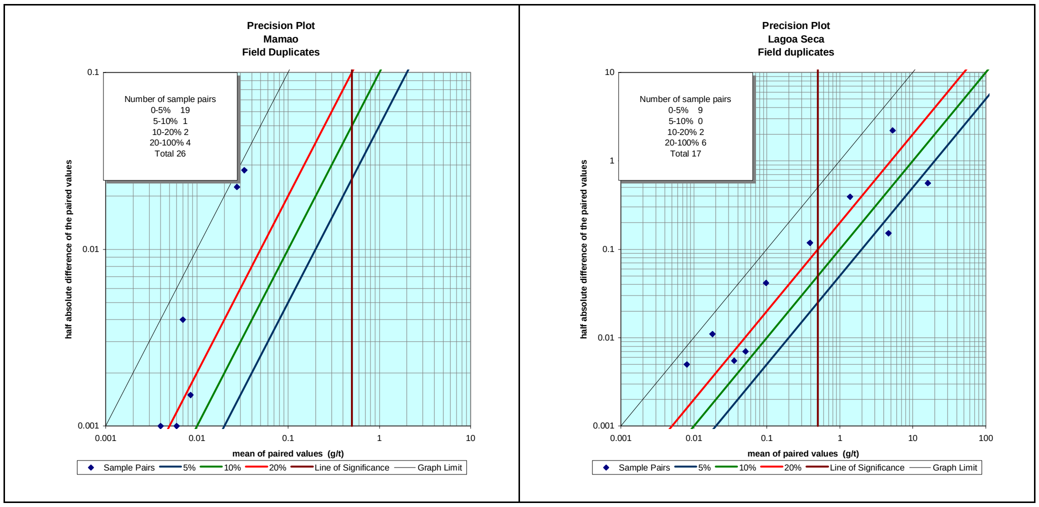
Standards

Agincourt regularly inserted up to three different standards per drillhole into sample batches submitted to the assay laboratory. Agincourt submitted 21 standards for nine drillholes at Mamão and 18 standards for eight drillholes at Lagoa Seca. Insufficient samples were submitted from Lagoa Seca West to allow a detailed analysis of sample accuracy. Agincourt monitored standard results, and when anomalous values were returned, resubmitted sample batches for re-assay.

Field and laboratory duplicates

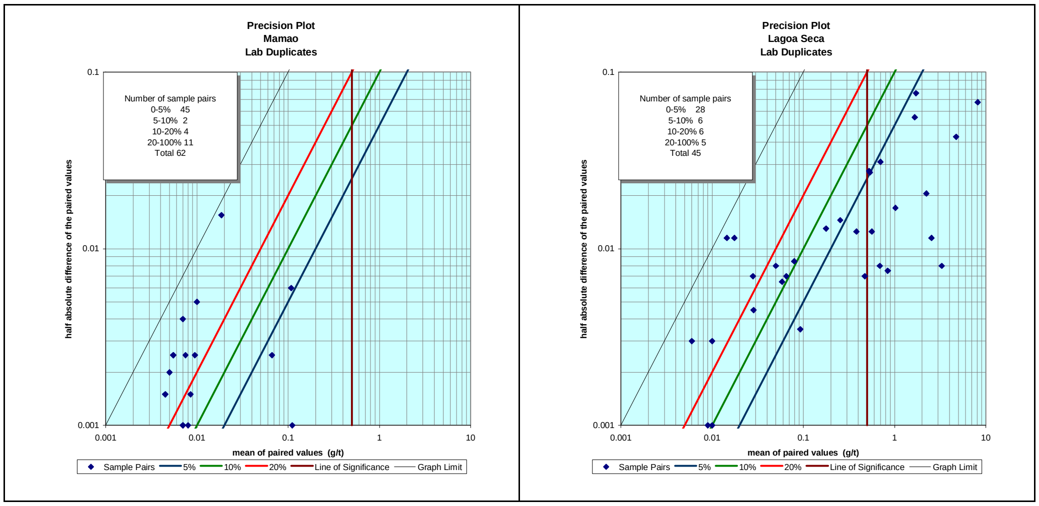
Agincourt submitted 26 quarter core field duplicates for nine drillholes at Mamão and 21 quarter core field duplicates for eight drillholes at Lagoa Seca. At Lagoa Seca only three of the field duplicates were submitted for the mineralised zone, and at Mamão none of the field duplicates were within the mineralised zone. Of the three field duplicates within the mineralised zone at Lagoa Seca, two of the assays returned values with greater than 20% precision (Figure 13.2). There is insufficient data to draw any meaningful conclusions from the field duplicate results. Insufficient samples were submitted from Lagoa Seca West to allow a detailed analysis of sample precision.

Figure 13.2 Precision plot of field duplicates from Mamão and Lagoa Seca



Laboratory duplicates consisting of either half or quarter core were also prepared by the laboratory, although it is not known at which stage of the sample preparation process the duplicates were taken. A total of 62 laboratory duplicates were taken from Mamão samples and 45 from Lagoa Seca samples (Figure 13.3). The precision plots for Mamão laboratory duplicates show poor precision at low grades near the detection limits. Most of the laboratory duplicates for Lagoa Seca return values within 5% precision.

Figure 13.3 Precision plot of laboratory duplicates from Mamão and Lagoa Seca



13.4 Statement on the adequacy of sample preparation, security and analytical procedures

Considering that no information exists regarding the sample preparation, security, and analytical procedures used by CVRD and Agincourt, Snowden is of the opinion that there is a moderate risk factor associated with the sample preparation, security, and analytical procedures for the project. Snowden recommends that Troy reduce the risk factor by undertaking check duplicate samples on the CVRD and Agincourt drillholes.

14 Data verification

14.1 Data verification by Reliance in 2004

In September 2004, Reliance undertook a scoping and sensitivity study which included a site visit and a review and verification of all available data and reports, as well as a program of re-sampling and re-assaying (Reliance, 2004).

14.1.1 Review of DDH drillhole quality

Reliance personnel visited CVRD's core storage facilities located in Carajás to inspect DDH drill core obtained by CVRD and SSR. They found that the CVRD drill core was in poorer condition than the SSR drill core, largely due to the fact that the CVRD drillholes were older, dating from 1986. The SSR drillholes were found to be in good to excellent condition. Reliance was of the opinion that both drillhole and sample intervals were well marked with good core integrity.

14.1.2 Review of geological logging

Reliance inspected drillhole logs completed by SSR from both Mamão and Lagoa Seca, and noted that the logging was very good to excellent. Reliance noted that individual flow units in the pyroclastic and volcanic units were logged as well as details of alteration and mineralisation. Structural information including orientation was also logged in detail.

The oxide-sulphide boundary, generally equal to the saprolite-bedrock contact, was logged in the DDH drillholes and also in the entire auger sampling program.

14.1.3 Review of RQD and core recovery

Reliance reviewed drill core recovery in the mineralised, hangingwall, and footwall zones at Melechete and was of the opinion that recoveries were generally excellent with values usually above 90%. Reliance noted that DDH drill core observed from the Lagoa Seca area had less integrity than the Mamão area.

Reliance performed check RQD measurements on several core boxes and found their results correlated well with those obtained by SSR. Rock integrity in the Mamão area was found to be very good with RQD values generally in the range of 80 to 100. RQD values in the ore zone and both the footwall and hangingwall appeared to be excellent with values greater than 90.

14.1.4 Check assay samples

Reliance collected 11 drill core samples from both the Melechete and Lagoa Seca areas for check assays. Sample intervals were chosen to check both high grade and low grade gold values. Reliance also confirmed the presence of free gold in drill core samples.

During the check sample procedure, the sample interval was quartered using a rock saw and the left hand side of the core was collected for sampling. The samples were analysed by Lakefield Geosol Laboratories in Belo Horizonte using a metallic screen fire assay technique. As well a suite of 32 elements were assayed by Inductively Coupled Plasma (ICP), as was mercury. The correlation between the original SSR and the Reliance check assays were relatively good.

Reliance also sampled several surface dumps and tailings areas. The results of these assays are shown in Table 14.1.

Table 14.1 Reliance surface check samples

Area	Type	Sample #	Au (g/t)	Depth	East	North
Lagoa Seca	Tailings	2319	1.33	50 cm	625121	9177970
Lagoa Seca	Tailings	2320	8.59	100 cm	625068	9177921
Lagoa Seca	Dump	2321	12.06	N/A	625308	9177837
Lagoa Seca	Dump	2322	0.20	N/A	625308	9177837
Mamão- Babaçu	Tailings	2323	1.12	80 cm	630554	9175043
Mamão- Babaçu	Tailings	2324	0.54	30 cm	630531	9175006
Mamão Babaçu	Tailings	2325	0.65	40 cm	630557	9174966
Mamão Babaçu	Dump	2326	16.89	N/A	630628	9175099
Mamão Babaçu	Dump	2327	1.60	N/A	630628	9175099
Barbosa Tailings	Tailings	2328	30.36	30 cm	630553	9175225

14.1.5 Check density measurements

Reliance collected six samples from drill core for density measurements, and submitted the samples to Lakefield Geosol, who performed the analysis by pycnometer. Samples were selected to obtain a variety of ore types and wall rock. Densities ranged from 2.57 to 2.99 t/m^3, with an average of 2.8 t/m^3, which Reliance noted generally confirms the values calculated by SSR and CVRD.

14.2 Data verification by Snowden in September 2006

In September 2006, Snowden estimated Mineral Resources at the Andorinhas Project and validated data associated with the estimate (see Section 17). Snowden noted there were discrepancies between the surveyed locations of the underground samples and the intercepts interpreted from drillholes. In several drillholes the intercept did not match the geometry of the mineralised zone interpreted from adjacent drillholes. Snowden considered that this was due to errors in the downhole surveying and could lead to a loss of resource volume where those intercepts were excluded from the mineralisation model.

14.3 Data verification by Troy in November 2006

Troy undertook a due diligence study of the Andorinhas Project in November 2006 which included a review of available data (Troy, 2006). Troy noted considerable drillhole deviation and considered the surveying methods as inadequate to accurately define the drillhole path. Troy believed the problem was exacerbated by the presence of disseminated magnetite within the mafic wall rocks. They noted that holes originally surveyed by Reflex Fotobor (mechanical) and later resurveyed by Maxibor (digital) identified discrepancies of up to 22 m in the easting.

14.4 Data verification by Snowden in March 2007

Snowden's Pamela De Mark visited the Andorinhas Project on 25 and 26 March 2007. Snowden reviewed DDH drill core, confirming the presence of free gold in drill core samples, and took check samples to confirm assays in six of Agincourt's DDH drillholes selected across the deposit. Snowden confirmed the presence of visible gold in two very high grade samples (RBD011 129.8 to 130.4 at 110.8 g/t Au, and RBD-017 157.5 to 158.1 at 60.8 g/t Au). Snowden also completed a review of all available databases, reports, maps, and other data available to Troy.

The results of the check assays are shown in Table 14.2. Snowden is of the opinion that the results are within acceptable ranges for duplicate samples for the style of gold mineralization concerned.

Table 14.2 Snowden check assay results

Deposit	Hole number	From (m)	To (m)	Original assay (g/t Au)	Check assay (g/t Au)
Lagoa Seca	RBD-026	33.0	34.0	17.7	21.7
	RBD-027	54.0	54.6	15.5	16.8
	RBD-008	74.0	74.8	2.0	2.3
Mamão	RBD-017	156.55	157.5	5.1	4.3
	RBD-021	183.3	183.9	2.6	2.4
	RBD-016	319.0	319.5	2.4	1.2

Troy is in the process of obtaining CVRD and SSR drill core but it is not yet available. Only drill core from Agincourt was available for review. Core is open to the weather but remains in good condition and is clearly labeled.

Snowden visited: workings at Mamão and Lagoa Seca; the potential plant location site at Mamão; the flooded workings at Melechete pit at Mamão; confirmed the presence of pumps at Lagoa Seca open pit, and confirmed collar coordinates for two DDH drillholes drilled by Agincourt (RBD006 and RBD027). No discrepancies were noted. Drill collars are well maintained, and set in cement bases affixed with metal labels indicating the hole number, prospect, coordinates, and start and finish dates.

14.5 Statement regarding verification

Snowden is of the opinion that the data used in Mineral Resource estimates detailed in Section 17 is reliable.

15 Adjacent properties

With the exception of the Sidepar iron ore mine disclosed in section 10 there is no information from adjacent properties applicable to the Andorinhas Project for disclosure in this report.

16 Mineral processing and metallurgical testing

16.1 Process requirements

The processing productivity will be restrained by the ability of the mining operation to deliver sufficient ore supplies over the life of the project. Initially, the combined ore sources have the potential to produce in excess of 400,000 tpa until the Lagoa Seca open pit resource is exhausted, which would be completed within 24 months. After the final processing of the Lagoa Seca ore supply, the projected ore feed to the mill would be in the range of 200,000 tpa, about 50% of the initial mining capacity.

In order to balance ore supplies from Mamão and Lagoa Seca and achieve the life of mine plan, a processing rate of approximately 250,000 tpa is appropriate. This project scale is logical considering the exploration prospectivity in the area.

Reviewing the test work completed to date, the recovery of gold via a combination of gravity and cyanidation techniques has indicated that the combined ore supplies should deliver approximately 94% fine gold extraction. There are components of the Lagoa Seca orebody that may not achieve this level as is evident from the sulphide rich tailings that currently remain on site from the garimpeiro workings completed in the 1990s. Any reduction in gold recovery for the Lagoa Seca mineralisation is expected to be compensated for by the substantial opportunity to re-treat tailings from both the Lagoa Seca and Mamão areas as part of a concerted effort to complete reclamation of the current un-bunded tailings areas.

