

**CMD Gold Mine, Andacollo, Chile**  
**Independent Technical Report**

Prepared by Coffey Mining Pty Ltd on behalf of:

**Lachlan Star Resources**

Effective Date: 1<sup>st</sup> April 2012

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Appendix B – Coffey Environments Environmental Review

Appendix C – Tenement Status of CMD Mine - Carey Abogados

Appendix D – Listing of Drilling Results Received After Resource Statement Date

Appendix E – Reconciliation Memorandum

## **1 SUMMARY**

### **1.1 Introduction**

Coffey Mining Pty Ltd (Coffey Mining) was commissioned by Lachlan Star Limited (Lachlan Star) to prepare an Independent Technical Report on the CMD Gold Mine in the country of Chile, South America, in order to provide an updated disclosure of the Mineral Resources.

Mineral Reserves have not been updated at this time and the Mineral Reserve, mine planning and economic assessment presented in this report are identical to the previous Technical Report dated 1 August 2011.

This report complies with disclosure and reporting requirements set forth in the National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101), Companion Policy 43-101CP, and Form 43-101F1.

### **1.2 Location**

The CMD Gold Mine property is located on the outskirts of the town of Andacollo in the Province of Elqui in Chile's Region IV, at latitude of 30° 13' 35" south and a longitude of 71° 5' 30" West (UTM 6.665.300N, 298.000E) and comprises 1,164Ha of mining rights over two areas designated as "the Old Pits" and "Las Loas" and 77Ha of prospecting rights around the mining rights.

### **1.3 Ownership**

Lachlan Star Limited has 100% beneficial interest in mineral holdings mined by the CMD Gold Mine through its 100% ownership of DMC Newco Pty Ltd, which owns 99.99998% of Compañía Minera Dayton (CMD) and 99.93% of Dayton Chile Exploraciones Mineras Limitada (DCEL). The company lawyer resident in Chile owns the remaining share in both companies to comply with the Chilean requirement of having more than one shareholder. Figure 4.7\_1 shows the ownership organisation structure. CMD Gold Mine refers to the assets owned by CMD and DCEL.

### **1.4 Geology**

The CMD Gold Mine is located in the lower Cretaceous volcano-plutonic arc that forms the coastal range. The arc is typical of volcanic arcs that form at subduction zones as a response to partial melting of the subducted crust.

The mineralization at the CMD Gold Mine is hosted by the Quebrada Marquesa Formation, which comprises a sequence of intermediate and felsic volcanics and volcanogenic sediments as lava flow, pyroclastic and epiclastic units. The stratigraphy strikes generally north and dips to the east at shallow angles.

## 1.5 Mineralization

The dacite units at the CMD Gold Mine contain generally bulk tonnage, low-grade mineralization. This apparent stratigraphic control on the mineralization occurs as a result of the alteration of the originally porous dacite units by hydrothermal fluids, probably associated with cooling of the Andacollo Porphyry. Less porous rocks such as andesites and dykes were not altered and mineralised as strongly as the dacite “mantos”.

Other types of mineralisation present include:

- relatively narrow mineralised veins that predominantly strike to the northwest and are steeply dipping; and
- shear zone hosted mineralisation, possibly remobilised, with variable width although of considerable strike lengths. The Mariposa shear in the Churumata West pit, which has been mined over the last two years, is typical of these structures.

## 1.6 Project Status

The CMD Gold Mine is an operating gold mine consisting of a series of open pit mining areas, crushing, heap leach and processing facilities with associated infrastructure. The CMD Gold Mine currently has a mining life of approximately two years from April 2012. Once mining ceases there is two years of continued gold production from the leach pads.

The exploration program is continuing with a view to expanding production and lengthening the mine life. The Mineral Resource Update presented in this report is the culmination of drilling throughout 2011 and 2012. Mine planning is currently underway, and once completed the Technical Report will be updated.

## 1.7 Mineral Resources

Mineral Resource estimates for the CMD Gold Mine have been generated by Coffey Mining on the basis of exploration data analytical results available up to 16<sup>th</sup> March 2011 for Chisperos and LasLoas and 14<sup>th</sup> December 2011 for Toro and 28<sup>th</sup> March 2012 for Tres Perlas. The mineral resource models were derived via geological interpretation and modelling of the mineralized zones. Various mineralized bodies have been estimated via Ordinary Kriging (OK) grade estimation technique.

The summarized Mineral Resource Estimates, as shown in Table 1.7\_1 and Section 14, has been determined as at 1 April 2012 and has been prepared and reported in accordance with NI 43-101. The resource estimate has been classified as an Indicated and Inferred Mineral Resources based on the confidence of the input data, geological interpretation, and grade estimation. Furthermore, the mineral resource classification is also consistent with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves of December 2004 (the Code) as prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Mineral Council of Australia (JORC). A summary of the Mineral Resources as at 1 April 2012 is provided in Table 1.7\_1.

Table 1.7_1 CMD Gold Mine Summary of Mineral Resources as at 1 April 2012					
Deposit	Resource Category	Lower Cutoff (Au g/t)	Tonnes (Mt)	Grade (Au g/t)	Metal (koz Au)
Tres Perlas	Indicated	0.15	112.6	0.37	1,332
	Inferred	0.15	104.3	0.34	1,126
Chisperos	Indicated	0.3	1.0	1.10	36
	Inferred	0.3	1.4	0.95	43
Toro	Indicated	0.15	17.5	0.62	348
	Inferred	0.15	11.6	0.36	135
Las Loas	Indicated	0.3	2.86	0.79	73
	Inferred	0.3	1.53	0.77	37

## 1.8 Mineral Reserves and Production Property Economic Assessment

The Mineral Reserve estimate has not been updated since the 1 August, 2011 Technical Report. The Mineral Reserves are based on the 1 April 2011 Mineral Resources.

The Mineral Reserve will be re-estimated once mine planning and economic evaluation has been completed. The discussion presented in this section is based on the Mineral Reserve Estimate detailed of the 1 August 2011 Technical Report.

The cashflow model has been generated on a pre-tax basis. As at 31 December 2011, the CMD Gold Mine had available tax losses of approximately US\$73.8 million and a capital repatriation credit of a further US\$89.7 million. The large tax loss available as a deduction against future profits means that the issue of tax is immaterial unless the life of mine can be extended for a very long period or the gold price increases significantly.

The financial performance over the life of mine for the Probable Mineral Reserve shows production of 126,000ozs of gold over the mine life and a NPV of \$35 million at a discount rate of 10%.

For the Probable Mineral Reserve Case, the payback period for undiscounted net free cash flow is 17 months, whereas at a discount rate of 10% and 15% this is respectively 18 months and 19 months, reflecting the low capital impost on the Project. A summary of the Mineral Reserves as at 1<sup>st</sup> August 2011 is described in Table 1.8\_1. It should be noted that the Mineral Resources are not additive to the Mineral Reserves.

<b>Table 1.8_1</b>			
<b>CMD Gold Mine</b>			
<b>Summary of Mineral Reserves Estimated as at 1 August 2011</b>			
<b>Deposit</b>	<b>Probable Mineral Reserves</b>		
	<b>Tonnes [Mt]</b>	<b>Au Grade [g/t]</b>	<b>Ounces (koz Au)</b>
Tres Perlas	3.0	0.7	69
Chisperos	0.8	1.2	29
Churumata	0.3	0.9	8
Las Loas	1.0	0.8	25
Toro/Socorro	0.9	0.8	25
<b>Total</b>	<b>6.0</b>	<b>0.8</b>	<b>157</b>

## 1.9 Conclusions

The geological understanding of the CMD Gold Mine has evolved greatly since the commencement of the Lachlan Star exploration program in 2011 and continuing in 2012. The knowledge acquired to date and exploration success over 2011 and 2012 confirms the economic potential of the CMD Gold Mine and surrounding areas, and the successful exploration campaign has culminated in the updated Mineral Resource.

## 1.10 Recommendations

A total of A\$3.08 million has been budgeted over the 2012 for mineral resource definition drilling at the CMD Gold Mine. The aim of this program is to upgrade the Inferred category mineral resources to a higher confidence level which would enable it to be included in the economic assessment of the CMD Gold Mine.

In addition a total of A\$2.79 million has been budgeted over 2012 for exploration drilling at the CMD Gold Mine. The aim of this program is to locate and define additional mineralisation not currently included in the mineral resources. The CMD Gold Mine has had a lack of exploration over the past decade, and there are numerous near mine targets that require follow up for both gold and copper–gold styles of mineralisation. Recent drilling at the Veneros, Mariposa and Toro deposits has returned encouraging results and follow up drilling of these areas is planned.

Coffey Mining considers that the proposed exploration and mineral resource development strategy is entirely appropriate and reflects the potential of the CMD Gold Mine.

Metallurgical test work should continue for the run of mine and coarse crushed leaching of the CMD Gold Mine ores. Two trials of around 7,000 tonnes each are currently underway, and Lachlan Star plans to include a 100,000 tonne test to replicate a large scale gold leaching environment.

A scoping study is recommended to establish the best economic outcome for expanding the production profile with the inclusion of large scale dump leaching and the potential of optimisation of the crushing circuit to maximise the profitability of leaching crushed ores.

Mine planning based on the new Mineral Resource has commenced, and this will include all metallurgical test work available to date. Once the mine planning process has been completed, an updated Mineral Reserve and associated Technical Report will be published.

## **2 INTRODUCTION**

### **2.1 Scope of the Report**

Coffey Mining Pty Ltd (Coffey Mining) has been commissioned by Lachlan Star Limited (Lachlan Star) to prepare an Independent Technical Report on the CMD Gold Mine in the country of Chile, South America (the Project), in order to provide a disclosure of the updated Mineral Resources. The Mineral Reserves, associated mine planning and Economic Analysis have not been updated in this report, and remain the same as discussed in the previous Technical Report dated 1 August 2011.

The report also includes an update on the metallurgical test work recently completed, and ongoing, examining the potential for run of mine (ROM) dump leaching and the potential to crush more coarsely than is currently applied in the CMD Gold Mine's operations.

This report complies with disclosure and reporting requirements set forth in the NI 43-101, Companion Policy 43-101CP, and Form 43-101F1.

The Report is also consistent with the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' of December 2004 (the Code) as prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy and Australian Institute of Geoscientists and Minerals Council of Australia (JORC).

Coffey Mining has previously completed the Independent Technical Report dated 1 August 2011 which included the estimation of mineral resources and reviewed the available, mining, geotechnical and environmental data.

All monetary figures expressed in this report are in United States of American dollars (US\$) unless otherwise stated. All Figures are sourced from Lachlan Star unless otherwise noted.

### **2.2 Site Visit**

The principal author of this report, David Slater, Coffey Mining's Principal Resource Geologist, has visited the CMD Gold Mine on two occasions, between 2<sup>nd</sup> December 2010 and 12<sup>th</sup> December 2010 and between the 23<sup>rd</sup> and 25<sup>th</sup> November 2011, to assess the Project, available data and the data collection protocols.

Mr Roger Kelley, Consulting Metallurgist, conducted a site visit to the CMD Gold Mine on 13<sup>th</sup> February 2012 in order to assess the current metallurgical processes, including the dynamic pad, plus review the test work on coarsely crushed and run of mine leaching.

The other author of this report, John Hearne, has not visited the CMD Gold Mine.

### 2.3 Principal Sources of Information

In addition to site visits undertaken to the CMD Gold Mine by Mr. Slater and Mr Kelley, the authors of this report have relied extensively on information provided by Lachlan Star, discussions with Lachlan Star and studies completed by other independent consulting and engineering groups. Lachlan Star technical staff also supplied digital and hard copy data for the CMD Gold Mine. A full listing of the principal sources of information is included in Section 27 of this report and a summary is provided below:

In summary the principal sources of information used to compile the technical report are:

- An Independent Technical Report generated by Coffey Mining Pty Ltd for the CMD Gold Mine- Effective date 1<sup>st</sup> August 2011.
- An Independent Technical Report generated by RSG Global Consulting Pty Ltd (June 2004). This report was not publicly filed.
- A report by Bechtel Corporation titled, “Andacollo Gold Project - Update of Feasibility Study” completed in May 1993.
- A drillhole database in Microsoft Excel format containing collar location, downhole survey, assay and geology data. (Source: CMD Gold Mine site Chief Geologist 29<sup>th</sup> March 2012).
- A 3-dimensional model of the topography. (Source: CMD Gold Mine site Surveyor 3<sup>rd</sup> January 2012).
- Representative drillhole cross-sections containing all relevant exploration, geological and mining data. (Source: CMD Gold Mine site Chief Geologist 10<sup>th</sup> January 2011).

Coffey Mining has made all reasonable enquiries to establish the completeness and authenticity of the information provided and identified, and a final draft of this report was provided to Lachlan Star along with a written request to identify any material errors or omissions. Lachlan Star has responded to this request, in writing, with clarifications that have been incorporated into the final report.