16.2 Process plant

Ore from the Andorinhas Project will be processed at the TC8 mill located at Mamão as the majority of ore supply over the life of the mining operation will be produced in this area. The plant was originally designed by Lycopodium Engineering and Dr Ron Blanks, and had operated at Tennant Creek in Australia treating high grade copper-gold ore in the 1990's. In December of 2001, Troy purchased the plant and shipped it to their Sertão and Antena Cluster deposits located in Goiás State, Brazil. The plant treated 320,100 t at 24.95 g/t Au from the Sertão Mine between 2003 and 2006, 104,700 t at 3.72 g/t Au at the Xupé Mine in 2006, and has treated remaining ore from two other deposits, from which 19,700 t at 3.61 g/t Au has been mined to February 2007. With processing at Goiás completed in mid 2007, the plant will be dismantled and transported to Andorinhas.

The mill currently processes 28 dry tonnes per hour in a closed circuit system comprising two crushers reducing ore of a maximum size of 400 mm to minus 12 mm, a 200 tonne capacity fine ore bin, a 2.7 m wide by 3.6 m long ball mill, a CIL circuit, and a Knelson concentrator followed by a Gemini table. The mill is in closed circuit with a cyclone with overflow passing over a sieve bend for wood pulp removal before feeding to the first leach tank and thereafter by gravity to a second leach tank followed by a carbon adsorption tank. Thereafter the slurry flows by gravity to seven leach adsorption tanks. Airlifts are used to advance carbon through the circuit, with air washing of the screens to keep the screens clean of carbon build up. The stripping plant is a 0.62 tonne Anglo with two eluate tanks. The gold room is fitted with 2 nine cathode electrowinning cells, filter press, smelting furnace, and vault.

16.3 Metallurgical testwork

The level of sampling and metallurgical test work is in keeping with an initial study (METS 2006, 2007).

Metallurgical sampling has endeavoured to be representative of the ore material to be mined and processed. Nearly all of the mineral reserve is in primary fresh rock so ore types displaying varying quantities of quartz mineralization and gold grades were selected from diamond drill core for testing

Standard gold industry metallurgical techniques are appropriate for the Andorinhas ore to achieve high gold recoveries. A combination of gravity processing and whole ore leaching provides the highest recoveries of the techniques investigated. In order to optimise and confirm the results produced to date, further metallurgical sampling and testing is required.

16.3.1 Metallurgical test work by SSR in 1997

SSR undertook metallurgical test work in July, 1997, on samples from the Andorinhas properties, using Hazen Research, a US based industrial research consulting firm. The preliminary test program studied the response of ore to conventional cyanide leaching and to conventional sulphide flotation methods.

Ore samples were divided into four separate composite ore types (Table 16.1), and each composite was tested at three different primary grinds for both flotation and whole ore leaching. Test results indicated that recoveries, either by conventional leaching or froth flotation, were excellent at above 95% in all cases. The impact from varying the grind from fine to coarse was minimal.

Table 16.1 Ore types used for metallurgical testing

Ore Type	Description
Type 1	Moderate to high quartz
Type 2	Moderate to low quartz
Type 3	Moderate quartz
Type 4	Moderate to low quartz

Flow sheet

The results of the preliminary study led to the development of two probable flow sheets for the Andorinhas ore. The first involved gravity separation at a coarse primary grind, cleaning of the rougher gravity concentrate on a Gemini table, followed by cyanide leaching of the cleaning circuit tailings after regrinding. The second flow sheet involved flotation of the ore followed by cyanidation of the flotation concentrate after regrinding.

Froth flotation techniques achieved high gold recoveries producing a significant upgrade of the mineralisation into a small mass of concentrate. The concentrate was reground and intensive cyanide leaching was carried out on the material providing approximately 91% total gold recovery.

The flow sheet that provided the highest gold extraction involved a combination of gravity separation and cyanidation. The method of whole ore leaching achieved very high gold recoveries within 24 hours and was independent of grind size (Table 16.2).

Cyanide consumption was in line with industry expectations, and showed a marked decrease at coarser grinds. Even at the coarser grinds (P80 of +75 microns) the average recovery was 94.9%.

Table 16.2 Whole ore leach test results summary

Ore	Grind	% Gold Recovery				Residue	NaCN
Type	P_{80} microns	8 hr	24 hr	48 hr	72 hr	Opt Au	Lbs/ton Usage
1	42	78.0	97.1	97.1	97.1	0.021	4.3
1	47	79.3	96.9	96.9	96.9	0.021	4.2
1	80	73.9	95.6	95.6	95.6	0.033	2.2
2	35	83.0	96.3	96.3	96.3	0.020	4.0
2	52	68.4	95.8	95.8	95.8	0.022	3.5
2	77	74.0	93.1	93.9	96.3	0.019	1.4
3	36	58.1	97.0	97.0	97.0	0.027	4.1
3	48	65.0	97.9	97.9	97.9	0.018	3.5
3	72	78.3	96.3	96.3	96.3	0.029	2.4
4	39	68.7	96.7	96.7	96.7	0.015	4.0
4	48	76.2	96.2	96.2	96.2	0.021	3.5
4	76	75.3	94.7	95.5	95.7	0.027	3.4

Gravity test work

Gravity gold test work achieved approximately 10% recovery but an overall balance was not carried out to confirm the result via standard back calculations. The initial gravity test work was carried out utilising a Gemini table, and upon review of the mineralisation, a continuous discharge Knelson concentrator and intensive leaching would be expected to achieve significantly higher gold recovery.

The test work was preliminary and recommendations for a coarser grind size, testing lead nitrate, and further gravity leach work were made.

Based on the work to date, whole ore leaching provides the highest overall gold recovery. Gravity gold recovery should utilise a Knelson concentrator and intensive leaching of the concentrate will maximise gravity recovery as well as remove an element of security risk associated with tabling the material with either a Gemini or Wilfley table.

Other test work

A single Bond Ball Mill Work Index was determined giving 14.2 kWhr/tonne based on a drill core composite. The ore is of medium hardness.

16.3.2 Review of metallurgical test work by Agincourt in 2006

METS undertook a due diligence study on behalf of Agincourt in August, 2006, which included a review of the previous metallurgical test work undertaken by SSR. METS concluded that the level of sampling and metallurgical test work was in keeping with an initial study. While the metallurgy appeared to be straight forward, they advised further work to confirm the results to date as a part of the development schedule.

METS further noted that standard gold industry metallurgical techniques were appropriate for the Andorinhas ore to achieve high gold recoveries. A combination of gravity processing and whole ore leaching provided the highest recoveries of the techniques investigated. In order to optimise and confirm the results produced to date, METS recommended the collection of representative samples for further comminution, bench scale and variability testing, including:

- Rod Mill Work Index
- Ball Mill Work Indices
- Unconfined Compressive Strength
- Abrasive Index
- head assay for gold and an ICP multi element scan
- grind sensitivity test work
- cyanide sensitivity test work
- oxygen uptake rate test work
- knelson concentration and intensive leach test work
- optimised flow sheet studies
- cyclic carbon loading, ICP on loaded carbon studies
- equilibrium rate constants
- typical tailings ore characterisation studies
- DETOX test work
- filtration tests on tailings

16.3.3 Metallurgical test work by Troy in 2007

In March, 2007, Troy submitted a two kg sample of Mamão DDH core to METS for metallurgical testing with the aim of determining the characteristics of the mineralised zone and to determine whether the ore could be successfully treated with the relocated plant from Troy's SML Sertão mine located in Goiás State, Brazil (METS, 2007).

There were no concerns regarding the leaching characteristics of the Mamão ore. High gold recoveries were quickly obtained with minimal cyanide and lime consumption. Cyanidation leach test work resulted in a high gold recovery of approximately 91% in 24 hours and 96% in 48 hours. Reagent consumption was low at 0.15 kg of sodium cyanide and 0.38 kg of lime per tonne of ore. Oxygen levels were satisfactory and indicate that sulphides do not appear to be oxygen consuming. ICP multi element scans indicate that the ore does not contain any deleterious elements that could possibly interfere with the leach or carbon adsorption.

Mineralogy studies showed the presence of free gold, which will require the inclusion of gravity concentration. The major mineral phases are pyrite and pyrrhotite, with gold present mainly as gold metal and once as a telluride. Gold grain sizes are fine, ranging between 1 and 10 µm. Quartz and plagioclase are the dominant gangue materials with minor chlorite and calcite, and accessory biotite and muscovite.

Two density determinations were made using the hot wax method, returning values of 2.86 t/m3 and 2.65 t/m3.

The test work indicated that the primary Mamão ore is harder than the industry average and the oxide ore which is currently being treated at the Sertão mine site. The estimated Bond Work Index is 20.5, compared to 8.6 at Sertão. The ore will require additional crushing and/or grinding capacity to maintain the plant throughput.

METS recommended further test work on approximately 50 kg of bulk sample to assess the comminution requirements of the Mamão ore, including:

- Unconfined Compressive Strength
- Crushing Work Index
- Rod Mill Work Index
- Abrasion Index

RML also submitted samples from Lagoa Seca. The key findings of the test work are as follows:

- The Bond Ball Mill Work Index (BWI) for the ore is a moderately high 16.8 kWhr/t, which will not cause processing issues as the plant has already successfully processed the much harder Mina Sertao sulphide ore.
- Additional crushing, leaching and/or grinding capacity will be required to maintain the plant throughput.
- The optimal grind size was determined to be P80 = 75µm. This is a finer size then the process criteria for the Mina Sertao.
- 26% of the gold can be recovered as a gravity gold concentrate, which is significantly lower than Mina Sertao.
- The ore does not contain any deleterious elements that will interfere with the leach or carbon adsorption.

METS made the following recommendations in regard to processing Legoa Seca ore:

- The Lagoa Seca ore is harder then the Mina Sertao and quantify possible throughput reduction, a range of comminution work should be performed, including:
  - Unconfined Compressive Strength
  - Crushing Work Index
  - Rod Mill Work Index
  - Abrasion Index
  - Lagoa Seca ore be ground to P80 75µm to maximise the gold recovery.
- The inclusion of a gravity circuit will improve the project economics by reducing the processing cost per ounce of gold.
- The residence time is increased to 48 hr to optimise the leaching process by the addition of a new leach tank.

17 Mineral Resource and Mineral Reserve estimates

17.1 Summary

Mineral Resources and Mineral Reserves are currently reported for the Lagoa Seca, Lagoa Seca West and Mamão deposits.

The Mineral Resources for Mamão and Lagoa Seca are reported by Mineral Resource category at a cut-off of 2 g/t Au for Mamão (Table 17.1); 0.8 g/t Au for Lagoa Seca (Table 17.2) and 0.8 g/t Au for Lagoa Seca West (Table 17.3).

Table 17.1 Mamão June 2007 Mineral Resources reported above a 2 g/t Au cut-off (inclusive of Mineral Reserve)

Classification	Mineralised domain	Volume	Density	Tonnes	Au g/t
Indicated	M2_HG	41,000	2.80	114,900	17.65
	M2_LG	2,900	2.80	8,100	2.16
	MEL_HG	153,300	2.80	429,200	12.41
	MEL_LG	94,100	2.80	263,400	2.54
	ARM_HG	-	-	-	-
	ARM_LG	-	-	-	-
	Total	**291,300**	**2.80**	**815,600**	**9.86**
Inferred	M2_HG	600	2.80	1,600	17.51
	M2_LG	-	-	-	-
	MEL_HG	-	-	-	-
	MEL_LG	-	-	-	-
	ARM_HG	28,600	2.80	80,000	6.13
	ARM_LG	-	-	-	-
	Total	**29,200**	**2.80**	**81,600**	**6.35**

Table 17.2 Lagoa Seca June 2007 Mineral Resources reported above a 0.8 g/t Au cut-off (inclusive of Mineral Reserve)

Classification	Mineralised domain	Volume	Density	Tonnes	Au g/t
Indicated	LG	198,600	2.81	554,800	1.29
	HG_C1	18,700	2.83	52,800	9.92
	HG_C2	11,100	2.82	31,300	8.98
	HG_N1	16,000	2.77	44,300	7.22
	HG_S1	5,800	2.84	16,400	7.26
	Total	**250,200**	**2.80**	**699,600**	**2.80**

Table 17.3 Lagoa Seca West October 2006 Mineral Resources reported above a 0.8 g/t Au cut-off

Classification	Mineralised domain	Volume	Density	Tonnes	Au g/t
Indicated	LG_C	173,500	2.75	474,300	1.10
	LG_C1	18,100	2.79	50,300	0.97
	LG_NE	98,251	2.81	276,350	1.12
	Total	**289,800**	**2.78**	**800,000**	**1.10**
Inferred	LG_C	202,400	2.78	561,600	1.02
	LG_C1	2,500	2.74	6,800	0.87
	LG_NE	370,200	2.82	1,043,600	1.44
	Total	**575,000**	**2.81**	**1,600,000**	**1.29**

The Mineral Reserve for Mamão is reported in Table 17.4 and for Lagoa Seca in Table 17.5. These estimates exclude that part of the Snowden 2006 reported inventory which was classified as Inferred Resource.

Table 17.4 Mamão Mineral Reserve, June 2007

Area	Classification	Tonnes	Grade (g/t Au)	Contained Au (oz)
Melechete	Probable	562,750	8.4	151,980
M2	Probable	184,250	9.4	55,680
Total Mamão	Probable	**747,000**	**8.7**	**207,660**

Table 17.5 Lagoa Seca Mineral Reserve, June 2007

Category	Classification	Tonnes	Grade (g/t Au)	Contained Au (oz)
High grade	Probable	109,200	9.0	31,600
Low grade	Probable	371,000	1.4	16,860
Total Lagoa Seca	Probable	**480,200**	**3.1**	**48,320**

17.2 Disclosure

Mineral Resources reported in Section 17 were prepared by Mr. K. Lowe, Consultant Resource Geologist, a full time employee of Snowden. Mineral Reserves reported in Section 17 were prepared by Mr Frank Blanchfield, Senior Mining Consultant, a full time employee of Snowden.