### 2.4 Qualifications and Experience

Coffey Mining is an international mining consulting firm specializing in the areas of geology, mining and geotechnical engineering, metallurgy, hydrogeology, hydrology, tailings disposal, environmental science and social and physical infrastructure.

The “qualified persons” (as defined in NI 43-101) for the purpose of this report are:

- Mr. David Slater, a full time employee of Coffey Mining;
- Mr John Hearne, a full time employee of Coffey Mining; and
- Mr Roger Kelley, a self-employed consulting metallurgist.

The technical review and resource estimation was completed by Coffey Mining Principal Resource Consultant, Mr David Slater who is also the principle author of this report. Mr Slater is a professional geologist with 23 years experience in exploration geology, mining geology and geostatistical modelling and estimation of Mineral Resources. Mr Slater is a Chartered Professional Member of the Australian Institute of Mining and Metallurgy (MAusIMM(CP)) and is also a Member of the Australian Institute of Geosciences (MAIG) and has the appropriate relevant qualifications, experience and independence as defined in NI 43-101. Mr Slater visited the CMD Gold Mine between 2<sup>th</sup> and 12<sup>th</sup> December 2010 and between 23<sup>rd</sup> and 25<sup>th</sup> November 2011.

Section 13 and Section 17 “Mineral Processing and Metallurgical Testing; Recovery Methods” were prepared by Mr Roger Kelley, Consultant Metallurgist. Mr Kelley is a metallurgist with 45years experience in mineral processing and is a Fellow of the South African Institute of Mining and Metallurgy.

Sections 15, 16, 18, 19, 21, 22, were prepared by Coffey Mining Principal Mining Engineer Mr John Hearne. Mr Hearne is a professional mining engineer with 24 years experience in mine optimisation, design, scheduling, cost estimation and cashflow analysis. Mr. Hearne is a Chartered Professional Member and a Fellow of the AusIMM and has the appropriate relevant qualifications experience and independence as defined in NI 43-101. Mr Hearne has not visited the CMD Gold Mine.

Mr Slater, Mr Kelley and Mr Hearne have the appropriate relevant qualifications, experience and independence to each be considered a Qualified Person as defined in NI 43-101.

## **2.5 Independence**

Coffey Mining is part of Coffey International Limited, a highly respected Australian-based international consulting firm specialising in the areas of exploration, geology, mining, metallurgy, geotechnical engineering, hydrogeology, hydrology, tailings disposal, environmental science and social and physical infrastructure.

Neither Coffey Mining, nor the authors of this report, have or have had previously any material interest in Lachlan Star or related entities or interests. Our relationship with Lachlan Star is solely one of professional association between client and independent consultant. This report is prepared in return for fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of the report.

Specific sections of the report that the Qualified Persons are responsible for are provided in Table 2.5\_1 and are repeated in the attached Qualified Persons certificates.

<p style="text-align: center;"><b>Table 2.5_1</b>  <b>CMD Gold Mine</b>  <b>Responsibility of Qualified Persons</b></p>			
<b>Qualified Person</b>	<b>Association</b>	<b>Responsible for Sections</b>	<b>Co-Responsible for Sections</b>
David Slater	MAusIMM(CP), MAIG	All sections excluding 13,15,16,17,18,19,21 and 22	1 to 12
Roger Kelley	FSAIMM	13,17	
John Hearne	FAusIMM(CP)	15,16,18,19,21,22	1 to 12

## 2.6 Abbreviations

A full listing of abbreviations used in this report is provided in Table 2.6\_1 below.

**Table 2.6\_1**  
**List of Abbreviations**

	Description		Description
\$	United States of America dollars	kg	kilogram
μ	Microns	kg/t	kilogram per tonne
2D	two dimensional	km	kilometres
3D	three dimensional	km <sup>2</sup>	square kilometres
AAS	atomic absorption spectrometer	l/hr/m <sup>2</sup>	litres per hour per square metre
ADR	Adsorption Desorption Recovery	M	million
Au	Gold	m	metres
bcm	bank cubic metres	Ma	Million years
BQ	size of diamond drill rod/bit/core	MIK	Multiple Indicator Kriging
CBM	Custodian of Mines	mL	millilitre
CC	correlation coefficient	mm	millimetres
cfm	cubic feet per minute	MMI	mobile metal ion
CIC	carbon in column	Moz	million ounces
CIL	carbon-in-leach	Mtpa	million tonnes per annum
cm	Centimetre	Mt	Million tonnes
CMD	Compania Minera Dayton	N (Y)	northing
Co,	relative nugget	NaCN	sodium cyanide
C1,C2	relative structures	NATA	National Association of Testing Authorities
cusum	cumulative sum of the deviations	NPV	net present value
CV	coefficient of variance	NQ	size of diamond drill rod/bit/core
DCEM	Dayton Chile Exploraciones Mineras Limitada	°C	degrees centigrade
DDH	diamond drillhole	OK	Ordinary Kriging
DGA	Director General of Water Affairs	oz	troy ounce
DTM	digital terrain model	P80 -75μ	80% passing 75 microns
E (X)	Easting	PAL	pulverize and leach
EDM	electronic distance measuring	ppb	parts per billion
EV	expected value	ppm	parts per million
g	Gram	psi	pounds per square inch
g/m <sup>3</sup>	grams per cubic metre	PVC	poly vinyl chloride
g/t	grams per tonne	QC	quality control
HARD	half the absolute relative difference	Q-Q	quantile-quantile
Ha	Hectares	RAB	rotary air blast
HQ	size of diamond drill rod/bit/core	RC	reverse circulation
h	hours	RL (or Z)	reduced level
HRD	half relative difference	ROM	run of mine
ICP-MS	inductivity coupled plasma mass spectroscopy	RQD	rock quality designation
ID	Inverse Distance weighting	SD	standard deviation
ID <sup>2</sup>	Inverse Distance Squared	SGS	Société Générale de Surveillance
IPS	integrated pressure stripping	SMU	selective mining unit
IRR	internal rate of return	t	tonnes
ISO	International Standards Organisation	t/m <sup>3</sup>	tonnes per cubic metre
ITS	Inchcape Testing Services	y	year

### 3 RELIANCE ON OTHER EXPERTS

Coffey Mining or the authors of this report are not qualified to provide extensive comment on legal issues, including status of tenure, mining concessions, water rights and surface rights associated with CMD Gold Mine referred to in this report. Assessment of these aspects has relied heavily on information provided by Lachlan Star, which has not been independently verified by Coffey Mining. This report has been prepared on the understanding that the property is, or will be, lawfully accessible for evaluation, development, mining and processing. The authors of this report have relied exclusively on a legal opinion (dated 28<sup>th</sup> March 2012) of Carey y Cia. Ltda. Abogados in their CMD Title Verification report. Mineral title and ownership details are provided in Section 4 of this report.

Information relating to the tenement, environmental and permitting status (Sections 4.6 and Section 18.6) of the project has been based upon reports supplied by Carey y Cia. Ltda. Abogados (dated 28<sup>th</sup> March 2012) in Appendix C. and Coffey Environments (Environmental Review dated May 31, 2011) in Appendix B.

Coffey Environments has undertaken an environmental review of the data provided for the CMD Gold Mine which is contained in Appendix B of this report. The relevant environmental legislative processes appear to have been followed, resulting in authorisation of the extension of the mining works. There are a number of issues that have been identified, both in the documentation reviewed, and through analysis of the gaps in information reviewed. The authors of this report however cannot provide extensive comment on all environmental issues associated with CMD Gold Mine referred to in this report and are not qualified to do so. Assessment of these aspects has relied heavily on information provided by Lachlan Star and Coffey Environments, which has not been completely independently verified by Coffey Mining.

Unless otherwise stated, all maps and figures have been sourced and prepared by Lachlan Star.

## 4 PROPERTY DESCRIPTION AND LOCATION

### 4.1 Location

The CMD Gold Mine property is located in the Province of Elqui, on the outskirts of the town of Andacollo, in Chile's Region IV, at latitude of 30° 13' 35" south and a longitude of 71° 5' 30" West (UTM 6.665.300N, 298.000E) and comprises 1,164Ha of mining rights over two areas designated as "the Old Pits" and "Las Loas", and 77Ha of prospecting rights around these mining rights.

Figure 4.1\_1 shows the location of the CMD Project within Chile.



## 4.2 Tenement Areas

### 4.2.1 Mineral Tenure in Chile

The Chilean Constitution provides for the absolute and exclusive ownership by the State of Chile (the "State") of all mines and mineral substances notwithstanding any ownership rights by third parties over the surface land, which surface land is subject to the obligations and limitations that the law creates to facilitate mining exploration, exploitation and related facilities. Notwithstanding such domain or eminent ownership of the State, the Constitution provides that an "organic constitutional law" will establish which minerals, other than oil and gas deposits, may be subject to mining concessions granted to private individuals or companies for them to explore or exploit.

Such mining concessions are to be established by means of a judicial award and shall have the duration, grant the rights and impose the obligations that the abovementioned organic constitutional law indicates. The concession has such a character that the Constitution indicates that the domain of the holder of a concession is protected by the constitutional provisions relating to property rights.

Exploitation mining concessions are immovable property of perpetual duration, different from the property of the owner of surface land (even if one same person owns both properties), subject only to the timely payment of the annual mining licenses payable to the Treasury. Such ownership right can be enforced against the State or any other third party; can be freely assigned, mortgaged and, in general, subject to any legal contract as in the case of any other immovable property under the Chilean Civil Code.

### 4.2.2 CMD Gold Mine Mining Concessions

CMD and DCEM are the registered owners of 133 exploitation mining concessions constituted according to both the Mining Code of 1932 and the Mining Code of 1983.

Additionally, CMD and DCEM are the registered owners of 4 mining concessions in process of being constituted.

A list of the legally registered mining properties is included in Table 4.2.2\_1 and also attached hereto as Appendix C in the report Tenement Status of CMD Mine Chile by Carey Abogadas(Lawyers). All Mining Concessions reviewed are exploitation mining concessions.

Based on the information provided by Lachlan Star, the certificates provided by Andacollo and Coquimbo's Custodian of Mines (CBM), and the direct review performed at the Andacollo CBM by Carey:

- The Mining Concessions appear to be duly constituted as per Chilean Mining law;
- The Mining Concessions appear to be duly registered in the corresponding registry of the relevant CBM;

- The Mining Concessions are currently registered in the name of, and therefore are under the legal possession of CMD and DCEM; and
- According to the personal review by Carey of the registrations made directly at the CBM of Andacollo, and of the certificates issued by the CBM of Andacollo dated May 9 and May 13, 2011 and by the CBM of Coquimbo on May 13, 2011, the Mining Concessions appear not to be affected by mortgages or encumbrances, or by liens, prohibitions or litigation.

There is no current litigation underway with respect to any of the concessions.

**Table 4.2.2\_1**  
**Mining Concessions Source Carey Tenement Report p19**

N°	Name	Current Ownership			Registry	Custodian of Mines
		Page	No.	Year		
1	Loa del 1 al 18	86	41	2007	Property	Andacollo
2	Montosa	86	41	2007	Property	Andacollo
3	San Juan	86	41	2007	Property	Andacollo
4	Rinconada	86	41	2007	Property	Andacollo
5	Tres Vetas	86	41	2007	Property	Andacollo
6	Luisa	86	41	2007	Property	Andacollo
7	La Reina	86	41	2007	Property	Andacollo
8	Tres Marías	86	41	2007	Property	Andacollo
9	María Teresa Uno	86	41	2007	Property	Andacollo
10	María Teresa Cuatro al Seis	86	41	2007	Property	Andacollo
11	María Teresa Siete al Nueve	86	41	2007	Property	Andacollo
12	María Teresa 10 al 14	86	41	2007	Property	Andacollo
13	Matías Uno 1 al 7	86	41	2007	Property	Andacollo
14	Matías Dos 1 al 8	86	41	2007	Property	Andacollo
15	Anastassia Uno 1 al 2	86	41	2007	Property	Andacollo
16	Juan Uno 1 al 6	86	41	2007	Property	Andacollo
17	Juan Dos 1 al 2	86	41	2007	Property	Andacollo
18	El Sauce dos del Uno al Dos	86	41	2007	Property	Andacollo
19	El Sauce Dos 3 al 4	86	41	2007	Property	Andacollo
20	El Sauce Dos 9 al 12	86	41	2007	Property	Andacollo
21	Arenillas	86	41	2007	Property	Andacollo
22	San Carlos	89	42	2007	Property	Andacollo
23	Rosario 1 al 89 (1 al 34, 36 al 61 y 68 al 88)	413	94	1994	Property	Andacollo
		85	45	2010		
24	Rosario 90 al 93	413	94	1994	Property	Andacollo
25	Rosario 94 al 101	413	94	1994	Property	Andacollo
26	Rosario 102 al 129 (102 to 105, 113 to 115, 118 to 123, 125 to 129)	413	94	1994	Property	Andacollo
		89	49	2010		
27	Rosario 139 al 140	413	94	1994	Property	Andacollo
28	Rosario 141-170	413	94	1994	Property	Andacollo
		83	43	2010		
29	Rosario 186 al 193 (187, 189-192)	413	94	1994	Property	Andacollo
30	Rosario 195	413	94	1994	Property	Andacollo
31	Irene	413	94	1994	Property	Andacollo
32	Don Ramón Ernesto	413	94	1994	Property	Andacollo
33	Don Santiago y otras	413	94	1994	Property	Andacollo
34	Gloria 2, 3 y 7	413	94	1994	Property	Andacollo
35	Don Pedro	413	94	1994	Property	Andacollo
36	Andacollo 1	413	94	1994	Property	Andacollo
37	Andacollo 2	413	94	1994	Property	Andacollo
38	Andacollo 3	413	94	1994	Property	Andacollo
39	Andacollo 4	413	94	1994	Property	Andacollo
40	Andacollo 5	413	94	1994	Property	Andacollo
41	Andacollo 6	413	94	1994	Property	Andacollo
42	Andacollo 7	413	94	1994	Property	Andacollo
43	Andacollo 8	413	94	1994	Property	Andacollo
44	Andacollo 9	413	94	1994	Property	Andacollo
45	Andacollo 10	413	94	1994	Property	Andacollo
46	Andacollo 11	413	94	1994	Property	Andacollo
47	Andacollo 12	413	94	1994	Property	Andacollo
48	Andacollo 13	413	94	1994	Property	Andacollo
49	Andacollo 14	413	94	1994	Property	Andacollo
50	Andacollo 15	413	94	1994	Property	Andacollo
51	Andacollo 16	413	94	1994	Property	Andacollo