All Snowden employees named above are Qualified Persons as defined in NI43-101. Snowden is independent of Troy.

17.2.1 Known issues that materially affect mineral resources and mineral reserves

Snowden is unaware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant issues that materially affect the estimates of mineral resources and mineral reserves.

The estimate of mineral resources is not materially affected by mining, metallurgical, infrastructure or other relevant factors.

17.3 Assumptions, methods and parameters – Mineral Resource estimates

The basis of the Mineral Resources estimates for the Mamão and Lagoa Seca deposits is discussed in this section. The Mineral Resources were estimated by Snowden in June 2007 (Snowden 2007). The resources were reported initially according to the JORC Code (JORC, 2004) in categories of Inferred, Indicated Mineral Resources and Probable Ore Reserve. The equivalent categories under the CIM Definition Standards (CIM 2005) are Inferred, Indicated Mineral Resources and Probable Mineral Reserve. In Snowden's opinion the CIM and JORC Codes are equivalent.

The estimates were prepared in the following steps:

- data validation – this was undertaken by Agincourt and reviewed by Snowden.
- data preparation – this and subsequent steps are discussed below.
- geological interpretation and modelling.
- establishment of block models.
- compositing of assay intervals.
- exploratory data analysis of gold data.
- analysis of top cuts.
- variogram analysis.
- derivation of kriging plan and boundary conditions.
- grade interpolation of gold.
- validation of gold grade estimates.
- classification of estimates with respect to JORC guidelines.
- resource tabulation and resource reporting.

17.3.1 Database

Drillhole data was provided in the form of comma delimited files that included collar, survey, assay and sometimes geology and weathering data. Assays were available for 171 drillholes at Mamão and 32 drillholes at Lagoa Seca. Table 17.6 shows a summary of the drillholes used in the Mineral Resource estimate by operator and deposit. Snowden performed a basic validation of the supplied database. This included checking for missing collar, survey, and assay information, and for overlapping sample intervals.

Table 17.6 Mineral Resource drillhole summary by operator

Deposit	Operator	Number of holes	Total metres
Mamão	SSR	142	13,127
	CVRD	15	1,923
	Agincourt	14	6,637
Lagoa Seca	CVRD	24	3,143
	Agincourt	8	803
Lagoa Seca West	CVRD, Agincourt	43	6,135

The validation process identified one drillhole missing assay information and another drillhole missing survey information at Mamão. The drillhole missing assay information was excluded from the database and the drillhole missing survey information was assigned a vertical dip on the basis that all other drillholes were drilled vertically.

Six of the drillholes at Lagoa Seca contained missing gold samples within the low grade mineralised domain. A value of 0.55 g/t Au was applied to the missing assays, which represents the median gold value for that domain.

17.3.2 Geological interpretation and modeling

The drillholes were coded for mineralisation, geology, and weathering according to the wireframes supplied by Agincourt (Table 17.7). The Mamão deposit is characterised by three separate mineralised high grade zones that are completely surrounded by low grade zones. The three zones strike roughly east-west and dip northwards in the range -30° to -40° (Figure 17.1).

Table 17.7 Geology, mineralisation, and weathering codes

Mamão geology and mineralisation codes	Lagoa Seca mineralisation codes	Lagoa Seca geology codes	Lagoa Seca weathering codes	Lagoa Seca mineralisation codes
Dyke	Waste	Greywacke	Above topography (Air)	Waste
Waste	LG mineralisation	Southern Rhyodacite	Above saprolite (Soil)	LGC Mineralisation
M2 High grade	HG _C1 mineralisation	Northern Rhyodacite	Saprolite	LGC1 Mineralisation
M2 Low grade	HG _C2 mineralisation	Southern Mafics	Transitional (Sap-rock)	LGNE Mineralisation
Melechete High grade	HG _N1 mineralisation	Northern Mafics	Fresh rock	
Melechete Low grade	HG _S1 mineralisation			
Melechete Mined out area				
Arame High grade				
Arame Low grade				

The Lagoa Seca deposit has been modeled to represent four high grade zones, which are mostly surrounded by a single low grade envelope. The high grade zones strike roughly parallel to the local mine grid easting axis. All zones dip steeply towards the south at approximately -85° (Figure 17.2).

Figure 17.1 Isometric view towards the southeast of the low grade mineralised domains of M2, Melechete, and Arame at the Mamão deposit

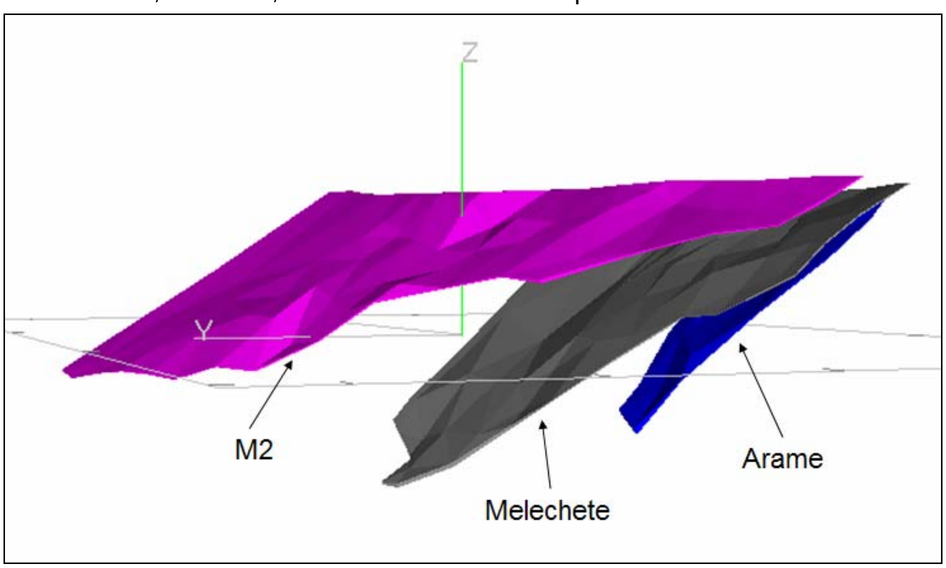
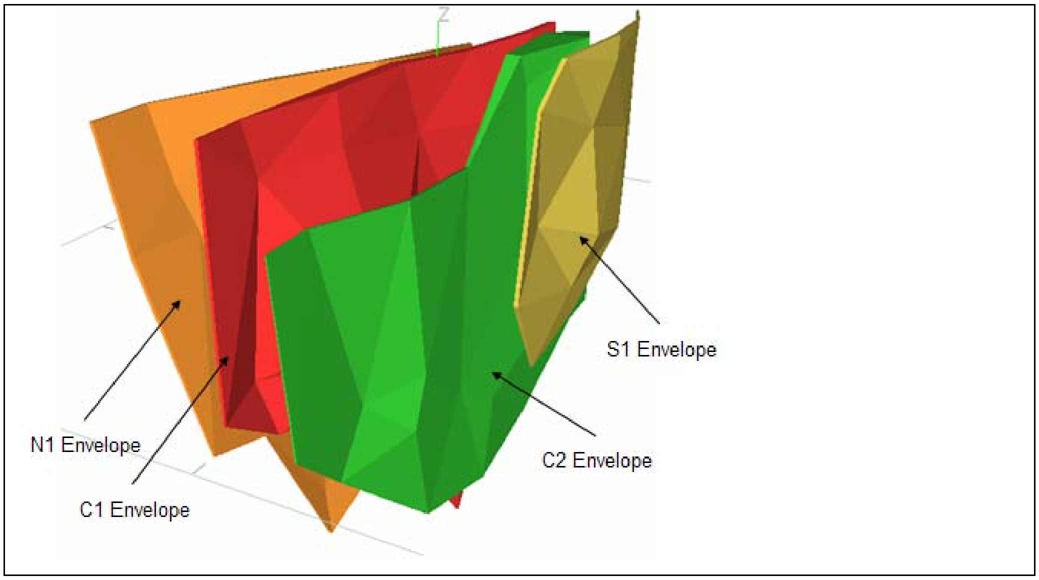


Figure 17.2 Isometric view to the northeast (mine grid) of the high grade mineralised domains at the Lagoa Seca deposit



17.3.3 Compositing of assay intervals

The coded drillholes for the high grade mineralised domain at Mamão were composited to 1 m as the majority of the samples were collected at lengths shorter than 1 m. Within the low grade mineralised domain, drillholes were composited at 2 m intervals as longer intervals were sampled in that domain. At Lagoa Seca and Lagoa Seca West, drillholes were composited at 1 m for all domains. Composites were restricted within domains.

17.3.4 Top cuts

Statistical analysis of the gold grades for the mineralised domains at Mamão, Lagoa Seca and Lagoa Seca West showed the presence of a small number of high grade outliers. The sample data exhibits a low coefficient of variation and therefore slight top cuts were applied to restrict the effect of these outliers. Top cuts were chosen by identifying outliers from cumulative probability plots and/or determining the points on histograms at which the grade distributions break down. Table 17.8 lists the top cuts used.

Table 17.8 Top cuts

Deposit	Mineralised Lens	Top cut
Mamão	M2 LG	5 g/t
	M2 HG	66 g/t
	Melechete LG	5 g/t
	Melechete HG	66 g/t
	Arame LG	5 g/t
	Arame HG	66 g/t
Lagoa Seca	LG	4.9 g/t
	C1 Envelope	35 g/t
	C2 Envelope	35 g/t
	N1 Envelope	35 g/t
	S1 Envelope	35 g/t
Lagoa Seca West	LGC	6.0 g/t
	LGC1	No top cut applied
	LGNE	8.5 g/t

17.3.5 Variogram analysis

Mamão

Continuity analysis at Mamão proved difficult for the M2 and Arame deposits due to the low number of composite samples. The Melechete high grade zone contained sufficient data to allow a reasonable estimate of continuity. This is partially due to the inclusion of samples from the mined out area. The number of low grade composites proved insufficient to determine the continuity for this zone. Under these circumstances it was therefore decided to model the Melechete high grade zone experimental variogram and adopt the same parameters for estimation of the Melechete low grade zone and the M2 high and low grade zones. For Arame, Snowden elected to assign the mean grade to the high and low grade zone blocks.

A normal scores transformation of the data was necessary due to the skewness of the data. The Melechete high grade continuity analysis showed that grade continuity is at its greatest in the plane of the reef along a bearing of 038°. The true downhole experimental variograms had a well defined structure and provided a robust estimate of the nugget effect. However, it should be noted that during the compositing process some samples whose lengths are much larger than one m were split, which has the effect of slightly reducing the nugget. For the Melechete high grade zone, the number of instances where this occurred is low (less than 5% of the sample data) and would therefore have a minimal effect on the nugget.

The long and intermediate directions of the variogram had well defined structures, but for the short axis there was essentially no experimental variogram to model due to the tabular nature of the deposit. The variogram model was back-transformed using hermite polynomials to adjust the model to the true data variance. In this case the number of polynomials used in the fitting was 30.

Lagoa Seca

The Lagoa Seca high grade lenses were combined for the purpose of continuity analysis and variogram modeling due to the low number of composites. The low grade envelope is well sampled. The high grade lenses are roughly parallel and in close proximity to one another. A normal scores transformation of the data improved the structure of the experimental variogram and allowed for improved modeling.

The true downhole variogram for the low grade envelope had a well defined structure due to the large number of samples. There was a similar situation for the directional variograms. The nugget value for the low grade envelope might be slightly low due to the splitting of some samples which were greater than one m in length. The high grade variograms had more poorly defined structures but a reasonable fit of the model to the experimental variogram was achieved.

The modeled variogram data was back-transformed using hermite polynomials to allow good fitting of the tails of the distribution. In this case the number of polynomials used in the fitting was 30.

Lagoa Seca West

Continuity analysis proved relatively difficult for the LGC1 domain due to the low number of composites. The other two domains contained sufficient data to allow a reasonable estimate of continuity. The shape of the distribution of samples for each domain was found to be similar based Q-Q relationships that were examined. The Q-Q plots show that although there is a small degree of conditional and systematic bias, the distribution of samples is relatively similar. Therefore it was decided to combine all the domains for the purpose of variography.

A normal scores transformation of the data was necessary due to the skewness of the data. A normal scores transformation of the data improved the structure of the experimental variogram and allowed for improved modelling. The continuity analysis showed that grade continuity is at its greatest in the plane of the reef plunging 300 to the east. The true downhole experimental variograms proved relatively easy to model and provided a robust estimate of the nugget effect. However, it should be noted that during the compositing process some samples whose lengths are slightly longer than 1 m were split, which has the effect of slightly reducing the nugget effect.

The long and intermediate directions of the variogram proved relatively easy to model. The back transform calculation of the normal scores variogram model is performed using Hermite polynomials and the discrete Gaussian model. The back-transformation adjusts the sill of the model to the true variance of the data. In this case the number of polynomials used in the fitting was 30.

17.3.6 Block model set up

The block model parameters used in the estimation process for Mamão, Lagoa Seca and Lagoa Seca West are listed in Table 17.9. Sub-cell splitting in all direction was used to accurately define contacts between different mineralisation, weathering and rock types.

Table 17.9 Block model set up

	Mamão	Lagoa Seca	Lagoa Seca West
X origin	630300	5900	4700
Y origin	9175000	5250	5000
Z origin	-140	110	-30
X cell size	20	12.5	12.5
Y cell size	10	5	5
Z cell size	10	5	5
No. X cells	42	32	104
No. Y cells	85	60	160
No. Z cells	41	32	60

17.3.7 Grade interpolation and boundary conditions

Snowden elected to use Simple Kriging as the estimation method for the Melechete and M2 lenses at Mamão based on the relatively wide spacing (50 m x 50 m) of the drillholes with respect to the range of the variogram. A global mean, representing the declustered mean of the composite data, was used in the kriging calculations. The estimation of the high grade blocks used only high grade composite samples (hard boundaries).

However, for the low grade blocks, both the high and low grade composite samples were used (soft boundaries). Grade changes across the high grade boundary were high but without a sharp contact. The soft boundary approach for the low grade estimate would allow for a continuous profile from the high grade zone to the low grade zone.

For Arame, the declustered mean of the high grade samples was used to calculate an average for all the high grade Arame blocks and similarly the same method was applied for the low grade blocks.

Ordinary Kriging was the estimation method used at Lagoa Seca and Lagoa Seca West due to the closer spaced drilling (approximately 25 m). Hard boundaries are used throughout and each high grade lens is estimated separately using only the data coded to that lens.

A number of search domains were used to control the orientation of grade estimation, based on the ranges of continuity determined from the variograms. For estimation purposes, three nested searches were used for both Mamão, Lagoa Seca and Lagoa Seca West. The first search range represented the range of the variogram for the respective deposits, while the second extended the range of the search and/or reduced the minimum number of samples required for an estimate. The last search range was sufficient to fill the remaining un-estimated areas of the individual models.

The parameters used in the estimations are given in Table 17.10.

17.3.8 Model validation

Snowden compared the declustered mean grade of the input composites to the tonnage weighted output block estimates for each mineralised domain. The ratio of difference between the model and the declustered composite grade to the model grade expressed as a percentage quantifies the degree of difference (Table 17.11). A significant difference between the Mamão M2 high grade declustered composite grade and the model grade is attributed to the low number of drillhole samples and their position in the declustering grid. A similar situation is observed for the Melechete low grade domain and the Lagoa Seca S1 high grade domain.

Visual inspection indicates that the model grades compare reasonably well with the input composite grades. Snowden notes that the estimate in Lagoa Seca is fairly smooth due to the lack of data. Visual comparisons in an area where there is close spaced drilling indicate significant local variability in the drillhole data which is not reflected in the estimate, although on the whole, broad trends are honoured.

Table 17.10 Estimation parameters

Deposit	Mineralised Domain	Interpolation method	Primary axis search distance and direction	Secondary axis search distance and direction	Tertiary axis search distance and direction	Second and third search factor	First search minimum and maximum samples	Second search minimum and maximum samples	Third search minimum and maximum samples
Mamão	M2 low & high grade	Simple kriging	50 m to $-29^0 \rightarrow 038^0$	50 m to $-24^0 \rightarrow 293^0$	50 m to $50^0 \rightarrow 350^0$	2,6	8, 20	2, 20	2, 20
	Melechete low & high grade	Simple kriging	50 m to $-29^0 \rightarrow 038^0$	50 m to $-24^0 \rightarrow 293^0$	50 m to $50^0 \rightarrow 350^0$	2,6	8, 20	2, 20	2, 20
	Arame low & high grade	Arithmetic mean	-	-	-	2,6	8, 20	2, 20	2, 20
Lagoa Seca	Low grade envelope	Ordinary Kriging	60 m to $10^0 \rightarrow 098^0$	30 m to $76^0 \rightarrow 325^0$	20 m to $10^0 \rightarrow 190^0$	1,2	6,20	2,20	2,20
	High grade C1	Ordinary Kriging	40 m to $0^0 \rightarrow 100^0$	30 m to $80^0 \rightarrow 010^0$	15 m to $10^0 \rightarrow 190^0$	1,2	6,20	2,20	2,20
	High grade C2	Ordinary Kriging	40 m to $0^0 \rightarrow 100^0$	30 m to $80^0 \rightarrow 010^0$	15 m to $10^0 \rightarrow 190^0$	1,2	6,20	2,20	2,20
	High grade N1	Ordinary Kriging	40 m to $0^0 \rightarrow 100^0$	30 m to $80^0 \rightarrow 010^0$	15 m to $10^0 \rightarrow 190^0$	1,2	6,20	2,20	2,20
	High grade S1	Ordinary Kriging	40 m to $0^0 \rightarrow 100^0$	30 m to $80^0 \rightarrow 010^0$	15 m to $10^0 \rightarrow 190^0$	1,2	6,20	2,20	2,20
Lagoa Seca West	Low Grade LGC	Ordinary Kriging	140 m to $30^0 \rightarrow 090^0$	50 m to $60^0 \rightarrow 090^0$	20 m to $00^0 \rightarrow 180^0$	2,5	15,30	7,30	7,30
	Low Grade LGC1	Ordinary Kriging	140 m to $30^0 \rightarrow 090^0$	50 m to $60^0 \rightarrow 090^0$	20 m to $00^0 \rightarrow 180^0$	2,5	15,30	7,30	7,30
	Low Grade LGNE	Ordinary Kriging	140 m to $30^0 \rightarrow 090^0$	50 m to $60^0 \rightarrow 090^0$	20 m to $00^0 \rightarrow 180^0$	2,5	15,30	7,30	7,30

Table 17.11 Comparison of mean input and block model grades

Mineralised domain		Composite Grade (g/t Au)	Model Grade (g/t Au)	% Difference
Mamão	M2 low grade	0.96	1.02	5.9%
	M2 high grade	20.75	17.65	-17.6%
	Melechete low grade	1.20	1.66	27.7%
	Melechete high grade	12.27	12.41	1.1%
	Arame low grade	1.08	1.08	0.0%
	Arame high grade	6.13	6.13	0.0%
Lagoa Seca	C1 high grade	10.36	9.88	-4.9%
	C2 high grade	8.19	9.09	9.9%
	N1 high grade	6.77	7.17	5.6%
	S1 high grade	8.56	7.21	-18.7%
	Low grade envelope	0.82	0.83	1.2%

17.4 Assumptions, methods and parameters – Mineral Reserve estimates

17.4.1 Mineral Reserve classification

RML has re-estimated capital costs due to the planned relocation of the TC8 plant from Goiás State to Mamão.

Further geotechnical studies are currently being undertaken by Golder Associates Pty Limited. From this work, RML considers that core examination indicates that the previous geotechnical design parameters for the pits and underground are conservative.

Snowden understands that RML is satisfied that the project now demonstrates economic viability. Snowden has re-tested the project viability using the updated RML mining and capital costs, along with other modifying factors as estimated by Agincourt in the Andorinhas Prefeasibility Study and confirmed by RML. As a consequence, the mining inventory as defined in the Snowden 2006 Prefeasibility Study is now classified as a Probable Mineral Reserve in terms of the JORC Code (JORC, 2004).

The Mamão deposit is planned as an underground mine extracting the Melechete and M2 orebodies using a combination of hand-held and small mechanised equipment. The two orebodies are reasonably shallow dipping at 40°. Melechete is planned as a cut and fill operation using waste from development as backfill. M2 is planned as a room and pillar operation using hand-held air-leg equipment and scraper winches. The Arame lode is low grade and poorly drilled and was not included as a mining target in the study.

The Mamão resource block model was processed through Snowden's Stopesizor software to identify areas that could be mined and to generate preliminary mining shapes. The shapes were then further refined to be representative of the likely mining shapes and geometries. The narrow portions of the resource were designed to reach minimum stoping widths of 1.5 m and development widths of 2.5 m which resulted in the inclusion of some surrounding dilution, particularly in the M2 region. Some small portions of the resource, isolated from the main mining areas, were excluded from the mining study. The pillars left in the M2 area account for approximately 10% of the recoverable resource. Almost complete extraction of the Melechete resource is planned. It is expected that inter-level pillars in Melechete are recovered in a retreat fashion as the levels are completed. The M2 mining technique will allow for very tight control of unplanned dilution, but will include planned dilution up to the minimum mining width. The larger equipment and resulting excavations in Melechete will require some planned dilution.

The Lagoa Seca deposit will be mined as an open pit containing 109,000 tonnes at 9.1 g/t Au of high grade ore, 370,000 tonnes at 1.40 g/t Au of low grade ore and 1.7 Mt of waste. The design for the pit is optimised to meet value and geotechnical considerations. The stripping ratio of waste to ore (high and low grade) is 3.5:1 and for high grade ore it is 19:1.

Following the creation of an optimised pit shell in Whittle software, a detailed design of the Lagoa Seca pit was completed by Snowden. The pit design followed the design parameters described below:

- overall slope angles – alluvial and detrital materials –30°
- overall slope angles – weathered bedrock –40°
- overall slope angles – fresh bedrock –55°
- batter angle 70°
- berm width 5 m
- bench interval 15 m
- flitch height 5 m
- road width 10 m

Assuming a gold price of $600/oz the break-even cut-off grade for Mamão is about 5 g/t Au and for Lagoa Seca about 0.9 g/t Au. Cut-off grades will be impacted by the gold price at the time, eventual mining and processing costs and the metallurgical recovery. Snowden understands that Troy has not hedged future gold sales from this project. The project is expected to take a total of six years from the start of construction to complete.

Milling throughput is planned at 250,000 tonnes per year for five production years. Metallurgical processing will comprise a two stage crushing and single stage ball mill comminution circuit, gravity gold recovery followed by intensive leach, a carbon in leach (CIL) circuit followed by stripping, electro-winning and smelting. The tailings will be treated through a cyanide destruction process to ensure that free cyanide levels are at an acceptable level for discharge. Tailings will be filtered and the cake blended with waste rock for dumping, thus removing the need for the construction of a tailings storage facility. It is anticipated that metallurgical recoveries for the open pit ore will be 92% and the underground ore will be 94%.

18 Other relevant data and information

18.1 Mining operations

18.1.1 Mamão

Mine design

The method of preparing the Mamão mine plan was as follows:

- Review the geological and geotechnical setting of the deposit to select a suitable stoping method or methods that could be used for the safe and efficient extraction of the orebody.
- Identify historic mining activity that may impact on mining method selection or limit access to the deposit.
- Identify stope and development design parameters considering mining constraints, and geotechnical, fleet and cost aspects.
- Determine design cut-off grades for stoping and development.
- Determine dilution and ore recovery modifying factors for stoping and development.
- Calculate a recoverable mining inventory.
- Prepare development and stoping layouts to extract the mining inventory.
- Prepare physical and cost schedules.

It should be noted that further exploration and stope definition drilling will be undertaken at Mamão (and has been costed into this plan) and the layouts, mineral inventory, costs and schedules which comprise this report are subject to refinement and optimisation as further geological and geotechnical information becomes available.

The following are the key resource, geological and structural features that are significant from a mine planning perspective:

- The resource grades for the Melechete (high grade) and M2 are high (~ 10 g/t), which implies that mining losses should be minimised.
- Melechete is the largest lode at Mamão and consists of quartz veins and veinlets within a shear zone that cuts through metamorphosed mafic volcanic rocks. The veins vary in thickness from 1 cm to 230 cm and dip, on average, at 42° to the north. The Melechete lode is continuous along strike for 500 m and extends from near surface to 300 m below surface. The lode averages 1.8 m in width, but some areas may be up to 5 m wide.
- A portion of the Melechete lode was mined in the 1990s using room and pillar stoping methods.
- The M2 lode sits approximately 270 m horizontally in the hangingwall of the Melechete lode. .The M2 lode is narrow, averaging one m in width and dips at 42° to the north.

- The Arame lode is located in the immediate footwall of the Melechete lode, averages one m in width and dips at 60° to the north. .Because the Arame lode is very low grade and poorly drilled it was not included in the mining study.
- At Mamão the hangingwall rocks are expected to be competent, highly silicic, moderately foliated, quartz-chlorite schists with foliation parallel to the lodes. The existing underground workings are reported to contain stable spans of up to ten m supported with three m square pillars (i.e. nine m^2) spaced 3 m by 8 m apart. Reliance (2004a) reviewed the available core and reported that the core was in good condition indicating little, if any, weathering had occurred in storage. Photographs of underground workings indicate the ore and hangingwall rock is competent with little spalling of pillars and competent backs.
- The Reliance (2004a) report included the following comments regarding core recovery and RQD data for the Mamão area:
  - core recovery in the mineralised, hangingwall and footwall zones was generally excellent, with recovery usually above 90%.
  - rock integrity was found to be very good with RQD values generally in the range of 80% to 100%.
  - RQD values in the ore zone and both footwall and hangingwall appear to be excellent, with values greater than 90%.
- No in situ stress measurements are reported for the site or region. However, given the depth of the resource does not exceed 300 m, it is unlikely high in situ stress will occur.
- The underground workings are flooded to within a few metres of the original land surface which implies a high water table, with a consequent risk of high inflows to pits and underground workings.
- Based on the high RQD reported for the lodes and hangingwall rocks and observations of existing stable, unsupported spans of ten m, the following are design parameters for an underground mine design using man entry methods:
  - Maximum unsupported spans should not exceed five m for man entry workings.
  - Maximum supported spans should not exceed 10 m.
  - Pillars should have a maximum height to width ratio of one.
  - Overall area extraction ratios should not exceed 90% in room and pillar workings as higher ratios are likely to result in severe spalling of pillars, leading to failure.
  - Higher extraction ratios may be achieved if backfill is used.
  - Where required, adequate support of the roof of mine development drives and stopes with up to ten m spans can be readily achieved with rock bolts, typically spaced 1.5 m apart.
- Mining by open stoping may be feasible for sections of the Andorinhas lodes with dips greater than 45°. Based on an average RQD of 80%, and typical geotechnical

properties for similar deposits, open stopes with hangingwall spans of 15 m on strike by 15 m on dip are considered feasible.

Cut and fill stoping method

Based on the geological and geotechnical nature of the Melechete lode, cut and fill is the selected stoping method. Cut and fill is a mining method which maximises ore recovery while minimising unplanned dilution. Given that personnel and equipment work within the stope, it is necessary to design for dimensions that are large enough to accommodate the stope drilling and loading equipment operating within the stope. Therefore the narrower and/or flatter parts of the orebody may incur higher volumes of dilution. The cut and fill method allows for local application of rock mass reinforcement and with appropriate levels of support, it provides for a safe working environment.