**Table 4.2.2\_1 (Cont'd)**  
**Mining Concessions Source Carey Tenement Report p19**

N°	Name	Current Ownership			Registry	Custodian of Mines
		Page	No.	Year		
52	Andacollo 17	413	94	1994	Property Property	Andacollo Andacollo
53	Andacollo 18	413	94	1994	Property Property	Andacollo Andacollo
54	Andacollo 19	413	94	1994	Property	Andacollo
55	Andacollo 20	413	94	1994	Property	Andacollo
56	Andacollo 23	413	94	1994	Property Property	Andacollo Andacollo
57	Andacollo 30	413	94	1994	Property Property	Andacollo Andacollo
58	Flor de María	413	94	1994	Property	Andacollo
59	Churrumata	413	94	1994	Property	Andacollo
60	India 1 al 4	413	94	1994	Property	Andacollo
61	Indígena	413	94	1994	Property	Andacollo
62	Rosario	413	94	1994	Property	Andacollo
63	Madrid 1 al 7	270	69	1994	Property	Andacollo
64	Roma 1 al 6	281	71	1994	Property	Andacollo
65	Londres 1 al 5	276	70	1994	Property	Andacollo
66	Berlín 1 al 2	253	66	1994	Property	Andacollo
67	Bruselas 1 al 5	242	64	1994	Property	Andacollo
68	París 1 al 4	247	65	1994	Property	Andacollo
69	Lisboa 1 al 8	258	67	1994	Property	Andacollo
70	Abismo 1 al 4	215	59	1994	Property	Andacollo
71	Horno 1 al 5	225	61	1994	Property	Andacollo
72	Madero 1 al 5	220	60	1994	Property	Andacollo
73	Pique 1 al 32	236	63	1994	Property	Andacollo
74	Mapa 1 al 7	230	62	1994	Property	Andacollo
75	Cascada 1 al 6	210	58	1994	Property	Andacollo
76	Arrecife 1 al 10	264	68	1994	Property	Andacollo
77	Segovia 1 al 28	13	7	2005	Property	Andacollo
78	Guijón 1 al 2	367	86	1994	Property	Andacollo
79	Barcelona 1 al 3	326	79	1994	Property	Andacollo
80	Castilla 1 al 9, 13 y 18 al 20	331	80	1994	Property	Andacollo
81	Baleares 1 al 3	291	73	1994	Property	Andacollo
82	Galicia 1 al 2	346	82	1994	Property	Andacollo
83	Zaragoza 1 al 14	315	77	1994	Property	Andacollo
84	Burgos 1 al 4	451	83	1994	Property	Andacollo
85	Jeréz 1 al 5	418	95	1994	Property	Andacollo
86	Málaga 1 al 8	402	92	1994	Property	Andacollo
87	Sevilla 1 al 5	356	84	1994	Property	Andacollo
88	Toledo 1 al 4	297	74	1994	Property	Andacollo
89	Murcia 1 al 5	309	76	1994	Property	Andacollo
90	Bilbao 1 al 4	286	72	1994	Property	Andacollo
91	Oviedo 1 al 13	379	88	1994	Property	Andacollo
92	Córdoba 1 al 11	340	81	1994	Property	Andacollo
93	Mallorca 1 al 5	361	85	1994	Property	Andacollo
94	Valencia 1 al 36	302	75	1994	Property	Andacollo
95	Cholita Uno 1	397	91	1994	Property	Andacollo
96	Cholita Dos 1 al 2	392	90	1994	Property	Andacollo
97	Cholita Tres 1 al 2	387	89	1994	Property	Andacollo
98	Patitas 1 al 5	429	97	1994	Property	Andacollo
99	Fragua 1 al 10	116	37	1997	Property	Andacollo
100	Mercedes 7	27	11	2007	Property	Andacollo
101	Mercedes 1 al 3	23	7	2007	Property	Andacollo
102	Nerransula	21	5	2007	Property	Andacollo

**Table 4.2.2\_1 (Cont'd)**  
**Mining Concessions Source Carey Tenement Report p19**

N°	Name	Current Ownership			Registry	Custodian of Mines
		Page	No.	Year		
103	Nueva	25	9	2007	Property	Andacollo
104	Rodrigo	24	8	2007	Property	Andacollo
105	Toro	28	12	2007	Discovery	Andacollo
106	Gabriela	22	6	2007	Property	Andacollo
107	María Luz	26	10	2007	Property	Andacollo
108	Oropesa 1, 2, 3, 4, 5, 6, 7, 9, 10 y 12	13	6	1998	Property	Andacollo
109	Cutana 3 al 7, 9 al 13, 15 al 16.	13	6	1998	Property	Andacollo
110	Pachuca	13	6	1998	Property	Andacollo
111	San Antonio	13	6	1998	Property	Andacollo
112	Urmeneta 1 al 4	13	6	1998	Property	Andacollo
113	Esperanza Dos y Tres	13	6	1998	Property	Andacollo
114	Diana 1 al 7	13	6	1998	Property	Andacollo
115	Atlántida 6	13	6	1998	Property	Andacollo
116	Santa Rosa 1 al 4, y Santa Rosa 6 al 10	13	6	1998	Property	Andacollo
117	Sierra Maestra 1 al 40	13	6	1998	Property	Andacollo
118	Porvenir	13	6	1998	Property	Andacollo
119	Río Elqui Uno al Cinco y Ocho	80	40	2010	Property	Andacollo
120	Barbara Tercera	81	41	2010	Property	Andacollo
121	Jazmin	82	42	2010	Property	Andacollo
122	Nanita 1 al 7, 9 al 11, 13 al 23, 28 al 32, 47 al 50	84	44	2010	Property	Andacollo
123	Sylvia	86	46	2010	Property	Andacollo
124	Claudia Uno y Dos	87	47	2010	Property	Andacollo
125	Mercedes 4, 5, y 6	88	48	2010	Property	Andacollo
126	Cautín	90	50	2010	Property	Andacollo
127	Río Elqui Dos 5 al 7, 14 y 15	91	51	2010	Property	Andacollo
128	Río Elqui Tres Uno	92	52	2010	Property	Andacollo
129	Vicky Uno y Dos	93	53	2010	Property	Andacollo
130	Esperanza (Uno)	1	1	2008	Property	Andacollo
131	Estrellita Dos 1	96	27	1995	Property	Coquimbo
132	Estrellita Uno 1 al 3	91 back	26	1995	Property	Coquimbo
133	Primera de Mayo	93	34	2011	Property	Andacollo
134	Nueva el Sauce Dos 1 al 19	198	169	2007	iscovery	Andacollo
135	Nueva Matías Tres 1 al 9	198	169	2007	iscovery	Andacollo
136	Infiernillo 1	3	3	2012	iscovery	Andacollo
137	Recóndita 1	1	1	2012	iscovery	Andacollo

### 4.3 Water Rights

#### 4.3.1 Water Rights According Chilean Law

According to Chilean law, water is a national asset of public use and private entities and individuals may obtain water rights granted by the public authority to use it. These are special rights that entitle the holders to perpetually extract and use a certain flow of water from natural sources such as rivers, streams, or aquifers, and use it for any purpose, as established in the resolution granting the right, which must contain, among other elements, the flow granted (expressed in metric units and time), the watercourse of extraction, the intake point and the essential characteristics of the water right. Water rights are subject to a registered ownership system separated from real estate.

The General Water Bureau (DGA) is the administrative authority in charge of granting water rights, conceding the authorizations related to their use or changes in their titles, supervising works or other intervention of riverbeds and other watercourses and providing special authorizations needed to intervene them, whether minor intake and restitution civil works or major hydraulic works such as dams, reservoirs, aqueducts, siphons, etc. Additionally, the DGA is responsible for gathering information regarding the use of water, the investigation and measurement of the water resources and the Public Water Cadastre.

#### 4.3.2 CMD Gold Mine Water Rights

The CMD Gold Mine is the registered owner of the underground water rights for a total flow of 205 l/s, consumptive, permanent and continuously exercisable, which are specified in Appendix C and they are subject to a mortgage and prohibition in favour of Banco Security, while they appear to be unaffected by interdictions or litigations. These water rights are located in the Borough of Coquimbo, IV Region, and were duly acquired by the CMD Gold Mine in 1993.

The CMD Gold Mine is also the registered owner of superficial water rights for a total of 10,27 shares corresponding to the Bellavista Channel, which are specified in Appendix C, which are unaffected by interdictions or litigations. These water rights are located in the Borough of Vicuña, IV Region, and were duly acquired by the CMD Gold Mine in 1992.

### 4.4 Surface Rights

The CMD Gold Mine is the owner of 68 properties, registered on the CBR of Andacollo, distributed as follows: 65 owned by CMD and 3 owned by DCEM. A list of the legally registered real estate is shown in Appendix C.

- The real estates appeared to be currently registered under the name, and therefore under the legal possession of CMD Gold Mine;
- Most of the registered properties appear to be unaffected by mortgages, prohibitions, and other types of encumbrances, except for the ones described in Appendix C;
- Current property certificates were obtained for only two properties owned by CMD; and

- Almost all the properties have been registered 10 years or more from June 2012. This means, as well, that in these cases, all the annulment actions and others to claim the validity and property of these titles should be elapsed.