The cut and fill method uses a starting sill drive in ore to allow progressive upwards vertical advance by back stripping or flat backing the sill drive in sequential horizontal slices. Waste fill is placed in the void created by each slice to provide close wall support, restricting the height of unsupported wall exposures to the distance between the surface of the previous fill placement and the backs of the current flat back strip. This makes the method a favored choice in poor ground conditions but relies on careful placement of fill. The fill needs to be placed as close as possible to the stope backs to maximise its supporting capacity. It needs to be placed as level as possible to avoid excessive ore losses when mucking the next flat back production. Cut and fill stoping finishes with uphole benching a small amount of ore to recover the sill pillar. The stope access from the decline to the orebody is progressively stripped to provide access to the next slice of ore, with new accesses developed when the stripped access gradient reaches the practical limit of productivity of one in six up. In areas where the orebody is greater than two m in width, mechanised equipment will be used to drill, blast, and load the ore. In areas where the orebody is less than two m in width, hand held pneumatic rock drills will be used for drill and blasting. Small mechanised loaders will be used to load and haul the ore.

Room and pillar stoping method

A manual room and pillar mining method using pneumatic rock drills and electric scrapers has been selected as the main mining method for the narrow M2 lode. The stoping method has the following advantages over more mechanised longhole stoping methods:

- It is a selective mining method that maximises recovery of the high value orebody.
- It is a method that can easily adapt to short range variability in orebody width.
- The amount of waste development is not excessive.
- There is a lower requirement for sophisticated, expensive capital equipment .
- The local labor force has experience in this method.

Stopes are established by developing ore drives, 20 m vertically apart, along the full strike length of the orebody. The ore drive will be developed at a profile of 2.5 m wide and 2.5 m high to suit the small load haul dump equipment that will be used to remove broken ore from the stoping area. The ore drive will be developed as a “shanty back” to minimise the amount of hangingwall dilution as well as allowing sufficient room for the ventilation ducting.

The ore drive will be developed using a mechanical development jumbo. Teams of miners using pneumatic rock drills will be used to develop the ore drives during the initial ramp up period. These development miners will be progressively transferred to stoping activities as stoping areas are made available.

Once the ore drive is completed, a series of parallel slot rises, spaced at 20 m centers along the ore drive, will be developed up from the lower level to hole into the level immediately above. Slot rising can commence before the ore drive development is completed, so that rises, close to the crosscut access, are established as soon as possible.

A stoping face is established by a horizontal connection between adjacent raises. The stope is connected to the upper level by two rises, which allows for through ventilation as well as a second means of egress from the stope.

Stoping is then progressed in an up dip direction using slashing holes drilled with the pneumatic rock drills. Although stope widths as low as 1.0 m can be achieved, practically stope widths of less than 1.5 m are unlikely to be achieved on a consistent basis.

Due to the flat dip of the orebody, blasted ore is dragged out of the stope using electric scrapers and water. The scraper hoe is rigged into the stope using steel wire ropes and a number of pulleys, which are used to direct the scraper hoe. Scrapers are initially installed in a small cuddy excavated off the ore drive, but can be relocated into the stope once sufficient working space has been established.

The stoped void is supported using a system of pillars. The size of each pillar and the spacing between pillars is determined on a case by case basis depending on stope width, ground conditions and gold grade. The exposed hangingwall will be supported using a regular pattern of rock bolts, which will be installed close to the working faces.

Development

Development layouts have been designed using the following criteria:

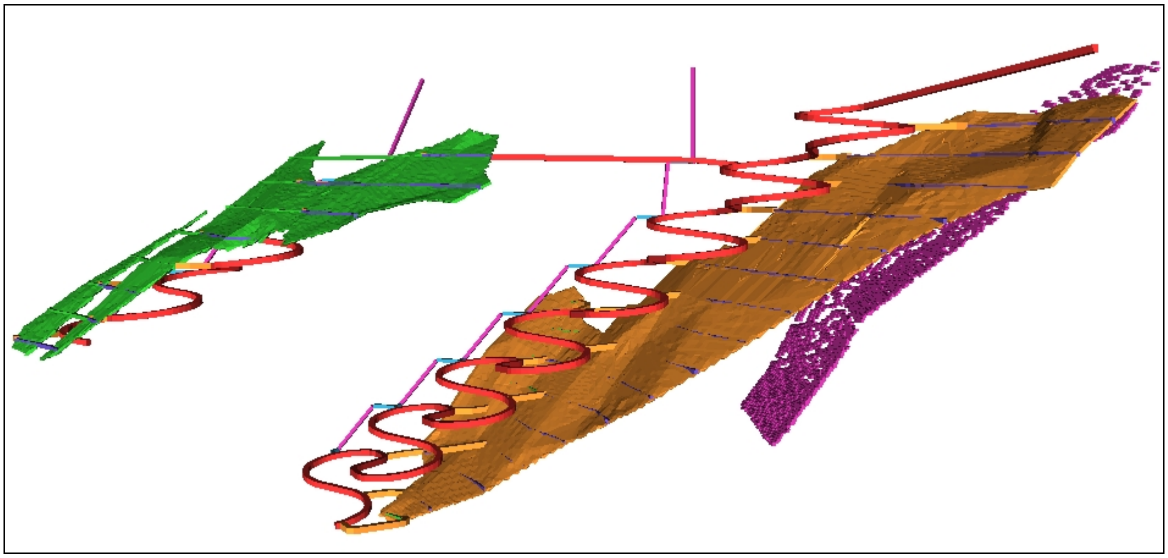
- The decline is to be 4.5 m wide x 4.5 m high at maximum gradient of one in seven with a minimum centerline radius of curvature of 25 m to suit a medium sized loader (4 m^3) and a 20 t to 30 t truck.
- A stand off distance of approximately 35 m, perpendicular to the orebody, is to be maintained between the decline and the hangingwall of the orebody to allow the cut and fill ramps to be established.
- Stockpiles are to be 15 m long, 4.5 m wide, and 5.0 m high, with allowance for stripping to accommodate truck loading and tipping of waste for backfill.
- Stockpile bays are to be provided on each level for stockpiling ore during the production cycle and waste during the backfill cycle.
- Return air raises are to be developed at approximately 50° to enable the conventional hand held rising methods to be employed.
- Smaller scale development in mechanised areas to suit a 3 m^3 loader are 3.0 m wide.
- Hand held mining drives will typically be 2.0 m wide and 2.0 m high.
- Mining levels are established at 20 m vertical intervals in both the Melechete and M2 areas.

- In Melechete cut and fill mining, a stope access crosscut is developed from the decline down at a gradient of 1:6 to intersect the orebody.

The underground orebodies will be accessed via a decline, developed down at a maximum gradient of one in seven. Separate declines are designed for the two lodes; however a single decline and long crosscuts may be considered (Figure 18.1). The Melechete decline is located in the hangingwall to avoid the Arame lode. Fresh air will intake to the mine via the decline, and exhaust via dedicated return air rises. Blasted ore will be tipped into stockpiles and then loaded into trucks and hauled up the decline to the surface. Waste rock from development will be stored underground, where possible, and used as backfill in the cut and fill stopes.

Allowance will be made for underground pump stations and small workshops. The design of the decline will allow for close spaced grade control drilling when required.

Figure 18.1 Isoclinal view of Mamão underground layout showing decline positions



18.1.2 Lagoa Seca

Pit shell optimisation

The resource model was imported into Whittle 4X optimisation software. Overall slope angles were selected according to Snowden geotechnical recommendations and were 55° in the north wall and 45° in the south wall.

For establishment of the initial optimised pit shell, costs were constructed in detail, with haulage costs increasing with depth. Mining recovery and dilution were assumed to be 95% and 5% respectively – processing recoveries were 94% for fresh rock, and 92.5% for weathered oxide material. The gold price was assumed to be \$580/oz, with a royalty of 2%.

The highest value Whittle shell was chosen with 470,000 ore tonnes. This shell was used as the basis for further pit definition that included detailed pit wall and ramp design.

Pit design

Following the creation of an optimised pit shell in Whittle software, a detailed design of the Lagoa Seca pit was completed. The pit design followed the design parameters described below:

- overall slope angles – alluvial and detrital materials – 30°
- overall slope angles – weathered bedrock – 40°
- overall slope angles – fresh bedrock – 55°
- batter angle 70°
- berm width 5 m
- bench interval 15 m
- flitch height 5 m
- road width 10 m

Waste dump design

A waste dump was designed immediately west of the open pit. The waste dump has a capacity of approximately 1.0 Mm^3 and is battered to approximately 20°. Waste has the potential to cause acid rock drainage, which will require the dumps to be contained within low permeability clays.

RML will investigate the requirement for sterilisation drilling under the waste dump site.

Blasting

The majority of ore and waste will be drilled and blasted. Operational experience will dictate whether ore and waste can be blasted separately or at the same time. Ore outlines will need to be clearly delineated by close spaced grade control drilling, and ore excavated on day shift only under the close supervision of the geologists and grade control technicians.

18.1.3 Mining equipment

Mamão

The fleet of core and ancillary mobile and fixed equipment is listed in Table 18.1.

Table 18.1 Mamão underground equipment

Underground equipment	Type	Number
Underground mobile equipment		
Medium loader	10 t	1
Small loader	1 t	1
Scrapers	50 kW	6
Trucks	20 t to 25 t	2
Production jumbo	Twin boom	1
Development jumbo	Single boom	1
Pneumatic rock drill	Crews	5
Pickup vehicle		3
Underground infrastructure		
Primary fan	150 kW	2
Secondary fan	60 kW	2
Secondary fan	30 kW	1
Secondary fan	15 kW	6
Large stage pumps	60 kW	2
Face pumps	20 kW	2
Small pumps	5 kW	4
Compressor	100 kW	2

Development drill and blast

Waste access development comprises the decline, level cross cuts and ancillary development such as stockpiles, turning bays and pump stations. These will be developed using a twin boom development drill rig capable of reaching 5.0 m in height.

Development load and truck

The broken development rock will be loaded using a larger sized seven tonne to nine tonne (4 m^3) loader that is capable of loading directly into trucks. This loader will also be used to load production ore from stockpiles into trucks throughout the mine life.

All material will be trucked using two 25 tonne trucks. The waste generated during development will be transported to backfill stockpiles underground or on surface. The production ore will be loaded on to the trucks from level stockpiles and trucked to the ROM stockpile on surface. At later stages in the life of the operation, it will be necessary to truck waste underground for backfill requirements. The trucks will be back loaded with waste in the same cycle as they are used to truck ore to surface.

Drill and blast production

The mine plan has been prepared being mindful of the need to protect the hangingwall and footwall of all stoping areas from blast damage. The cut and fill stoping method is conservative in this regard with the development drill jumbo being used for the production drilling function. This effectively limits blasthole lengths to less than four m and if drilling is performed accurately using 45 mm bits, presents little risk of creating significant blast damage.

The narrow portions of Melechete and the entire M2 will be mined using hand held pneumatic air leg drills with holes between 24 mm and 36 mm in diameter. The drill steel length will be between 1.80 m and 2.40 m.

Blast holes will be charged with pneumatically loaded ANFO. Packaged emulsion explosives will be used for the bottom (lifter) holes of each face blast and any other blastholes that are likely to contain water. The charge will be initiated with non-electric detonators and packaged emulsion primers.

Production loading

The mechanised cut and fill mining areas will be mucked using medium sized loaders that have a typical capacity of 4 t to 6 t (3 m^3). These will load rock from the blasted face to a stockpile on the level near the decline. A larger loader will then load from the stockpile onto trucks for transport to the surface.

In narrow air leg cut and fill stoping, a smaller loader, typically 1 t to 2 t capacity, will be used to load blasted ore from the face to the level stockpile. In the M2 orebody, rock will be scraped with metal scraper hoes, pulled by wire ropes on electric winches, from the blasted face into level drives where the rock will be loaded by rubber tired loaders. The scraper hoes will be maneuvered around the working area by directing the wire rope with snatch-block pulleys from the winch installation to the blasted face. The electric winches will vary in size from 30 kW to 75 kW depending on the distance to be pulled.

Maintenance and fuel

Maintenance and refueling will take place in a surface workshop and diesel fuel bay. The location of the maintenance area is shown on the surface layout drawing (Figure 5.3).

Backfilling

The mine plan relies on efficient and effective placement of waste rock as backfill in the cut and fill stopes. This material will come primarily from waste produced as part of the development cycle. In the beginning of the mine life, more waste is generated underground than that which can be used as backfill. This means that some waste will be stockpiled on surface. In the last two years of the mine life, there is insufficient waste generated underground and the stockpiled waste will be back loaded on trucks and taken underground for backfill placement. More waste is consumed in backfill than is generated underground, by approximately 50,000 t. This means that this backfill material will be sourced from existing stockpiles or from the Lagoa Seca operations near the end of the mine life. The option also exists to investigate the use of tailings to meet some of the backfill requirements.

Level stockpile bays are designed to a size that allows trucks to tip waste fill which has been hauled from development elsewhere in the mine, or from surface. From there, the waste fill will be hauled by LHD to the filling location. In cut and fill stopes, the fill is hauled into the stope void and must be carefully tipped from the loader to build a fill platform as high and as evenly surfaced as possible. Irregularities in the fill surface can result in significant ore loss from the next flat back lift. If the fill height is too low, an excessive height of unsupported wall may result, potentially leading to wall failure and dilution of subsequent production. A LHD fitted with an ejector bucket will provide the best option for achieving effective fill placement.

Pumping

The proposed long term dewatering arrangement for ground and service water will be through electric and pneumatic submersible face and level sump pumps feeding higher capacity staged electrical pumps such as Mono pumps. The staged pumps will then transport the water to surface and into the open pit for settling before re-use or discharge to the environment.

Ground water ingress to the mine is primarily through faults and fractures in the rock mass. The inflow of ground water and run off, through mine openings such as the decline portal, is expected to peak during the wet season. The pumping capacity of the mine should be designed to cope with these peak periods. The decline portal is to be designed so as to minimise water entry through run off during high rainfall events. This would include profiling of roads, construction of bunds and a sufficiently sized sump adjacent to the portal entrance fitted with a pump. Full grouting of surface and underground geological drillholes will significantly reduce the likely inflow of water as mining progresses.

Operationally, the use of holding tanks and automatic pump controllers for staged face pumps and collection of water from persistent sources is recommended to manage water inflow. This will improve road conditions, vehicle performance, ventilation and general conditions underground.

The previous underground workings are reported to be flooded. Until these areas are confirmed to be de-watered, they should be treated as a potential inrush hazard and mining in their proximity should be strictly controlled and a sufficient barrier pillar maintained.

There is a history of power supply failures during heavy thunder storms. It is recommended that an emergency diesel generated power source be installed to ensure that the pumping capacity is not lost during high rainfall events.

Although the currently planned approach appears to be adequate for the expected conditions, it is recommended that a program of expert investigation be implemented to gain an improved understanding of the hydrogeologic setting of the mine to confirm this conclusion.

Ventilation

The primary ventilation requirements for the underground workings have been determined by:

- Applying typical airflow parameters of 0.05 m^3/s per kilowatt of diesel engine power operating underground.
- Providing airflow distribution to all non-mechanical working areas.

The return air capacity for the mine will be 120 m^3/s. Air will be drawn into the mine through the decline and distributed to the working areas. Air will be returned to surface via two return air rises. A 60 m^3/s fan will be installed on surface above each rise. One rise will ventilate the M2 area; the other will ventilate the Melechete area. The return airway system will be continued downwards as mining progresses through a series of interconnecting rises.

The effectiveness of the primary ventilation circuit will depend on the installation of effective barricades at each access to the return air raise, to regulate flows and ensure adequate air volume reaches the lower workings of the mine.

Level development and cut and fill mining will be carried out under forced secondary ventilation with return air exhausting through the return air rise on that cross cut level, as a normal practice.

Ventilation of air leg mining in the M2 mining area will be via primary, bottom up air flow through the stopes and through forced secondary ventilation in workings with no flow through ventilation.

Lagoa Seca

Waste will be mined using conventional backhoe type excavator such as a CAT 375 or similar, which could achieve a productivity of approximately 540 tonnes per hour. A smaller CAT 330 excavator or similar using a 1.25 m wide bucket will achieve ore productivities of 315 tonnes/hour loading two CAT 740E dump trucks or similar. Ore will be dumped on a ROM pad, and loaded into trucks by the contractor.

18.1.4 Power supply

The power consumption estimates for the Project, considering the underground mining equipment and processing plant installation is 2500 kW. This power supply is planned to be sourced from the local grid system as it is understood that there is a spare 7500 kW capacity at Rio Maria.

18.1.5 Stope definition drilling

A program of DDH drilling from surface to provide Mineral Reserve definition of the orebody for mine design purposes has been planned. The program will comprise approximately 14,000 m of drilling for the Lagoa Seca, Melechete and M2 ore bodies. The Mamão plan shows that the decline will advance ahead of production needs. Approximately $300,000 has been allocated to a limited amount of underground grade control drilling from the advancing decline, should it be required. The underground drilling will be completed from non-dedicated development such as stockpile bays or rise accesses as they are mined with the advancing decline. On this basis, no provision for additional development has been made for stope definition drilling.

It is not intended to complete an exhaustive grade control drilling program, ahead of mining, once the decline is in place. The reserve definition drilling, from surface, is expected to provide adequate definition for placement of initial development. The nature of cut and fill and room and pillar mining allows for continuous adjustment of mining direction, to control mined grades, on a cut by cut basis under the direction of geologists or geological technicians.

18.2 Recoverability

Information concerning all test and operating results are provided in Section 16. It is anticipated that metallurgical resources for the open pit will be 92% and underground ore 94%.

18.3 Markets

There is no information other than Troy expects to sell its dore unhedged, with arrangements similar to its mining operations at SML.

18.4 Contracts

No mining, concentrating, smelting, refining, transportation, handling, sales or hedging contracts have been entered into.

18.5 Environmental considerations

The reader is referred to section 4.8 for details of permitting. To date no bonds have been posted for remediation and troy's obligations for remediation and reclamation have not yet been assessed.

18.6 Royalties and taxes

A tax rate of 34% was assumed, which comprises 25% corporate tax and a 9% social liability tax. See Section 4.2 for a description of the royalties applicable to the Andorinhas Project.

Other than as set out above there are no taxes, royalties or other government levies of interests applicable to the Andorinhas Project or to production or to revenue or income from the Andorinhas Project.

18.7 Capital and operating cost estimates

All costs and revenues are quoted in US dollars ($). Local costs have been converted to Brazilian Reais (BRL) using an exchange rate of $1.00 = BRL2.10.

18.7.1 Capital cost estimate

Capital costs total US$22.6 M over the life of mine, equivalent to US$18/t processed. The components of the capital cost estimate are shown in Table 18.2.

Table 18.2 Capital cost estimate

Item	Capital Estimate ($M)
Mill purchase and contingency	5.90
Underground mobile fleet	4.19
Underground fixed equipment	0.92
Underground capital development - decline	3.01
Processing plant relocation, refurbishment and tailings containment	3.41
Other site establishment and infrastructure	2.98
Contractor mobilisation	0.20
Lagoa Seca pre-strip	0.78
Box cut	0.09
Sustaining capital	0.77
Closure and rehabilitation	0.35
Total	**22.6**

Mining

The capital cost estimate in Table 18.2 includes mobile equipment, fixed plant, box cut establishment and decline development. It has been assumed that the majority of the mobile equipment required by the underground operation can be obtained second hand, at reduced prices. The complete underground mobile fleet is estimated to cost $4.19 M.

The fixed plant required for the underground operation is estimated to cost $0.92 M. It is not expected to make many second hand purchases for this equipment which includes ventilation fans and pumps. Mobilisation of the mining contractors is estimated to be $0.2 M.

The main decline development to access the Melechete and M2 lodes will be done using a contractor. Approximately five km of capital development will be developed at a cost of $3.01 M. The average decline cost is estimated to be $500 per metre, which includes allowance for vertical development, stockpiles, ventilation rises and escape ways. Mine capital costs include allowance of $0.09 M for box cut and $0.16 M for portal establishment.

Processing

Refurbishment, relocation and construction of the processing plant are estimated to cost $3.41 M. Major costs being dismantling of the Sertão plant $0.18 M, shipping $0.34 M and construction $2.35 M.

Other

A sustaining capital allowance of $0.77 M has been provided for the Mamão operations. A provision of $0.35 M has been allowed for rehabilitation of the Lagoa Seca and Mamão mine areas following mine closure. No salvage value has been allowed for plant and equipment following mine closure.

18.7.2 Operating cost estimate

Operating costs total $64.1 M over the life of mine, equivalent to $52/t processed or $266/oz recovered. No contingency provision was allowed.

The components of the operating cost estimate are shown in Table 18.3. Underground operating cost estimates were provided by Troy based on a similar sized operation nearby. Open pit, processing and administration operating costs are based on Troy's current operational experience in Brazil.

Table 18.3 Operating cost estimate

Item	$/tonne
Overhead and exploration / grade control	3.00
Underground mining	27.00
Open pit mining ore	3.40
Open pit mining waste	1.85
Ore haulage	1.00
Processing	18.50
Administration	18.00

Mining

The operating cost estimate for underground mining production is estimated to be $27 / t mined as summarised in Table 18.4.

Table 18.4 Mamão underground mining operating unit cost

Category	$
Labour	11.23
Consumables	3.45
Power	3.96
Fuel	4.33
Maintenance	4.03
Total	**27.00**

Overhead costs and exploration/grade control drilling to a 30 m by 30 m grid is estimated at an additional $3 per tonne milled, which includes allowance of $300,000 for occasional grade control drilling from underground. The Lagoa Seca open pit will be mined on a contract basis at a cost of $3.40 per ore tonne and $1.85 /t waste. Ore haulage will be approximately $1.00 per tonne.

Processing and administration

The cost of processing is estimated to be $18.50/t including consumables, power, maintenance and personnel. The average administration cost is estimated to be $18/t.

18.8 Economic analysis

The throughput rate for the project is 250,000 tonnes per year based on a maximum vertical advance rate of 50 m to 60 m per year, which is considered by Snowden to be achievable. Using a gold price of US$600/oz and Troy supplied capital and operating cost estimates, and excluding the purchase cost, the Andorinhas Project will achieve earnings before interest and tax (EBIT) of $54.5 M and an after tax, discounted cash flow of $22M and $28 M at a 10% and 5% discount rate respectively. The internal rate of return (IRR) is 51%, calculated excluding the sunk purchase cost (Table 18.5).

This economic analysis is based on probable mineral reserves.

A standard sensitivity analysis (Table 18.6, Table 18.7, Figure 18.2, Figure 18.3) where key parameters are varied independently of each other, shows that the project is very sensitive to grade, metal price and moderately sensitive to operating costs and capital costs.

It is anticipated that the project economics will be enhanced by the delineation of additional mineralisation within the project area. An extensive exploration programme has commenced that will focus on discovering, delineating and developing resources amenable to treatment through the Andorinhas processing plant. The Andorinhas greenstone belt contains several anomalous target areas outside of the current RML tenement holdings. These prospective areas will be investigated and discussions with the current holders progressed if warranted.

Table 18.5 Mining, processing and cash flow schedule

Area	Unit	Production period (year)						Total
		-1	1	2	3	4	5	
Production								
Open pit waste	kt	400	1,304	-	-	-		-
Open pit HG	kt	31	78	-	-	-	-	109
Open pit HG	g/t	9.05	9.05		-	-	-	9.05
Open pit LG stocks	kt	147	225	-	-	-	-	372
Open pit LG stocks	g/t	1.40	1.40	-	-	-	-	1.40
UG ore	kt	-	61	176	200	200	111	747
UG grade	g/t	-	7.71	8.59	8.39	9.09	9.16	8.68
Decline	m	-	2,099	2,619	-	-	-	4,718
Total processed	kt	0	250	251	250	250	227	1,228
Total grade	g/t	-	5.48	7.17	6.99	7.58	5.19	6.51
Au recovered	koz	-	41.3	54.2	52.7	57.1	35.4	240.6
Au value	$M	-	24.78	32.50	31.61	34.23	21.25	144.37
Royalty	$M	-	0.77	0.73	0.63	0.68	0.43	3.24
Au revenue	$M	-	24.01	31.78	30.97	33.55	20.83	141.14
Operating cost								
Legoa Seca - mining	$M	0.217	2.959	0.000				3.18
Melechete - mining	$M		1.833	5.271	5.985	6.006	3.318	22.41
Legoa Seca - stockpile	$M	0.132	0.202	0.000	0.000	0.000	0.000	0.33
Processing	$M	-	7.272	8.244	8.224	8.234	6.200	38.17
Contingency	$M	_	-	-	-	-	-	
Total operating cost	$M	0.350	12.266	13.515	14.209	14.240	9.518	64.10
Total operating cost	**$/t**	1.964	33.718	76.916	71.221	71.130	86.061	52.21
Capital cost								
Pre-production capital	$M	18.43					18.43	18.43
Production capital	$M			1.22	0.90	0.90		3.02
Sustaining capital	$M		0.19	0.19	0.19	0.19		0.77
Closure and rehabilitation	$M			0.15				0.35
Total capital	$M	18.43	0.19	1.56	1.09	1.09	18.43	22.57
Capital cost	$/t							18.38
EBIT	$M	-18.78	11.55	16.70	15.67	18.22	11.11	54.47
EBITDA (cumulative)	$M	-18.78	-7.23	9.47	25.15	43.36	54.47	
Taxation	$M		2.09	4.15	4.19	4.43	2.53	18.01*
Net cash flow	$M	-18.78	9.46	12.56	11.48	13.79	8.58	36.46*
NPV (10%)	$M	-17.91	8.20	9.89	8.22	8.98	5.08	22.13*
NPV (5%)	$M	-18.33	8.79	11.11	9.68	11.07	6.56	28.43*

Note: *Totals for these items include provision for tax payable in Year 6.