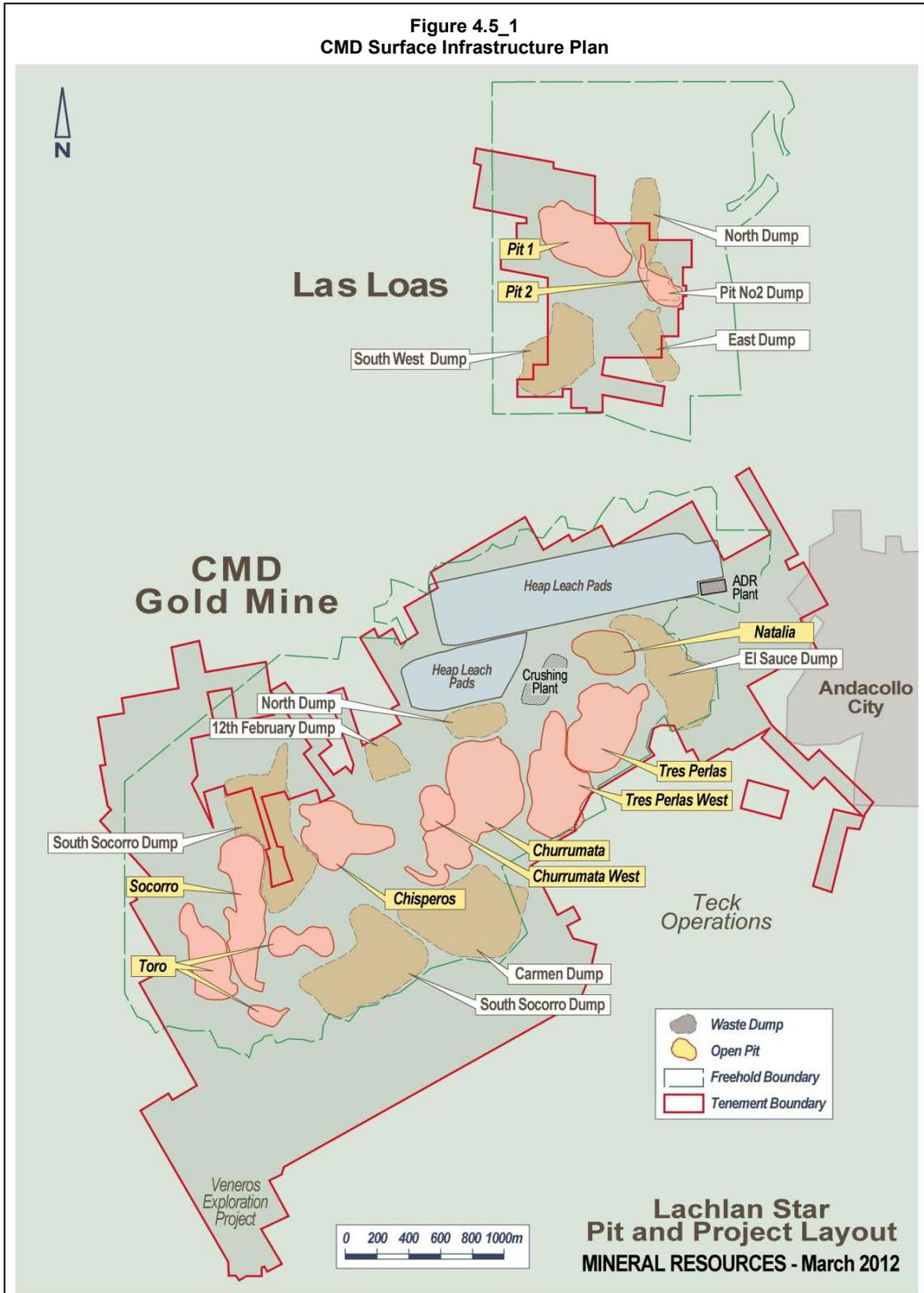
#### 4.5 Surface Structures

In addition to the open pits, comprising one set located in the south (referred to as the “Old Pits”) and another two in the north (Las Loas Pit No. 1 and No. 2), the CMD Gold Mine surface structures include:

- Waste rock dumps
- The main mine buildings including: offices, laboratory, stores, change-houses and security post.
- Crusher plant with workshops.
- Adsorption, Desorption and Recovery (“ADR”) plant with refinery and gold pouring room.
- Workshops, power station, electrical substations houses and stores.
- Heap leach pads with associated ponds.

Figure 4.5\_1 is a plan identifying CMD's surface infrastructure.

Figure 4.5\_1  
 CMD Surface Infrastructure Plan



## 4.6 Royalties, Encumbrances

### 4.6.1 Royalties

#### State Royalties

In January 2006, a Mining Tax was introduced in Chile. This tax is levied upon operating revenue earned by mining enterprises. This tax is calculated according to two different arithmetic operations, one intended to determine the tax rate and other to determine the taxable basis. The specific tax rate will depend on the volume of sales made by the miner, converted into metric tonnes of fine copper. There is an exception for miners who make sales for less than the equivalent to 12,000 tonnes of copper and who will not pay this tax.

For miners making sales the equivalent of more than 12,000 tonnes of copper, they will be subject to a progressive rate that ranges from 0.5% to 4.5%. Further, miners with sales greater than 50,000 metric tons of fine copper pay tax at a fixed rate of 5%. The tax base is comprised of the net operating income of the mining enterprise. The specific mining tax which is paid is deductible for Chilean income tax purposes.

At a copper price of US\$10,000/t, the tax threshold is triggered at an annual sales level of US\$120 million. At a gold price of US\$1500, this equates to an annual gold production of 80,000 ounces. Under the current mine plan, CMD will not be liable for this royalty.

#### Claim Owner Royalties

Royalties are payable to the previous owners of certain tenement areas and are based on the amount of gold deemed to be recovered from production during a particular month and using various estimates for gold recovery for particular tenement areas. The details relating to the royalties, which are stated on a percentage of gross revenue, are reflected in Table 4.6.1\_1.

Table 4.6.1_1 CMD Gold Mine Royalty Terms-(Royalty Rate stated as % of gross revenue)		
Royalty Recipients	Royalty Rate (%)	Pit Areas Applicable
Alexim	2.0	Tres Perlas, Churrumata and Socorro (70%#)
Jeraldo	4.0	Toro (72%), Mercedes area of Churrumata (70%#)
Nenadovich	4.0	Las Loas (70%#)

# Based on assumed metallurgical recovery for royalty calculation

For the Nenadovich agreement, covering the Las Loas deposit, an advance of US\$0.5 million was paid which is recovered at a rate of US\$5 per ounce. At 31 March 2012 the unredeemed advance balance stood at US\$0.24 million.

### 4.6.2 Employee Benefits

There are no statutory obligations in terms of Chilean legislation for retrenchment benefits when a mine closes. In the case of a worker being retrenched with operations continuing, no severance pay is due.

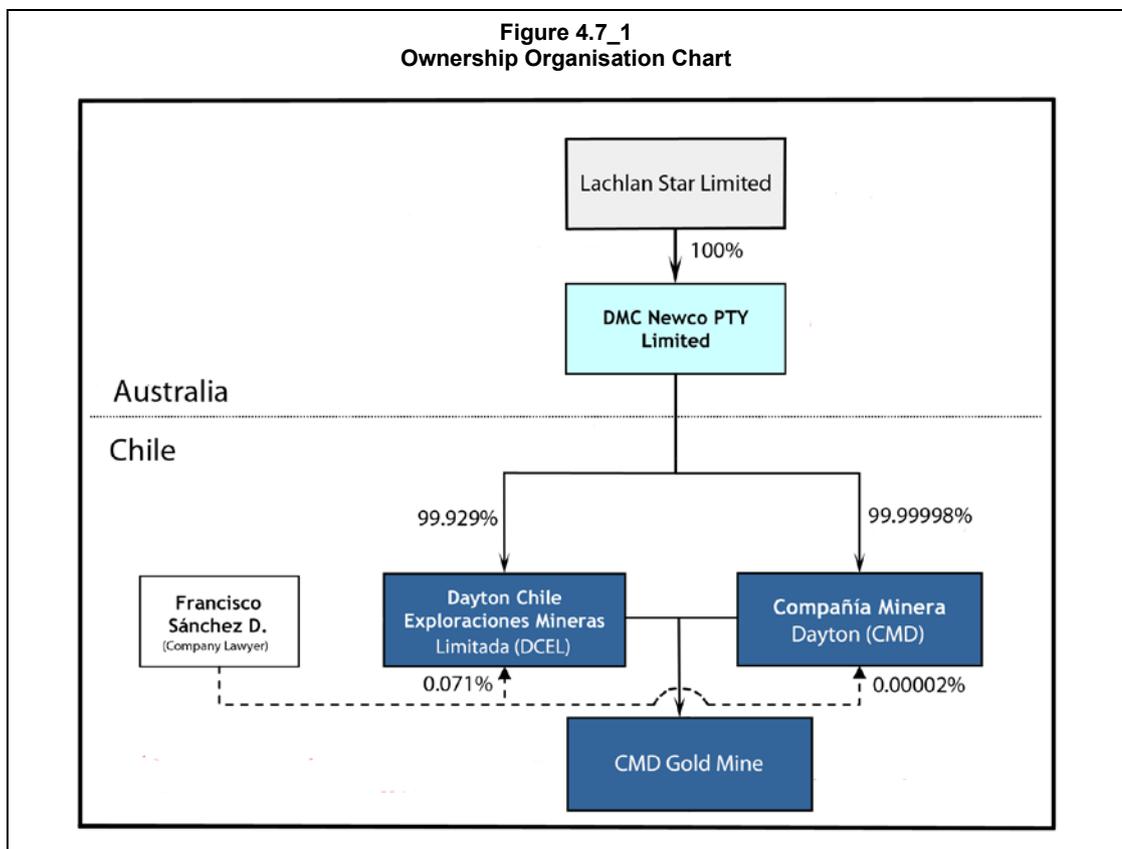
However, a provision of one month's salary for each year every worker worked is accrued for those employees that will be retrenched at the end of the operations life. At 31 December 2011 an amount of US\$1.85 million was provided for retrenchment of which US\$1.0 million is related to mining and crushing/stacking staff. The provision balance increases by US\$0.24 million each year of additional operation of which US\$0.18 million per annum is for mining and crushing/stacking employees.

#### 4.7 Ownership

Lachlan Star Limited has an effective 100% beneficial interest in mineral holdings mined by the CMD Gold Mine through its 100% ownership of DMC Newco Pty Ltd, which owns 99.99998% of Compañía Minera Dayton (CMD) and 99.93% of Dayton Chile Exploraciones Mineras Limitada (DCEL).

Under Chilean law, Chilean companies must have at least two registered shareholders. The company lawyer resident in Chile owns a very minor share in both companies to comply with the Chilean requirement of having more than one shareholder. The 0.00002% of CMD and 0.071% of DCEL is held by a Chilean lawyer in trust for DMC Newco to satisfy this requirement. Figure 4.7\_1 shows the ownership organisation structure.

The CMD Gold Mine comprises the assets owned by CMD and DCEL, and is operated by CMD.



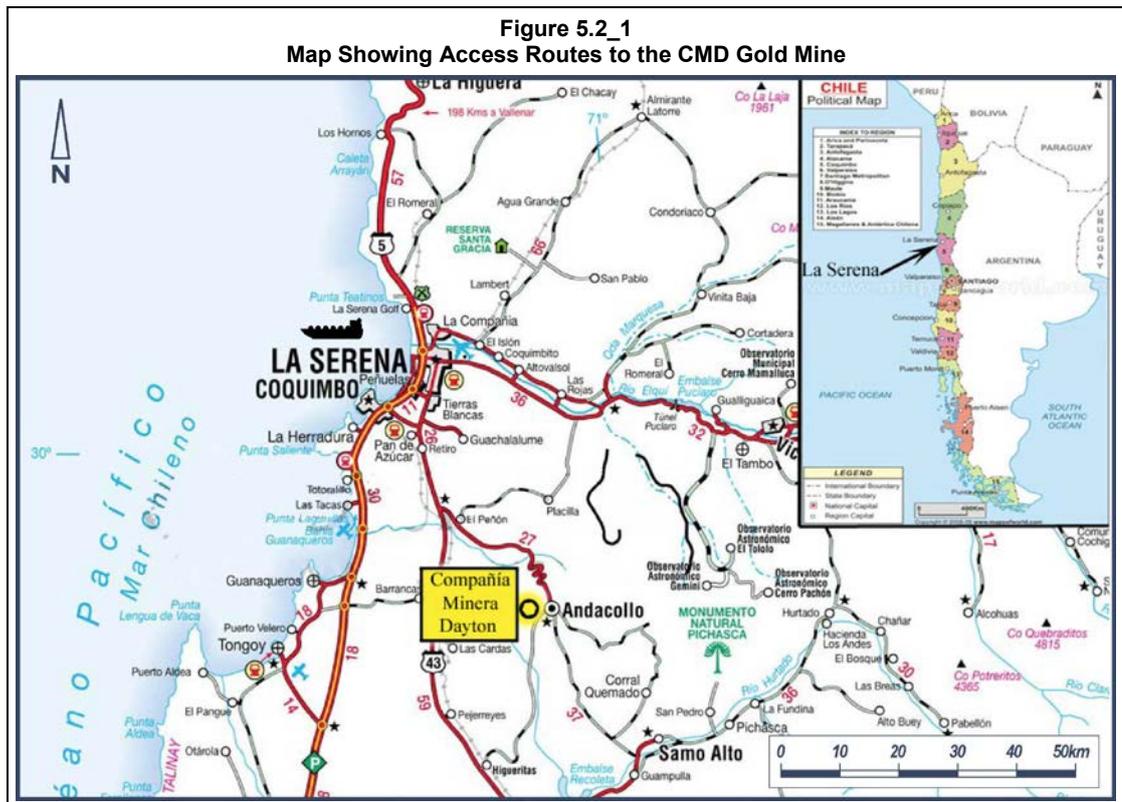
## 5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

### 5.1 Topography, Elevation and Vegetation

The CMD Gold Mine is located in the Andacollo basin on the eastern slopes of the coastal mountain range. The basin has a circular form of approximately 7km in diameter and varies between 1,000 and 1,100 metres above sea level. It is surrounded by mountains with an average altitude of 1,500 metres above sea level. The vegetation of the area is sparse but dominated by low shrubs and herbaceous plants, with some succulents and low trees.

### 5.2 Project Access and Proximity to Population Centres

Access to the town of Andacollo from La Serena is by well-maintained two lane paved national highways, the D-43 followed by D-41, over a distance of 53km. The site is on the outskirts of the town of Andacollo from where it is accessed by approximately 1km of paved road (Figure 5.2\_1). According to the 2002 census, Andacollo had 10,288 inhabitants (5,148 men and 5,140 women). Of these, 9,444 (91.8%) lived in urban areas and 844 (8.2%) in rural areas. La Serena (population 155,000) is located on Chile's main north-south highway (Route 5), which runs the entire length of the country.



La Serena is also serviced by an airport with regular commercial flights from Santiago situated 400km to the south. The port of Coquimbo is directly adjacent to La Serena.

### 5.3 Physiography and Climate

The Andacollo basin is located in a semi-arid sub system of Chile's coastal mountain range. The maximum and minimum temperatures registered during the last 10 years of operation at the CMD Gold Mine are shown in Table 5.3\_1.

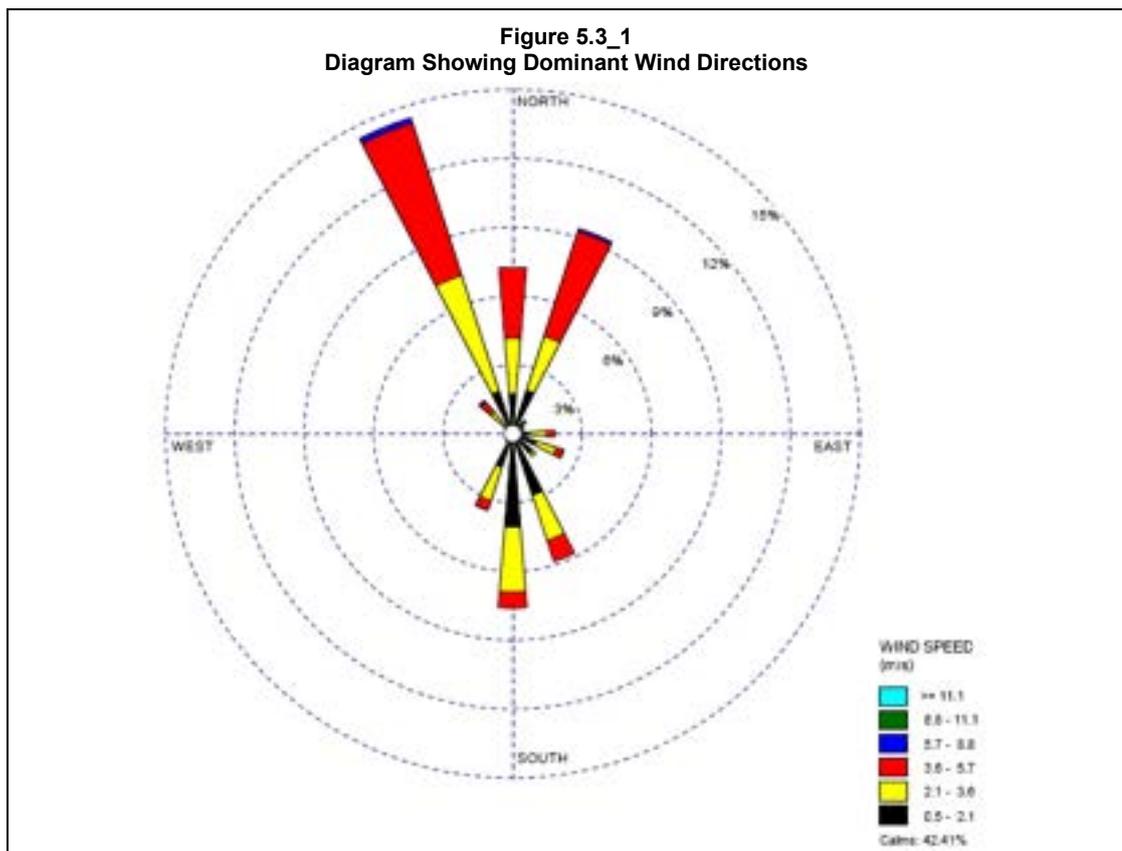
<b>Table 5.3_1</b> <b>CMD Gold Mine</b> <b>Maximum and Minimum Temperatures in Degrees Centigrade Over Last Decade</b>		
<b>Year</b>	<b>Maximum (°C)</b>	<b>Minimum (°C)</b>
2001	25.6 (Feb)	8.0 (July)
2002	28.5 (Jan)	5.5 (June)
2003	27.7 (Jan)	5.6 (July)
2004	27.9 (Jan and Feb)	6.1 (June)
2005	29.5 (Jan and Feb)	3.2 (July)
2006	30.2 (Jan)	5.4 (June)
2007	26.2 (Jan)	1.0 (Aug)
2008	24.4 (Mar)	6.8 (Jul)
2009	29.3 (Dec)	6.5 (July)
2010	22.8 (Jan)	4.3 (July)
2011	30.7 (Sep)	-0.9 (July)

The rainfall registered over the period 1963 to 2010 shows variations from 8.6mm in 1995 to 452.9mm in 1984. The average for the period is 142mm with a standard deviation of 121.6mm. The 10-year average rainfall figures are shown in Table 5.3\_2. In 2011 the rainfall at 163.2mm was approximately in line with historical figures for the last 30 years.

<b>Table 5.3_2</b> <b>CMD Gold Mine</b> <b>Precipitation in mm</b>	
<b>Year</b>	<b>Average (mm)</b>
1963-1970	144.24
1971-1980	105.59
1981-1990	167.79
1991-2000	140.04
2000-2010	153.59
2010-2011	163.20

Figure 5.3\_1 shows wind direction measurements during 2000 at the mine site illustrating that the most frequent wind directions are north-northwest to north-northeast. Wind speeds are generally low with 42.4% of the time no wind at all, an average wind speed of 1.7m/s and a maximum measured wind speed in 2000 of 7.1m/s.

The climate allows for year round operations.



## 5.4 Infrastructure

### 5.4.1 Power

Power up to 5MW is provided by two companies, Potencia S.A. supplying 3MW to the crusher, heap leach and conveyors and CONAFE supplying 2MW to the carbon absorption plant, pumps and the offices. The total power supply is distributed from the Andacollo substation on the eastern boundary of the project area. In addition, the plant has three emergency generators (2x 1,000kVA and 1 x 1,500kVA). These provide sufficient power for lighting and essential operations in the event of a power failure and for use during times of peak demand when grid power supply rates are higher than the diesel generated power cost.

### 5.4.2 Water

Lachlan Star owns parcels (lots) 102 and 103 in a group of lots named Nueva Vida in the Cerillos sector of the municipality of Coquimbo. The associated water rights owned by Lachlan Star have a capacity of 205 litres per second. The water requirement for the project is 21 litres per second in winter and 46 litres per second in summer. However, during the last few years the mine has been pumping water from the pits, thereby reducing its need for water from the Cerillos sector.

Process water up to 19 L/s is pumped to the site by Aquas del Valle S.A. from the water well on the northernmost lot and Carmen de Andacollo ("Carmen") provides pumping services for water drawn from the southernmost lot up to 25 L/s per month at a charge of US\$1.15/m<sup>3</sup>. In return for providing the pumping services Carmen is allowed to use for its own benefit the remainder of the available water up to 35 L/s per month at a rate of US\$1.25/m<sup>3</sup> up to 25 L/s per month and at US\$0.575/m<sup>3</sup> for any consumption exceeding that rate. Should pumps be installed to draw the full water rights, much additional water is available for any expansion as the water rights associated to this particular borehole has the right (and proven yield) to generate 90 L/s. The Aquas del Valle pipe has an effective capacity of 25 L/s, but the borehole which feeds into it has rights to 115 L/s.

Table 5.4.2\_1 shows the water consumption during the 2011 of production year illustrating that the actual needs of the mine are much less than available resources and that there is ample water available for future expansion of production.

Month	Pumped by Aquas del Valle		Pumped by Carmen de Andacollo	
	m <sup>3</sup> /month	litres/second	m <sup>3</sup> /month	litres/second
Jan '11	21,155	7.9	35,343	13.2
Feb '11	17,590	7.3	20,501	8.5
Mar '11	14,522	5.4	20,057	7.5
Apr '11	22,057	9.8	16,352	6.3
May '11	22,799	8.5	21,230	7.9
Jun '11	9,572	3.7	8,877	3.4
Jul '11	1,824	0.7	14,259	5.3
Aug '11	2,866	1.1	21,701	8.1
Sep '11	14,853	5.7	20,662	8.0
Oct '11	49,798	18.6	26,668	10.0
Nov '11	48,679	18.8	28,116	10.8
Dec '11	28,122	10.5	30,504	11.4
<b>Total</b>	<b>253,837</b>	<b>8.0</b>	<b>264,270</b>	<b>8.4</b>

Potable water is produced on site by treatment of the process water.

### 5.4.3 Waste Dumps

Table 5.4.3\_1 has the details of the six waste dumps adjacent to Las Loas, Tres Perlas, Churumata, Chisperos and the Toro pits.

Table 5.4.3_1 CMD Gold Mine Waste Dump Characteristics							
Waste Dump		Area (m <sup>2</sup> )	Final Height (m)	Final Slope (degrees)	Capacity (kt)		
					Original Capacity	Used	Remaining
Las Loas	North	89,232	50	31.5	4,468	6,612	-
	Southwest	171,311	100	31.5	9,110	5,080	4,030
	East	78,069	50	31.5	2,965	4,354	-
	Pit 2	40,664	30	31.5	1,842	989	853
	<b>Total Las Loas</b>					<b>18,385</b>	<b>16,126</b>
Old Pits	Tres Perlas West	25,200	80	<31.7	1,300	205	1,095
	Socorro Sur	405,297	90	31.5	15,111	6,939	8,172
	Carmen	342,552	115	31.5	11,829	10,811	1,018
	North	110,822	90	27-31.5	3,116	3,283	-
	El Sauce	273,234	75	31.5	1,200	1,428	-
	12 February	61,804	64	31	10,191	1,305	8,886
	<b>Total Old Pits</b>					<b>42,747</b>	<b>23,971</b>

The mine plan reported in the previous Technical Report required waste dump capacity of 25.45 million tonnes over the life of mine. With the total waste movement from 1 July 2011 to 31 March 2012 of 9,473,000 tonnes, the remaining waste movement on the current mine plan is 15,977,000 tonnes. There is sufficient capacity on the current waste dumps to cater for the current mine plan.

It should be noted that backfilling of the Natalia pit ceased in March 2011, as a result of the recognition of the potential for additional resource in this area. Since the previous Technical Report, an additional waste dump, 12<sup>th</sup> February, has been added to the dumps available.

#### 5.4.4 Other

La Serena is the nearest major city to Andacollo and is the capital of Chile's Region IV. It is serviced by the port of Coquimbo, 11km to the south. The region's main activities are agriculture, wine and pisco production, tourism and mining. Total region population is approximately 603,000 of which around 400,000 live in greater La Serena, including Coquimbo.

Many service companies oriented to the mining industry are located in La Serena and Coquimbo and hence most supplies and services required by the CMD Gold Mine are readily available. More specialized items and services can be quickly obtained from Santiago. Chile has a long history of mining and a highly developed mining services industry, which can readily provide the project requirements.

Telephone and data transmission at the site is provided by land lines.

#### **5.4.5 Personnel**

Management and senior staff all work at the CMD Gold Mine site. Most live in La Serena and commute to the site each day by transportation provided by the company.

Operations staff of the mining contractor and labourers in the process department work 12 hour shifts on a four days on, four days off basis. Senior management, plant management and administrative staff work five days per week from 8h30 until 17h30 from Monday to Friday. Most company employees and contractor labourers live in the town of Andacollo, which has a population of approximately 10,000. Andacollo has a long history of mining. It is expected that experienced operators will be readily available when operations expand.

## 6 HISTORY

### 6.1 Prior Ownership and Ownership Changes

The first reported mining activity in the Andacollo area dates back to the Incas who extracted gold and copper. After the arrival of the Spaniards in 1540, the production of these minerals increased and up to the end of the 19<sup>th</sup> century, the area continued to be one of the most important in Chile for the production of gold. Production then declined but saw a strong reactivation over the period 1932 to 1950.

As the various ore bodies in the area were exhausted, local artisan miners (pirquineros) continued to remove and wash the thin layers of alluvial material from the hillsides to extract gold. This activity resulted in the destruction of trees and agricultural land, the evidence of which is still visible today. Historical records indicate that up to 3 million ounces of gold have been recovered from the area.

A Chilean subsidiary of Chevron, Chevron Minera Corporation of Chile, commenced the evaluation of the CMD Gold Mine deposits in 1985 and undertook extensive exploration drilling programs that ultimately resulted in the definition of the main deposits. In 1989, CMD commenced an exploration program under an option agreement to purchase the property. The purchase of the mining rights and some adjacent surface property was completed in 1990. In the same year, CMD started negotiations to purchase the remaining surface rights necessary to develop the operation.