Table 18.6 Sensitivity analysis (NPV at 10% discount rate, +/- 30%)

% change	NPV ($M)						
	-30%	-15%	-7.5%	0%	7.5%	15%	30%
Grade	1	12	17	22	28	33	44
Gold price	1	12	17	22	28	33	44
Production capital	23	23	23	22	22	22	22
Pre-Production capital	28	25	24	22	21	20	17
Mining cost	26	24	23	22	22	21	19
Process cost	28	25	24	22	21	19	16

Figure 18.2 Graph of NPV sensitivity at 10% discount rate

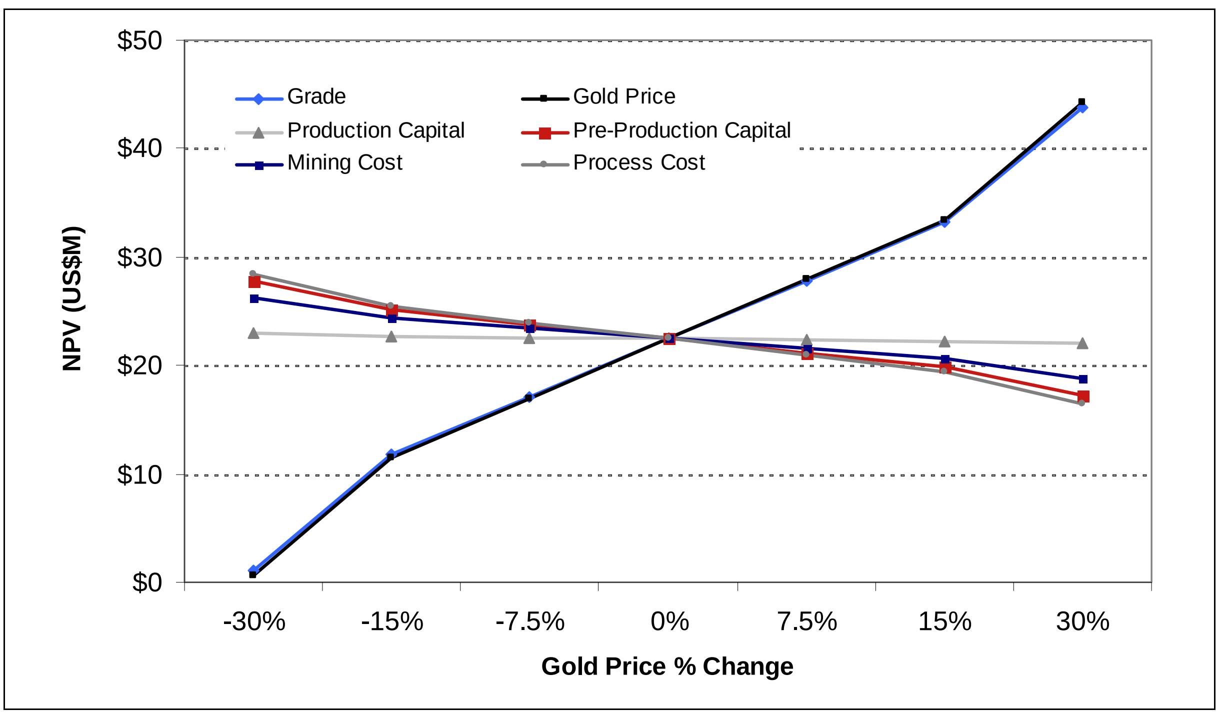
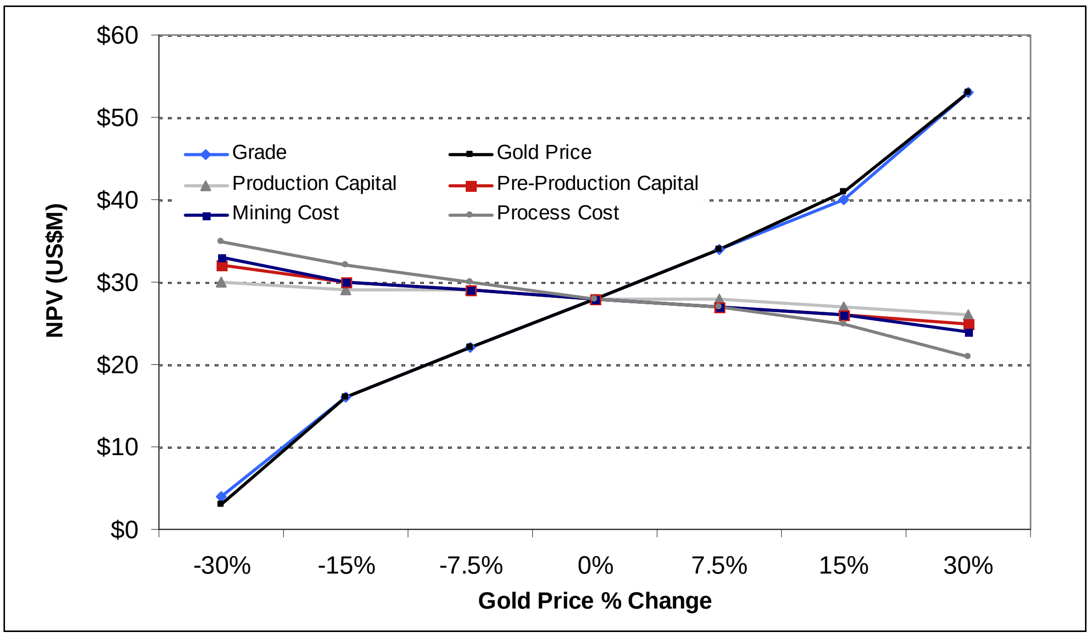


Table 18.7 Sensitivity analysis (NPV at 5% discount rate, +/- 30%)

% change	NPV ($M)						
	-30%	-15%	-7.5%	0%	7.5%	15%	30%
Grade	4	16	22	28	34	40	53
Gold price	3	16	22	28	34	41	53
Production capital	29	28	28	28	28	28	28
Pre-Production capital	34	31	30	28	27	26	23
Mining cost	33	30	29	28	27	26	24
Process cost	35	32	30	28	27	25	21

Figure 18.3 Graph of NPV sensitivity at 5% discount rate



18.9 Payback

Payback will occur approximately two years following commissioning of the mines.

18.10 Mine Life

The mine has a life of about five years and schedules show that a combined production rate of 250,000 tpa can be achieved from the open pit and underground.

Development of the Lagoa Seca open pit and underground operations at Mamão will be mined concurrently. Low grade open pit ore, mined with the high grade, will be processed to maintain throughput rates.

The key scheduling dates are as follows, where Q1 Year -1 commences January 1 2007:

- plant purchase, refurbishment and construction – Year -1 (Y-1)
- sterilisation drilling, Lagoa Seca pre-strip, mill civil work and geotechnical studies commence Q3, Y-1
- full production from open pit Q1, Y1
- underground box cut and decline development commences Q 3, Y -1
- open pit mining completed Y 2
- underground at full production Q 4, Y 1

Underground production will commence once the decline and return airways have been established. Backfill for the cut and fill will be sourced from development waste. However there will be a shortfall and some backfill must be sourced from other surface dumps or tailings.

18.10.1 Project implementation schedule

Pre-production

In order to meet the required timing to start mining and processing ore, statutory approval has been obtained to allow for trial mining. An environmental permit has been issued to allow for the mining and processing of 50,000 t of ore from the Project.

The pre-production period will be approximately 6 months, although some ore will produced during the pre-strip. Site construction at Mamão will commence with the processing site construction office, the underground decline offices, and supporting amenities including security, first aid, basic workshops and a limited amount of visitors' accommodation units. The exploration facilities located at Lagoa Seca will be upgraded and used as offices for the open pit mining contractor.

All buildings will be constructed using local resources from the towns of Floresta and Rio Maria. Power will be sourced from the Project power line and access to the site will be via the haul road. Requirements such as security fencing and location of spare lay down areas will be completed after the major construction phase has been completed. The management of the construction phase will be contracted to a reputable Brazilian construction firm who will be responsible for overseeing the relocation, refurbishment and installation of major items required for the plant.

The mining and processing infrastructure required for the Andorinhas Project is well proven technology used extensively throughout Brazil and internationally. The type and size of the mining and processing equipment and the relatively short life of the Project lends itself to the use of refurbished equipment in the mine and process plant. Numerous operations throughout the world have been installed using refurbished equipment, including a major part of Troy Resources' Sertão Project in the State of Goiás, Brazil, which will be relocated to Mamão.

Refurbishment and modification may take about six months. Large equipment will be transported by road, and it may take up to two months before all items reach site.

Site preparation will be carried out concurrently with the refurbishment and may take up to three months in good weather conditions or double this in the wet season. Sufficient power for construction work is available from an existing power line in the short term. Grid power required to operate the plant will be available by the time equipment is ready for commissioning.

The installation of the processing equipment is expected to take approximately two months. Site crane facilities will be provided on a contractual basis apart from a small mobile unit that will remain on site during production. After the major units are installed a further six weeks will be required to complete all the electrical and piping connections. The construction contractor will be required to remain at the site during the commissioning stage of the facility. It is likely that dry and wet commissioning will take approximately one month, after which the Project will be ready to enter the production ramp up stage.

Pre-stripping of the Lagoa Seca open pit will expose sufficient ore ahead of the process plant commissioning. An experienced Brazilian contractor will be used to mine the open pit and haul the ore to Mamão. Any ore produced before the plant is commissioned will be stockpiled close to the process plant.

The open pit contractor will also excavate the decline box cut at Mamão. Decline development and stoping will be by owner-mining.

Dewatering of the old pit and underground workings will be completed prior to commencement of mining. The construction of major infrastructure will be timed for completion immediately prior to the first ore production.

Mine schedule

An integrated life of mine schedule was prepared using Mine 2 4D software, which incorporated the open pit and underground activities. The schedule is resource constrained by relying on units of key production equipment for main activities, while recognising that some redundancy in the fleet exists to maintain acceptable availabilities.

The key parameters used to develop the open pit schedule were:

- high grade ore is prioritised
- low grade ore is stockpiled and transported to the mill when required to meet capacity
- waste is dumped adjacent to the pit
- minimal overburden stripping is required
- it is assumed that high grade and low grade ore can be identified and stockpiled separately
- one excavator and two loaders are available to load two trucks with waste or ore when required

The key parameters and resource constraints used to develop the underground schedule were:

- a twin boom and a single boom electro-hydraulic jumbo are available
- one Elphinstone R1700 LHD or similar is available for the development and production loading
- one or two smaller loaders such as an Elphinstone R1300 and ST-2D or similar are available for stope mucking and backfilling
- two 20 t to 30 t capacity underground articulated dump trucks are available
- development at 4.0 m and 4.5 m wide at eight per round for a 3.0 m advance
- flat back stoping at eight hours required to generate 176 t of ore

- room and pillar stoping – 30 t per shift per crew
- backfilling - 120 t backfilled per hour

18.10.2 Labor estimates

Fixed staff positions include management, supervision and administration and remain largely unchanged over the life of the operation. The number of personnel in operational positions in the mine and process plant will vary to match the production profile. Over the life of mine, an average of 276 personnel will be employed as summarised by category in Table 18.8, with a maximum of 306 employees in year three. Productivity is estimated to be 5.7 tonnes per day per underground operational employee for Mamão.

Where possible, operations, supervision and administration personnel will be local residents. A number of expatriates will be employed in senior management and technical support roles. Operations crews will be organised into four roster panels and will rotate between shifts, producing continuous operations on three 8 hour shifts per day and a two week on, one week off roster sequence. Training of the local work force will be a key component of the project. Labor costs include 85% allowance for on costs and an 8% to 12% allowance for leave coverage.

Table 18.8 Labor list – average life of mine

Category	Average number
Mining operators	77
Processing operators	44
Supervision	14
Technical	29
Administration	106
Management	6
Total	**276**

19 Interpretation and conclusions

19.1 Results and interpretation of data

The Lagoa Seca deposit contains an Indicated Mineral Resource estimated at 699,600 tonnes at 2.8 g/t Au which includes a Probable Mineral Reserve of 480,200 tonnes at 3.1 g/t Au. The stated Reserve is a subset of the stated Resources.

The Mamão deposit includes an Indicated Mineral Resource estimated at 815,600 tonnes at 9.9 g/t Au plus an Inferred Mineral Resource estimated at 81,600 tonnes at 6.4 g/t Au. The Mamão resource includes a Mineral Reserve of 747,000 tonnes at 8.7 g/t Au.

The Lagoa Seca West deposit contains an Indicated Mineral Resource estimated at 800,000 tonnes at 1.1 g/t Au plus an Inferred Mineral Resource estimated at 1,600,000 tonnes at 1.3 g/t Au.

It is Troy's intention to mine the Lagoa Seca deposit by open pit and to mine the Mamão deposit underground by a combination of hand held and small mechanised equipment.

Troy has relied upon information it acquired when it purchased the Andorinhas Project in November 2006 to derive its preliminary costed mine plan. However, since its acquisition Troy has proceeded to review and interpret all information obtained and has commenced acquisition of its own field information to support its detailed mine planning and costing studies.

Snowden (2006b) schedules showed that a combined production rate of 250,000 tpa could be achieved from the open pit and underground for a mine life of 5 years. Snowden understands now that Troy is required to process ore from each site separately to comply with royalty constraints. It is Troy's intention to begin both operations at a similar time.

Based on Snowden's review of Troy's current project plan Snowden considers the plan to be reasonable.

19.2 Adequacy of data density and reliability

Snowden has satisfied itself that the data is sufficient to classify the resources in the Indicated and Inferred Resource categories and has recommended work programs including infill drilling and further metallurgical and geotechnical studies.

19.3 Areas of concern

No key issues have been identified by Snowden. The analysis provided in section 18 is commensurate with a Prefeasibility Study. The additional data collection planned by Troy, including that recommended by Snowden (Section 20 of this report), will provide additional detail required for mine planning and costing.

19.4 Conclusions

Snowden's review of the Andorinhas Project for this Technical Report has confirmed that Troy's preliminary plan for mining the Andorinhas mineral reserve is reasonable.

The Lagoa Seca deposit contains an Indicated Mineral Resource estimated at 699,600 tonnes at 2.8 g/t Au which includes a Probable Mineral Reserve of 480,200 tonnes at 3.1 g/t Au.

The Mamão deposit includes an Indicated Mineral Resource estimated at 815,600 tonnes at 9.9 g/t Au plus an Inferred Mineral Resource estimated at 81,600 tonnes at 6.4 g/t Au. The Mamão resource includes a Mineral Reserve of 747,000 tonnes at 8.7 g/t Au.

The Lagoa Seca West deposit contains an Indicated Mineral Resource estimated at 800,000 tonnes at 1.1 g/t Au plus an Inferred Mineral Resource estimated at 1,600,000 tonnes at 1.3 g/t Au. The Lagoa Seca West resource has not been converted into a Mineral Reserve.

It is Troy's intention to mine the Lagoa Seca deposit by open pit and to mine the Mamão deposit underground by a combination of hand held and small mechanised equipment.

Snowden's schedules showed that a combined production rate of 250,000 tpa could be achieved from the open pit and underground for a mine life of 5 years. Snowden understands that Troy is required to process ore from each site separately to comply with royalty constraints.

Using a gold price of US$600/oz and Troy supplied capital and operating cost estimates, the Andorinhas Project will achieve a discounted cash flow of $22 M and $28 M at a 10% and 5% discount rate respectively. The internal rate of return (IRR) is 51%.