The main activities and milestones in the development of the mine are listed below:

- 1990 CMD commissioned Bechtel to carry out a feasibility study. The study concluded that a profitable operation could be developed based on the following facilities:
  - Two open pit mines, Tres Perlas and Churrumata
  - One underground mine, Socorro Norte
  - A three-stage crushing plant of 10,850 tonnes per day capacity
  - A heap leach pad designed to leach 25 millions tonnes of ore
  - A process plant and infrastructure to produce an average of 100,000 ounces of gold per year.
- 1992 CMD presented a “Declaration of Environmental Impact” (DIA) to the local authorities. The DIA was prepared by Dames and Moore Chile Limitada.
- 1994 Construction of the facilities commenced in April.
- 1995 Construction was completed and plant commissioning and start-up commenced at the end of the year.
- 1996 The first doré bars were produced in March.
- 1997 Crushing plant capacity was increased to 18,000tpd in the 3<sup>rd</sup> quarter by the addition of the third line of tertiary crushing.

- 2000 The mining operation was shut down on 29 September due to low gold prices. Leaching of the pads continued from 2000 until 2004.
- 2005 In September 2005 the operation was sold at auction to Oro Chile.
- 2006 From March 2006 CMD resumed mining, crushing and leaching operations.
- 2008 During September 2008 operation stopped waiting for the new project “Las Loas” to be permitted.
- 2009 In April 2009, permitting was obtained and operation was restarted.
- 2010 In December 2010, Lachlan Star Limited, an ASX registered company, purchased the share capital of CMD from Oro Chile and took operational control.
- 2011 Lachlan Star achieves dual listing by being accepted on the TSX Exchange. An aggressive exploration programme rapidly increased the global mineral resource base.

## 6.2 Historical Mineral Resource and Mineral Reserve Estimates

Until January 2011, no Mineral Resources or Mineral Reserves had been estimated by Lachlan Star for the CMD Gold Mine. Internal estimates and or inventories for production purposes had been created by CMD staff, however these inventories have not been stated under NI 43-101 or JORC code.

During the first months of 2011, Lachlan Star commissioned Coffey Mining to estimate the first NI 43-101 compliant Mineral Resource, which were included in the Technical Report dated 1<sup>st</sup> August 2011, and detailed in Table 6.2\_1.

<b>Deposit</b>	<b>Resource Category</b>	<b>Lower Cutoff (Au g/t)</b>	<b>Tonnes (Mt)</b>	<b>Grade (Au g/t)</b>	<b>Metal (koz Au)</b>
Tres Perlas/Natalia	Indicated	0.3	15.6	0.50	252
	Inferred	0.3	19.4	0.53	333
Chisperos	Indicated	0.3	1.0	1.10	36
	Inferred	0.3	1.4	0.95	43
Toro Cabanas/Socorro	Indicated	0.3	3.3	0.80	84
	Inferred	0.3	8.2	0.72	188
Churumata	Indicated	0.3	0.6	0.82	16
	Inferred	0.3	8.7	0.78	219
Las Loas	Indicated	0.3	2.86	0.79	73
	Inferred	0.3	1.53	0.77	37
El Sauce	Inferred	0.3	7.10	0.69	156

The first Mineral Reserve estimate for the mine was also published in the same Technical Report (1<sup>st</sup> August 2011), and this is detailed in Table 6.2\_2. The Mineral Reserve estimate has not yet been updated, and the Mineral Reserve estimate has not been changed in this report.

<b>Table 6.2_2</b>			
<b>CMD Gold Mine</b>			
<b>Summary of Mineral Reserves Estimated as at 1 August 2011</b>			
<b>Deposit</b>	<b>Probable Mineral Reserves</b>		
	<b>Tonnes [Mt]</b>	<b>Au Grade [g/t]</b>	<b>Ounces (koz Au)</b>
Tres Perlas	3.0	0.7	69
Chisperos	0.8	1.2	29
Churumata	0.3	0.9	8
Las Loas	1.0	0.8	25
Toro/Socorro	0.9	0.8	25
<b>Total</b>	<b>6.0</b>	<b>0.8</b>	<b>157</b>

### 6.3 Production History

Table 6.3\_1 shows the total tonnes of mineralized material stacked and gold produced since the start of operations in 1995 until 2005. A total of 590,163 ounces of gold was produced from 27Mt of mineralized material, at a grade of approximately 0.91g/t Au.

Table 6.3\_2 shows the production performance since the reopening of the mine. In excess of 18 million tonnes of mineralized material has been stacked after reopening of the mine at a grade of 0.70g/t Au yielding 288,475ozs. The combined gold production until March 2012 was close to 0.88 million ounces.

**Table 6.3\_1**  
**CMD Gold Mine**  
**Cumulative Leach Pad Statistics For First Production Cycle**

Period	Mineralized Tonnes Stacked	Cumulative Tonnes Stacked	Grade g/tonne	Cum. Grade g/tonne	Ounces to Leach Pad	Cum. Ounces to Leach Pad	Ounces Poured	Cum. Ounces Poured	Recovery for Period* %	Cum. Recovery* %
1995	1,393,442	1,393,442	1.035	1.035	46,368.4	46,368.4	13,411.5	13,411.5	28.9	28.9
1996	4,358,810	5,752,252	1.046	1.043	146,596.1	192,964.5	87,649.9	101,061.4	59.8	52.4
1997	4,806,995	10,559,247	0.889	0.973	137,416.5	330,381.0	91,346.7	192,408.1	66.5	58.2
1998	5,525,097	16,084,344	0.834	0.925	148,134.0	478,515.0	92,547.6	284,955.7	62.5	59.6
1999	6,346,367	22,430,711	0.933	0.927	190,352.0	668,867.0	134,954.6	419,910.3	70.9	62.8
2000	4,495,364	26,926,075	0.830	0.911	119,924.8	788,791.8	89,681.0	509,591.3	74.8	64.6
2001	9,612	26,935,687	0.766	0.911	236.7	789,028.5	36,238.9	545,830.1	na	69.2
2002	0	26,935,687	na	0.911	0.0	789,028.5	19,821.9	565,652.0	na	71.7
2003	0	26,935,687	na	0.911	0.0	789,028.5	13,310.8	578,962.9	na	73.4
2004	0	26,935,687	na	0.911		789,028.5	9,586.7	588,549.6	na	74.6
2005	0	26,935,687	na	0.911		789,028.5	1,613.1	590,162.7	na	74.8
<b>Total</b>	<b>26,935,687</b>		<b>0.911</b>		<b>789,028.5</b>		<b>590,162.7</b>			<b>74.8</b>

\* Note: Recovery is based on ounces produced with settlement adjustment

**Table 6.3\_2**  
**CMD Gold Mine**  
**Cumulative Leach Pad Statistics Since Reopening of the Mine**

Period	Mineralized Tonnes Stacked	Cum. Tonnes Stacked	Grade g/tonne	Cum. Grade g/tonne	Ounces to Leach Pad	Cum. Ounces to Leach Pad	Ounces Poured	Cum. Ounces Poured	Recovery for Period* %	Cum. Recovery* %
2006	4,046,358	4,046,358	0.74	0.74	96,651	96,651	41,491	41,491	42.9	42.9
2007	4,752,618	8,798,976	0.75	0.75	115,266	211,917	74,934	116,425	65.0	54.9
2008	3,702,878	12,501,854	0.65	0.72	77,461	289,378	63,861	180,286	82.4	62.3
2009	1,460,392	13,962,246	0.71	0.72	33,405	322,783	34,952	215,238	104.6	66.7
2010	1,572,566	15,531,097	0.69	0.72	34,817	357,600	33,110	248,348	95.1	69.4
2011	2,713,502	18,244,599	0.58	0.70	50,942	408,747	40,127	288,475	78.5	70.6
<b>Total</b>	<b>18,248,314</b>				<b>408,542</b>		<b>288,475</b>		<b>70.6</b>	
<b>Grand Total</b>	<b>45,184,001</b>				<b>1,197,570</b>		<b>878,638</b>			<b>73.4</b>

\* Note: Recovery is based on ounces produced with settlement adjustment

## **7 GEOLOGICAL SETTING AND MINERALIZATION**

### **7.1 Regional Setting**

The CMD Gold Mine is located in the lower Cretaceous volcano-plutonic arc that forms the coastal range. The arc is typical of volcanic arcs that form at subduction zones as a response to partial melting of the subducted crust.

The mineralization at the CMD Gold Mine is hosted by the Quebrada Marquesa Formation, which comprises a sequence of intermediate and felsic volcanics and volcanogenic sediments as lava flow, pyroclastic and epiclastic units. The stratigraphy strikes generally north and dips to the east at shallow angles.

Intrusive rocks in the area are associated with the regional Cretaceous batholith. The Andacollo Porphyry is a diorite intrusion located to the southeast of the project. The porphyry hosts the copper deposits directly south of the CMD Gold Mine and currently being mined by Teck. Other plutonic rocks in the area include a number of dykes and sills of variable composition, including monzonites, andesites, diorites and basalts.

### **7.2 Project Geology**

The CMD Gold Mine area is underlain by volcanic stratigraphy associated with the Quebrada Formation, comprised of a sequence of andesites, dacites, trachytes and rhyolites, with epiclastic intercalations. The sequence forms tabular bodies that exhibit a north-south strike direction and generally dip gently to the east.

The volcanic sequence is intruded by a number of dykes of andesitic, basaltic or monzonitic affiliation.

Structural features at the CMD Gold Mine include a number of major north trending normal faults such as the Andacollo, Mariposa and Runco Faults. These faults are downthrown on the western sides, with up to 350m offset locally. They are postulated to form the deep-seated conduits for the mineralizing fluids and have resulted in repetitions of the mineralized volcanic stratigraphy.

Northwest trending shear zones and faults are also common, and were most likely formed as tension gashes as a response to movement along the north trending normal faults. Quartz vein swarms, hydrothermal brecciation and gold mineralization are often associated with these structures.

The most significant gold mineralization is generally hosted within dacite flow units, and is known locally as “manto” mineralization. This style of mineralization is extensive and forms low grade apparently stratabound deposits. Mineralization can also be found in the andesitic pyroclastic units.

Hydrothermal alteration includes quartz-carbonate alteration associated with veined shear zones, potassium feldspar (potassic) alteration associated with the mineralized dacite units and chlorite-epidote-carbonate (propylitic) alteration assemblages associated with the remaining lithotypes.

The Tres Perlas and Natalia deposits are primarily hosted in a dacite unit with a thickness of between 50m and 150m. The mineralization also occurs in andesites and andesitic tuffs that underlie the dacite, and in the overlying rhyolites. Tres Perlas contains very continuous mineralization within the dacite unit, in contrast to the other deposits where gold grades are more variable due to the impact of higher grade structural zones.

At Natalia, the mineralization is localized within high angle shear zones containing veins and faults that cross the dacite. The Natalia vein swarm is 40m wide, strikes northwest and dips steeply to the southwest.

Tres Perlas West is considered to comprise a down-faulted block of the Tres Perlas dacite unit, with a complex network of veining and faulting.

The Churumata deposit is hosted in a dacite unit with a width of between 10m and 40m, as well as in andesites and breccia units. The dacite unit at Churumata is approximately 120m below the dacite unit at Tres Perlas, and approximately 100m above the dacite unit at Socorro. The mineralized dacite at Tres Perlas is intercalated with generally barren aphanitic andesites and cut by barren sub-vertical dykes, resulting in discontinuous blocks of mineralization within the volcanic sequence. CMD also interpreted a zone of relatively high grade mineralization associated with a contact breccia on the margin of a large diorite dyke in the southeastern part of the open pit.

The Chisperos deposit is hosted in a similar geological setting as the Churumata deposit, with a mineralized sequence between 10m and 25m thick. The Chisperos deposit is characterized by the presence of high angle structures associated with higher grade zones within the volcanic stratigraphy.

The Toro deposit is hosted in the same dacite unit that hosts the Socorro deposit, along strike to the south. The mineralized volcanic sequence varies in thickness from 10m to 25m and is cut by high angle faults, veins and dykes.

The Las Loas deposit comprises a NW-SE trending fault zone with which is associated a quartz vein swarm and hydrothermal brecciation. A series of NW trending S dipping vein-faults form the main control for gold mineralization, most of which are one meter or less in thickness, run up to over 1km along strike and show broader zones of gold mineralization associated to them. The main structure hosting mineralization corresponds to a dilational jog, trending northwest, which runs along strike for 1,500m with average thickness of 200m. The main structures are: Las Veteranas, Poderosa, Amarilla and Santo Domingo. Mineral paragenesis consists of specularite and quartz (associated to pyrite at depth), occasional calcite and chalcopyrite. The host rocks are andesites. Rocks associated to mineralization present potassic alteration.

Coffey Mining considers that the geological interpretations developed by Lachlan Star adequately reflect the underlying geology.

### **7.3 Mineralization**

The dacite units at the CMD Gold Mine contain generally bulk tonnage, low-grade mineralization. This apparent stratigraphic control on the mineralization occurs as a result of the alteration of the originally porous dacite units by hydrothermal fluids, probably associated with cooling of the Andacollo Porphyry. Less porous rocks such as andesites and dykes were not altered as strongly as the dacite “mantos”.

Alteration within the dacites includes potassic alteration, as well as zones of silicification and carbonate alteration. The altered dacites became very brittle and fractured more easily than the unaltered rocks during deformation, possibly associated with movement on the major north trending normal faults. The brittle fracture regime within the dacites comprises a network of hairline fractures, which have provided a favourable host for subsequent gold mineralization, and are now filled with carbonate, quartz, sulfides and gold.

There are a number of very high grades at the CMD Gold Mine, particularly associated with contact breccia and fault zones. Most of the fault zones have a strike direction of northwest, and are probably formed as a response to movement along the major north trending normal faults. The northwest trending structures created zones of dilation and low pressure, resulting in the formation of quartz veins and breccias, as well as relatively high gold grades and strong hydrothermal alteration.

Gold mineralization at the CMD Gold Mine therefore occurs in brittle fracture zones within the dacite or associated with faults and dyke contacts. Grades can be very high locally, but are low overall. This style of mineralization, with very variable grades in discontinuous mineralized zones provides challenges during geological modelling and grade estimation.

No systematic evaluation of the copper content of the deposits at the CMD Gold Mine has been carried out.

## 8 DEPOSIT TYPES

The style of mineralization at the CMD Gold Mine can be described as porphyry-related copper and gold mineralization, which is a common mineralization style, associated with subduction zones in many parts of the world, including the Cordillera of North and South America, the Tethyan Belt in western Asia and eastern Europe and a number of belts in Indonesia and the Philippines. These metallogenic provinces generally comprise extensive narrow belts of porphyry and epithermal gold and copper (and molybdenum) deposits. Regional structural features provide the controls on the locations of the deposits.

Porphyry-related mineralization is usually associated with intermediate to felsic porphyritic intrusions. The intrusions are formed by magma rising from the subducted plate through the crust of the overlapping plate and causing partial melting of the enclosing rocks. Volcanos are formed if the magmas reach surface before solidifying. As the intrusions cool, hydrothermal fluids are released. These hydrothermal fluids then migrate rapidly to areas of low pressure, such as brittle fracture zones occurring at the top of the cooling intrusion, and in more distal fault zones. Rapid cooling of the fluids results in boiling and pressure release, causing deposition of metals and the formation of quartz veins and hydrothermal breccias.

Hydrothermal fluid flow along conduits such as major fault zones and through porous rock units such as pyroclastics and porphyritic intrusions, results in hydrothermal alteration of the enclosing rocks. The type of alteration will depend on the temperature and composition of the fluid (including the influx of large amounts of meteoric water into the system), and alteration mineral assemblages are used as an effective exploration tool. The deposits can also be modified by surface weathering processes whereby atmospheric oxidation of the sulfides produces iron oxides and sulphuric acid. This acidic environment can cause metals to be leached and re-deposited elsewhere, resulting in depletion and enrichment zones.

Copper mineralization is usually found adjacent to and within the intrusions, with some gold. Gold mineralization is usually concentrated at higher (shallow and cooler) levels within the hydrothermal system as epithermal gold and silver deposits. Local conditions prevalent at the time of mineralization will influence the type and tenor of the deposit.

This style of deposit is the basis of some of the largest mines in the world, including Grasberg (Indonesia), Lepanto (Philippines), Lihir (PNG), Morenci (USA), Sar Cheshmeh (Iran) and Recsk (Hungary). Examples from Chile include El Salvador, Candelaria and El Indio.

At Andacollo, mining of the copper mineralization associated with the Andacollo Porphyry is being carried out by Teck and mining of the associated gold halo is being carried out by Lachlan Star.

## 9 EXPLORATION

### 9.1 Historical and current Exploration Work

Information regarding the previous CMD exploration programs has been difficult to acquire due to a lack of long term employed exploration personnel on site.

It is known that Chevron, the previous owners of the project, undertook Reverse Circulation (RC) and (diamond core) DC drilling programs from 1987 until CMD acquired the project. The work by Chevron identified most of the gold deposits on the property.

CMD has also undertaken a significant amount of drilling, using RC and DC methods using its own drilling rigs and also reputable contract drilling companies as listed, to the extent known below.

- Atacama Drilling
- Perfomin
- Minera Cruz
- Mineral Drilling
- Major Drilling; and
- Ausdrill.

This drilling has mainly been carried out to define the extent of the mineralization at each deposit and to define resources for conversion to reserves.

The CMD exploration and mineral resource drilling culminated in a feasibility study undertaken by Bechtel on behalf of CMD in 1994.

Drilling is discussed further in Section 11.

### 9.2 Historical Exploration Data Collection

Data collection and quality control associated with blasthole sampling for grade control purposes are well documented and discussed in internal CMD Gold Mine reports, however only limited blasthole data have been used for resource estimation at Churrumatta. Coffey Mining has used the assay data from the closely spaced blastholes as a guide to the preferred orientation of mineralized zones during geological modelling of the Tres Perlas/Natalia Las Loas and Churrumata deposits.

Based on information provided by the then available ex-CMD geological personnel, it appears that historic CMD data collection methods and procedures during exploration and resource drilling were conventional and appropriate, and carried out with diligence, however the methods and procedures have not been verified by Coffey Mining.

Geological and geotechnical logging has been carried out by Chevron and CMD to a very high standard, and the amount and type of information recorded is conventional and appropriate.

Exploration and resource drilling data are stored within a master database as Microsoft Access files. Drill logs and assay sheets are also stored as hard copies in organized filing cabinets on site.

### **9.3 Future Exploration and Other Prospects**

#### **9.3.1 Exploration Strategy**

The exploration strategy of Lachlan Star for the short to medium term is as follows:

- Short Term - find the type of resources that can be easily converted in the short term to reserves and that will allow the reduction of the stripping ratio to improve short-term cashflow.
- Medium Term - identify sizeable resources that will allow for extension of the mine life. The preference is for resources on the CMD Gold Mine tenements that would then not require a full environmental approval process. At the same time, identify the potential for copper mineralization in the area adjacent to the Teck mine.

Figure 9.3.1\_1 shows the various mining areas exploiting the manto mineralisation (“Old Pits”) and the most important exploration prospects for reference purposes.



Apart from extensions to the current pit areas within Lachlan Star mineral holdings, the projects and prospects within and immediately adjacent to the CMD mining concessions that have potential add to the resource base include:

- The Veneros exploration project;
- Strike extension of the Las Loas Pit (not shown on Figure 9.3.1\_1);
- East of the Tres Perlas Pit;
- El Sauce.

### 9.3.2 Cu mineralization exploration

During the first half of the 2011 calendar year it was recognized that it is probable that the copper mineralisation of the neighbouring Carmen de Andacollo deposit extends into CMD property. This presents an opportunity to pay for the stripping of substantial overburden at Tres Perlas and Churrumata, allowing for the deepening of these pits.

Some drilling was completed during 2011, and the results are discussed in Section 9.3.3. Further drilling targeting copper mineralisation is planned, and the assaying of drilling for copper is now routinely undertaken, even in areas where only gold mineralisation is expected. Lachlan Star plans to develop enough data in order to provide a resource estimate of the copper mineralisation.

### 9.3.3 Current Exploration Results

Since the Mineral Resources estimation data acceptance date of 1 March 2011 for the Resource Estimate effective 1 April 2011 a total of 231 diamond drill holes and reverse circulation holes were drilled for a total of 37,145 metres. The majority of the drilling was focused on the Toro-Socorro-Floridor area in the west and the balance predominantly drilled at Tres Perlas, Natalia – El Sauce in the northeast to increase the resources and/or the confidence level of these resources as reflected in this report.

Table 9.3.3\_1 gives a breakdown of the drilling accomplished since 1 March 2011 for the various areas followed by a brief discussion of main results obtained at Toro-Socorro-Floridor (“Toro Area”) and Tres Perlas-Natalia-El Sauce (“Tres Perlas Area”) and copper mineralisation drilling followed by a discussion on the results of and IP survey and deep drilling in the Abejas area.

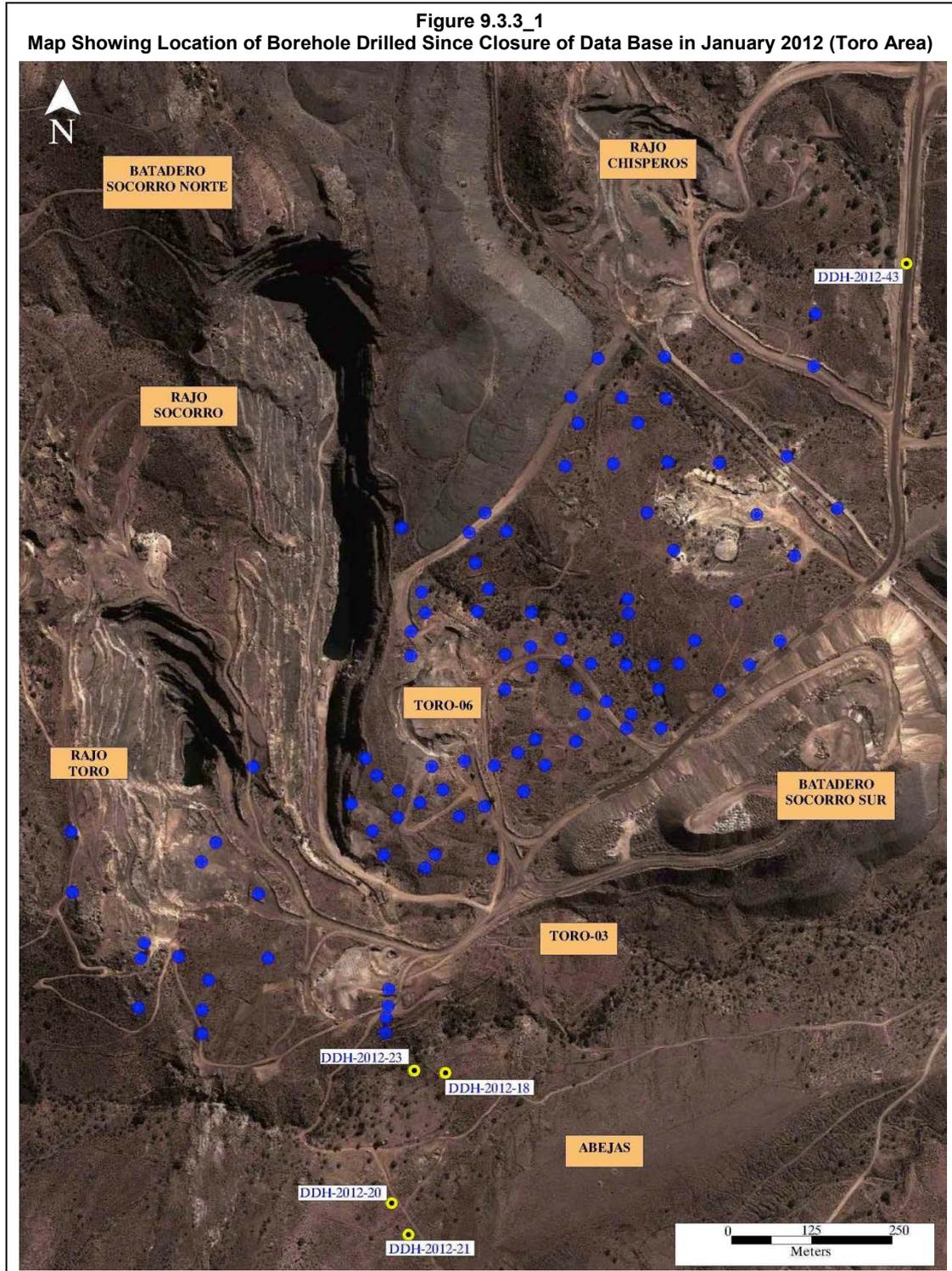
Table 9.3.3_1 CMD Gold Mine Breakdown of Drilling After the Previous NI 43-101 Report and Until 28 March 2012						
Area	Diamond Holes		RC Holes		Total	
	No.	metre	No.	metre	metre	% Total
Toro-Socoro-Floridor						
Until Resource Statement – 12 Jan '12	34	5,682	72	10,454	16,136	43.4
After Resource Statement	8	1,351	-	-	1,351	3.6
Tres Perlas – Natalia – El Sauce	30	4,980	56	8,495	13,475	36.3
Churumata	7	1,345	16	2,841	4,186	11.3
Las Loas	2	350	-	-	350	0.9
Abejas	4	1,287	-	-	1,287	3.5
La Laja	2	360			360	1.0
Copper Exploration	-					
<b>Total</b>	<b>87</b>	<b>15,355</b>	<b>144</b>	<b>21,790</b>	<b>37,145</b>	<b>100</b>

The drilling was carried out by both RC and DDH methods in a pattern that is approximately 40m x 40m to gain sufficient confidence in the geological and block models, and 50m x 50m in the Natalia – El Sauce area, subject to drill pad access.