In Snowden's opinion Troy has the background and experience of successful gold mining and treatment at Goias, Brazil to execute this mine plan.

20 Recommendations

Snowden recommends that Troy undertakes the following work program as a matter of priority:

- dewater the Lagoa Seca and Melechete pits
- complete resource infill drilling at Lagoa Seca
- complete resource reassessment and infill drilling at the Lagoa West prospect
- undertake additional definition drilling of the M2 deposit for mine design work
- complete sterilisation drilling for the plant site, tailings areas, and other site based infrastructure
- undertake a detailed structural study of the Mamão and Lagoa Seca deposits
- undertake a comprehensive review of historic DDH drill core including re-logging with an emphasis on establishing geological controls on mineralisation
- submit Lagoa Seca DDH drill core samples for ICP assay
- collect bulk samples at Mamão and Lagoa Seca for detailed metallurgical and processing test work
- complete pit wall stability studies to steepen the walls of the Legoa Seca pit.

Other critical tasks include:

- identify and evaluate extensional resource targets at Lagoa Seca and Mamão to ensure additional mill feed
- undertake a study to confirm a suitable location for the tailings dam at Mamão
- metallurgical test work of ore at Melechete and M2 ore zones
- undertake petrographic study of the lithologies and mineralised zones
- undertake geotechnical and hydro geological studies including:
  - Identifying the quality of the underground water at Mamão and Lagoa Seca
  - Determine and monitor the flow of drainages upstream and downstream of the mine areas
  - Identifying the ground quality at the plant site
  - Geotechnical mapping of the Lagoa Seca and Melechete pits
  - Identifying the physical properties of the rock
  - Collecting a representative suite of samples at Mamão and Lagoa Seca for specific gravity determination
- construct a core shed to store and protect all project drill core, including coarse reject and pulp samples.

Additionally Troy should:

- retrieve and compile all data related to the project

- organise landowner agreements for the entire property
- undertake geological reconnaissance including mapping of the garimpeiro workings and any known areas of mineralisation, including iron ore targets
- acquire and interpret remote sensing and geophysical data and images
- undertake an aeromagnetic survey
- complete a reconnaissance soil and auger sampling program throughout the property to assess the effectiveness of this sampling method.

20.1 Andorinhas exploration budget

A total expenditure of US$3 M is recommended on exploration activities (Table 20.1).

Table 20.1 Exploration budget

Item	Budget (US$)
Salaries	700,000
Soil geochemistry surveys	150,000
Drilling programs (rotary airblast, reverse circulation, diamond core)	1,020,000
Assaying	230,000
Geophysical surveys, satellite imagery processing	600,000
Land access expenses	100,000
General operating costs	200,000
TOTAL (US$)	3,000,000

20.2 Andorinhas development budget

Troy has approved a budget of US$25.6 M to develop mining operations.

21 References

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Snowden, 2006a.	Andorinhas Project Resource Estimation, project number 5616
Snowden, 2006b	Andorinhas Project Prefeasibility Study, project number 5616

22 Dates and Signatures

Name of Report:
Andorinhas Project, Para State
Brazil
June 2007

Commissioned by:
Troy Resources NL

Signed 3 December 2007

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Pamela L De Mark Date

3 December 2007

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Kevin Lowe Date

3 December 2007

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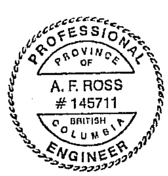
Frank Blanchfield Date



3 December 2007

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Andrew F. Ross Date

23 Certificates

CERTIFICATE of QUALIFIED PERSON

(a) I, Pamela L. De Mark, Senior Resource Consultant, Snowden Mining Industry Consultants Inc., 550 – 1090 W. Pender St., Vancouver, BC V6E 2N7, do hereby certify that:

(b) I am an author of the technical report titled "Andorinhas Project, Para State, Brazil" dated June 2007 (the "Technical Report") of Troy Resources NL.

(c) I graduated with a Bachelor of Applied Science (Honours) Degree in Applied Geology from the University of Technology, Sydney (Australia) in 1994. I am a Member of the Australasian Institute of Mining and Metallurgy and have recently submitted my application to APEGBC for registration as a P.Geo. I have worked as a geologist for a total of 14 years since my graduation from university. I have been involved in mining and resource evaluation consulting practice for 3 years. During my working career I have been involved in mining and resource evaluation of gold deposits.

(d) I have read the definition of "qualified person" set out in National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements of a "qualified person" for the purposes of NI 43-101.

(e) I visited the Andorinhas Project site on 25 and 26 March 2007.

(f) I am responsible for the preparation of section 14 of the Technical Report.

(g) I am independent (as defined in section 1.4 of NI 43-101) of Troy Resources NL.

(h) I have no prior involvement with the property that is the subject of the Technical Report.

(i) I have read NI 43-101 and 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

(j) As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Vancouver BC this 3rd day of December, 2007.

Signed

____

Pamela L. De Mark

BSc(App Geo)Hons, MAusIMM

CERTIFICATE of QUALIFIED PERSON

(a) I, Kevin Lowe, Consultant Resource Geologist of Snowden Mining Industry Consultants Pty Ltd., 87 Colin St., West Perth, Western Australia, do hereby certify that:

(b) I am an author of the technical report titled “Andorinhas Project, Para State, Brazil” dated June 2007 (the “Technical Report”) of Troy Resources NL.

(c) I am a graduate of the University of the Witwatersrand with the degrees of Bachelor of Science Honours in Geology (1992) and Master of Science in Geology (1996). I am a Member of the Australasian Institute of Mining and Metallurgy. I have worked as a geologist for 13 years since my graduation from university.

(d) I have read the definition of “qualified person” set out in National Instrument 43-101 – Standards of Disclosure for Mineral Projects (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements of a “qualified person” for the purposes of NI 43-101.

(e) I have not made a visit to the Andorinhas Project.

(f) I am responsible for the preparation of section 17 of the Technical Report in so far as it relates to Mineral Resources.

(g) I am independent (as defined in section 1.4 of NI 43-101) of Troy Resources NL.

(h) I have no prior involvement with the property that is the subject of the Technical Report.

(i) I have read NI 43-101 and 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

(j) As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Perth WA this 3rd day of December, 2007.

Kevin Lowe MSc, MAusIMM

CERTIFICATE of QUALIFIED PERSON

(a) I, Frank Blanchfield, Senior Mining Consultant of Snowden Mining Industry Consultants, 87 Colin St., West Perth, Western Australia 6005, do hereby certify that:

(b) I am an author of the technical report titled "Andorinhas Project, Para State, Brazil" dated June 2007 (the "Technical Report") of Troy Resources NL.

(c) I graduated with a Degree in Bachelor of Engineering in Mining from the University of New South Wales in 1990. I am a Member of the Australasian Institute of Mining and Metallurgy. I have worked as a mining engineer continuously for a total of 17 years since my graduation from university. I have been involved in mining and mineral reserve evaluation consulting practice for over 5 years.

(d) I have read the definition of "qualified person" set out in National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements of a "qualified person" for the purposes of NI 43-101.

(e) I have not made a visit to the Andorinhas Project.

(f) I am responsible for the preparation of section 17 of the Technical Report in so far as it relates to Mineral Reserves and section 18.

(g) I am independent (as defined in section 1.4 of NI 43-101) of Troy Resources NL.

(h) I have no prior involvement with the property that is the subject of the Technical Report.

(i) I have read NI 43-101 and 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

(j) As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at West Perth this 3rd day of December, 2007.

Frank Blanchfield, BE., MAusIMM

CERTIFICATE of QUALIFIED PERSON

(a) I, Andrew F. Ross, Principal Consultant and Technical Competency Manager of Snowden Mining Industry Consultants Pty Ltd., 87 Colin St., West Perth, Western Australia, do hereby certify that:

(b) I am the author of the technical report titled "Andorinhas Project, Para State, Brazil" and dated June 2007 (the "Technical Report") of Troy Resources NL.

(c) I graduated with an Honours Degree in Bachelor of Science in Geology from the University of Adelaide in 1972. In 1985 I graduated with a Master of Science degree in Geology from the James Cook University of North Queensland. I am a Fellow and Chartered Professional (Geology) of the Australasian Institute of Mining and Metallurgy and a member of the Australian Institute of Geoscientists. I am licensed as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia. I have worked as a geologist continuously for a total of 34 years since my graduation from university. I have been involved in mining and resource evaluation consulting practice for 10 years, including resource evaluation of gold deposits for at least 5 years.

(d) I have read the definition of "qualified person" set out in National Instrument 43-101-Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements of a "qualified person" for the purposes of NI 43-101.

(e) I have not made a visit to the Andorinhas Project.

(f) I am responsible for the preparation of all sections of the Technical Report other than sections 14, 17 and 18.

(g) I am independent (as defined in section 1.4 of NI 43-101) of Troy Resources NL.

(h) I have no prior involvement with the property that is the subject of the Technical Report.

(i) I have read NI 43-101 and 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

(j) As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Perth WA this 3rd day of December, 2007.

A.F. Ross

PROFESSIONAL PROVINCE OF A. F. ROSS # 145711 BRITISH COLUMBIA ENGINEER

Andrew F. Ross, MSc., FAusIMM (CP), PGeo.

A Development capital cost estimate

Schedule 1
ANDORINHAS CAPITAL COST ESTIMATE

Cost elements.	**R$**	Dec	**Jan**	**Feb**	**Mar**	**April**	**May**	**June**	**July**	**August**	**Sept**	**Oct**	**Nov**	**Dec**	**Totals**
Site supervisison / staff salaries	420,000.00	20000	28,000	32,000	20,000	36,000	42,000	42,000	60,000	80,000	80,000				420,000
Construction Management and engineering	300,000.00							100,000	50,000	100,000	50,000				300,000
Communications	100,000.00		2,000	2,000	3,000	6,000	8,000	53,000	8,000	10,000	8,000				100,000
Housing and RM office costs (8 mths)	75,000.00	9000	800	1600	2000	4000	4000	10,000	15,000	25,000	10,000	2,600			75,000
SML Admin	645,000.00									109,580	85,049	83,318	83,000	284,053	645,000
Geotechnical studies and drilling	255,000.00		20,000		10,000	75,000	100,000	50,000							255,000
Reserve infill drilling	200,000.00	98000	21000			50,000	100,000	29,000							200,000
Metallurgical test work	400,000.00				100,000	100,000	100,000	100,000							400,000
Streilization drilling	150,000.00					50,000	50,000	50,000							150,000
Plant hire for site clearing	120,000.00					20,000	50,000	50,000							120,000
Contractor and staff mobilization	430,000.00					20,000	100,000	100,000	50,000	100,000	60,000				430,000
Power line installation	200,000.00			17000				100,000	83,000						200,000
Road construction	180,000.00							80,000	50,000	50,000					180,000
Ore haulage road construction	200,000.00						50,000	50,000	50,000	50,000					200,000
Water wells	70,000.00							35,000	35,000						70,000
Environmental permits	75,000.00		20,000			20,000				35,000					75,000
Mining permits	75,000.00				10,000				20,000		45,000				75,000
Land owner rentals	37,040.00		680	680	680	5000	5000	5000	5000	5000	5000	5000			37,040
Land owner advance on royalty		14000	14,000	28,000	28,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	15,000	15,000	
Land owner buy out	430,000.00										430,000				430,000
Sertao Plant dismantling	376,565.00									376565					376,565
Sertao Plant Transport	716,496.00									350,000	366,496				716,496
Plant civils	1,000,000.00						200,000	200,000	400,000	200,000					1,000,000
Plant construction	2,424,000.00									1,000,000	1,000,000	424,000			2,424,000
Tailingas dam construction	200,000.00									100,000	100,000				200,000
Replacement of Boiler and heat exchanger.	127,000.00				27,000			100000							127,000
Construction of additional Leach Tank	180,000.00								180,000						180,000
Intensive leach system, (Gekko or Accasia)	1,000,000.00										500,000	500,000			1,000,000
Office construction Mamao (includes fixtures and equipment)	250,000.00					30,000	25,000	50,000	100,000	45,000					250,000
Underground Change house and office	100,000.00					15,000				50,000	35000				100,000
Safety and 1st Aid office	50,000.00						50,000								50,000
Security office	50,000.00							50,000							50,000
Security fencing	50,000.00								10,000	10,000	30,000				50,000
Mobile workshop	100,000.00									50,000	50,000				100,000
Mill office	40,000.00								40,000						40,000
Restaurant	75,000.00								75,000						75,000
Mill workshop	75,000.00						20,000	25,000	30,000						75,000
Ware house	80,000.00							20,000	20,000	20,000	20,000				80,000
Laboratory	300,000.00						40,000	20,000	40,000	200,000					300,000
Vehicles	700,000.00									700,000					700,000
Undergropund fixed equipment	1,935,000.00						200,000	100,000	200,000	500,000		100,000	100,000	735,000	1,935,000
Underground mobile equipment	8,815,000.00						2,000,000			6,815,000					8,815,000
Mine rescue equipment	370,000.00								100,000	100,000	170000				370,000
Box cut	187,500.00							50000	100000	37,500					187,500
Decline development	6,321,000.00										700,000	800,000	800,000	4,021,000	6,321,000
Lagoa Seca Pre strip	1,634,000.00							1634000							1,634,000
Addional crusher or mill or both	600,000.00							300,000	300,000						600,000
Plant modifications	530,000.00									230000	300000				530,000
Un-allocated contingency	1,616,460.00														1,616,460
Total	**R$ 34,265,061.00**	141,000	**106,480**	**81,280**	**200,680**	**466,000**	**3,179,000**	**3,438,000**	**2,056,000**	**11,383,645**	**4,079,545**	**1,949,918**	**998,000**	**5,055,053**	**34,265,061**

US$ **2.1** **$ 16,316,696**