Diamond drilling achieved acceptable core recovery and RC drilling obtained acceptable sample recovery. The entire holes were sampled and assayed on a systematic basis and no element of sample bias was introduced.

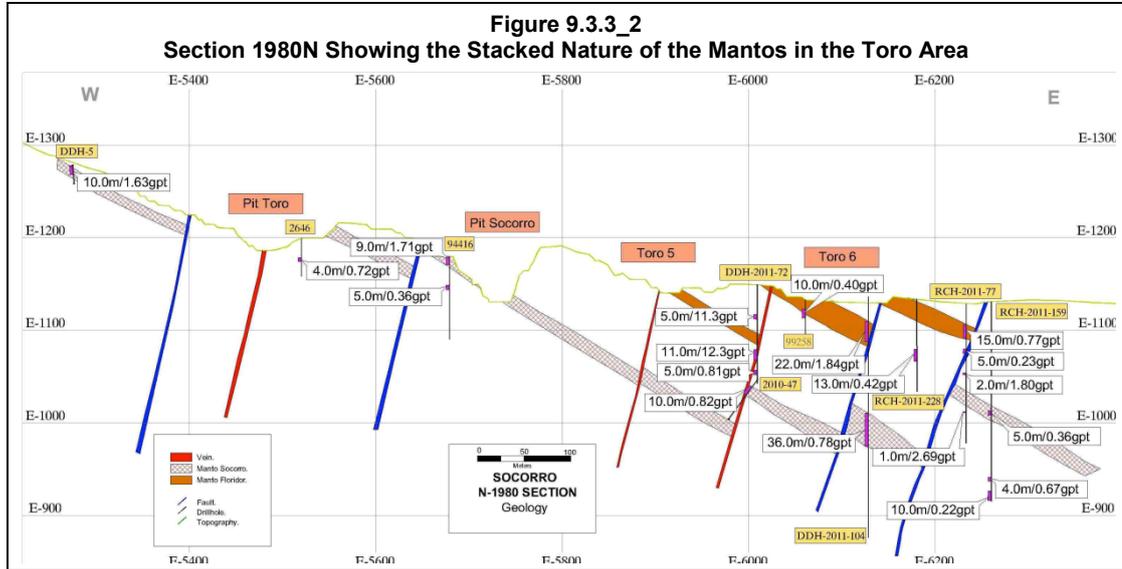
#### Toro Area

Figure 9.3.3\_1 shows the drillhole locations of the drilling carried out at the Toro Area since closing the database for the previous resources estimate.



At the Toro Area a number of stacked mantos are present which are from top to bottom referred to as Floridor manto, Socorro manto, Toro manto and Cabana manto. The drilling program has essentially infilled the gaps in the block model for the mineral resource estimate dated April 2011 and confirmed the downward extension of these mantos.

Figure 9.3.3\_2 gives cross section 1980N and shows the stacked nature of the mantos, here represented by the Floridor manto overlying the Socorro manto. The mantos are at regular intervals affected by normal faults with downthrows to the west. The drilling proved the repetition and downward extension of known mineralisation.



### Tres Perlas Area

At the Tres Perlas Area it has long been recognised that considerable mineralization is present in the hanging wall, previously perceived as too low grade to be of interest. With the prospect of dump leaching and the prevailing gold price these resources are of economic interest and a large programme commenced to define the footwall mineralization, but in particular the hanging wall of the mineralization better. Figure 9.3.3\_3 gives the drillhole locations for drilling during 2011 (in blue) and during 2012 (in yellow) in the Tres Perlas Area.

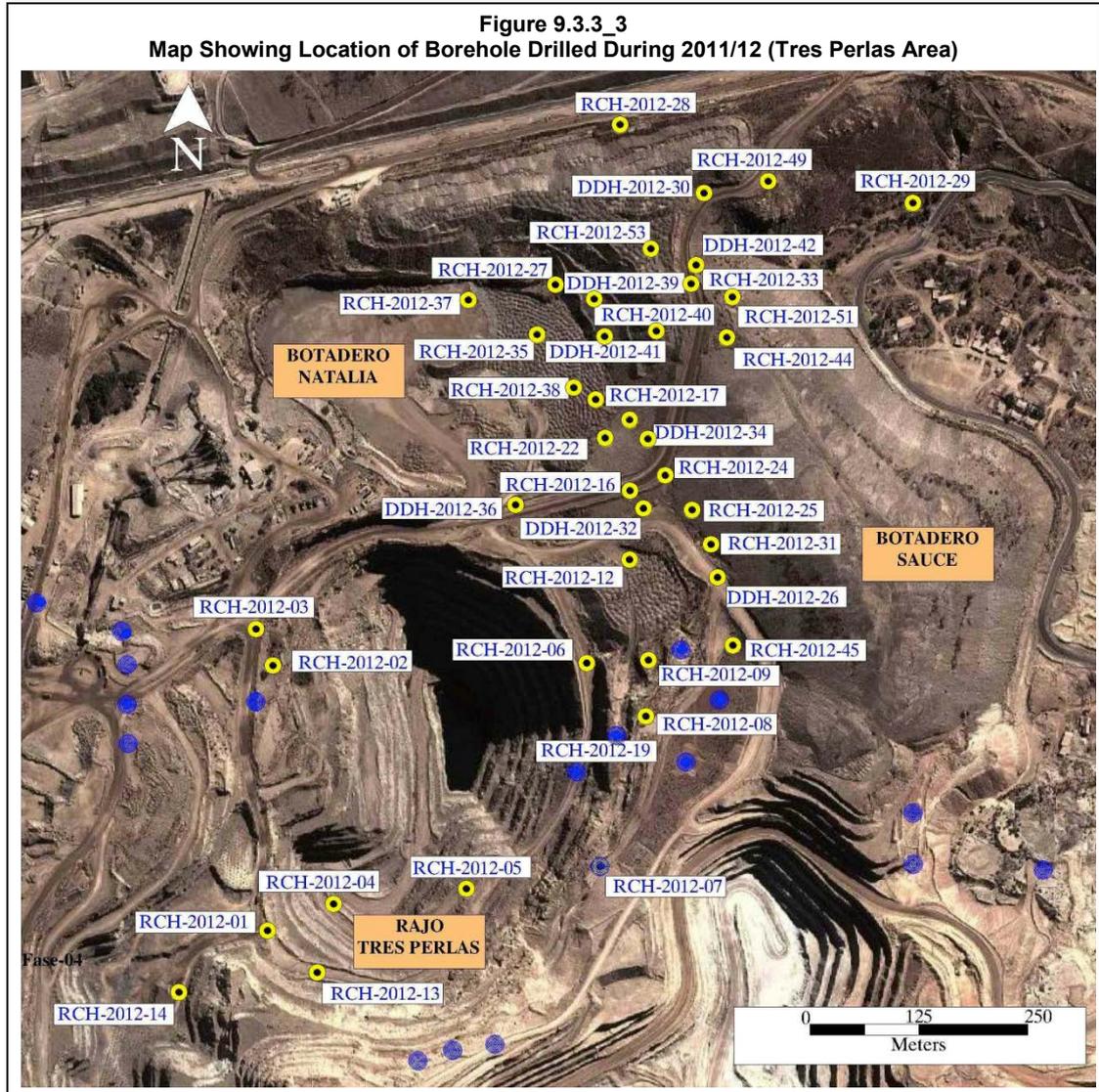
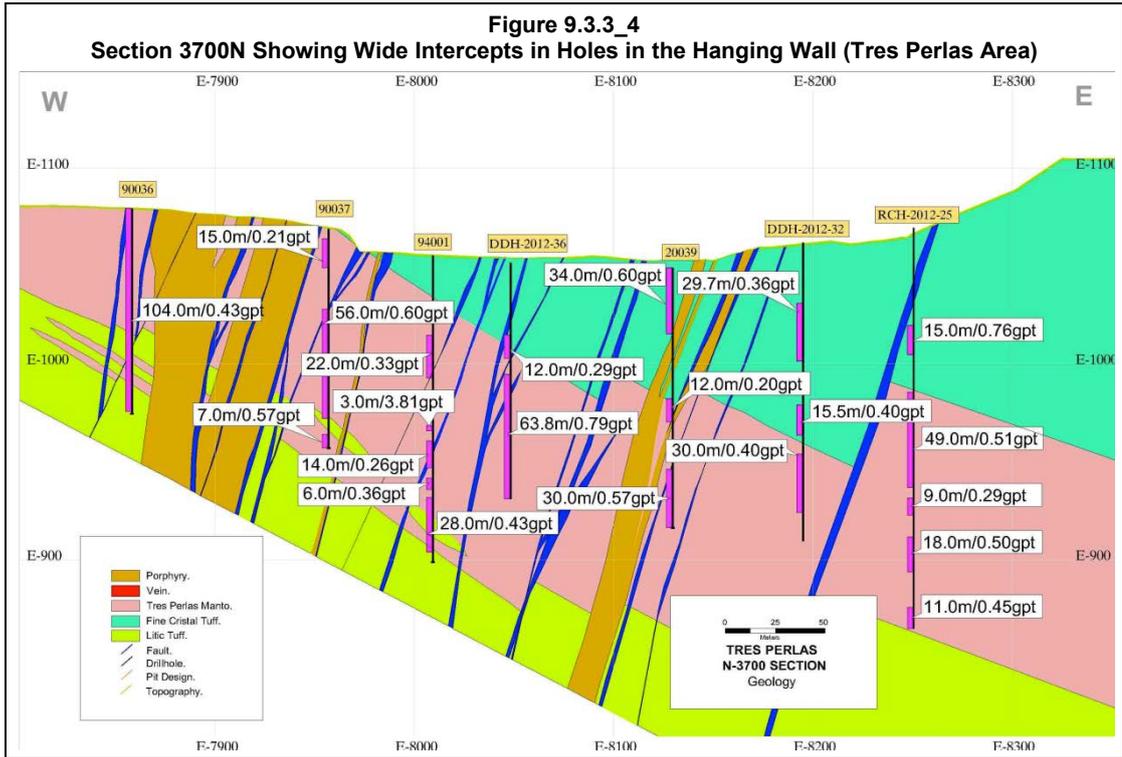
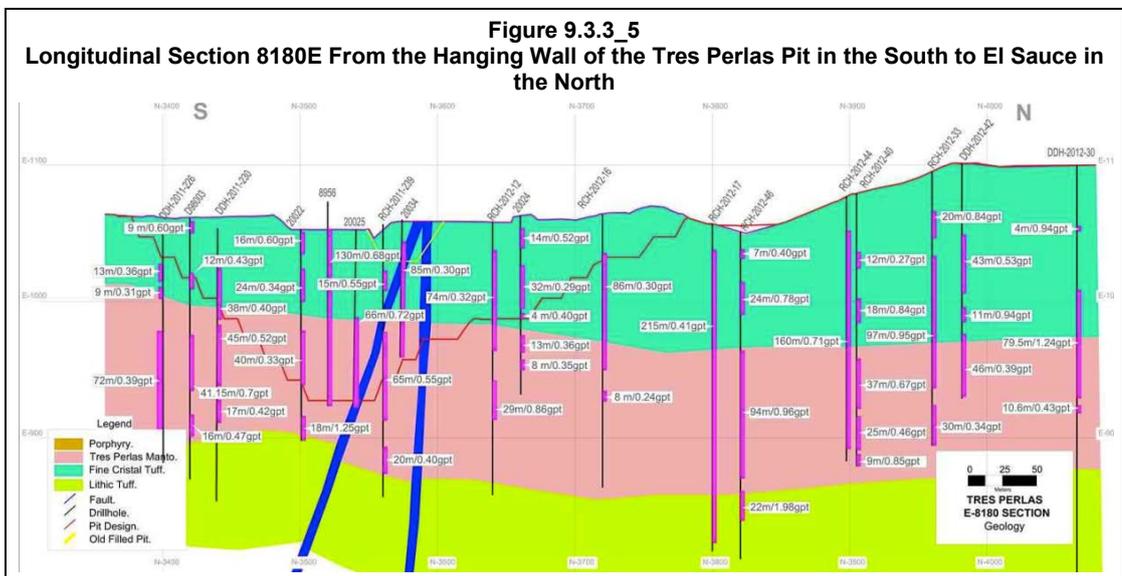


Figure 9.3.3\_4 shows cross section 3700N with the results of a number of holes in the hanging wall confirming the continuation of mineralisation over very wide intercepts.



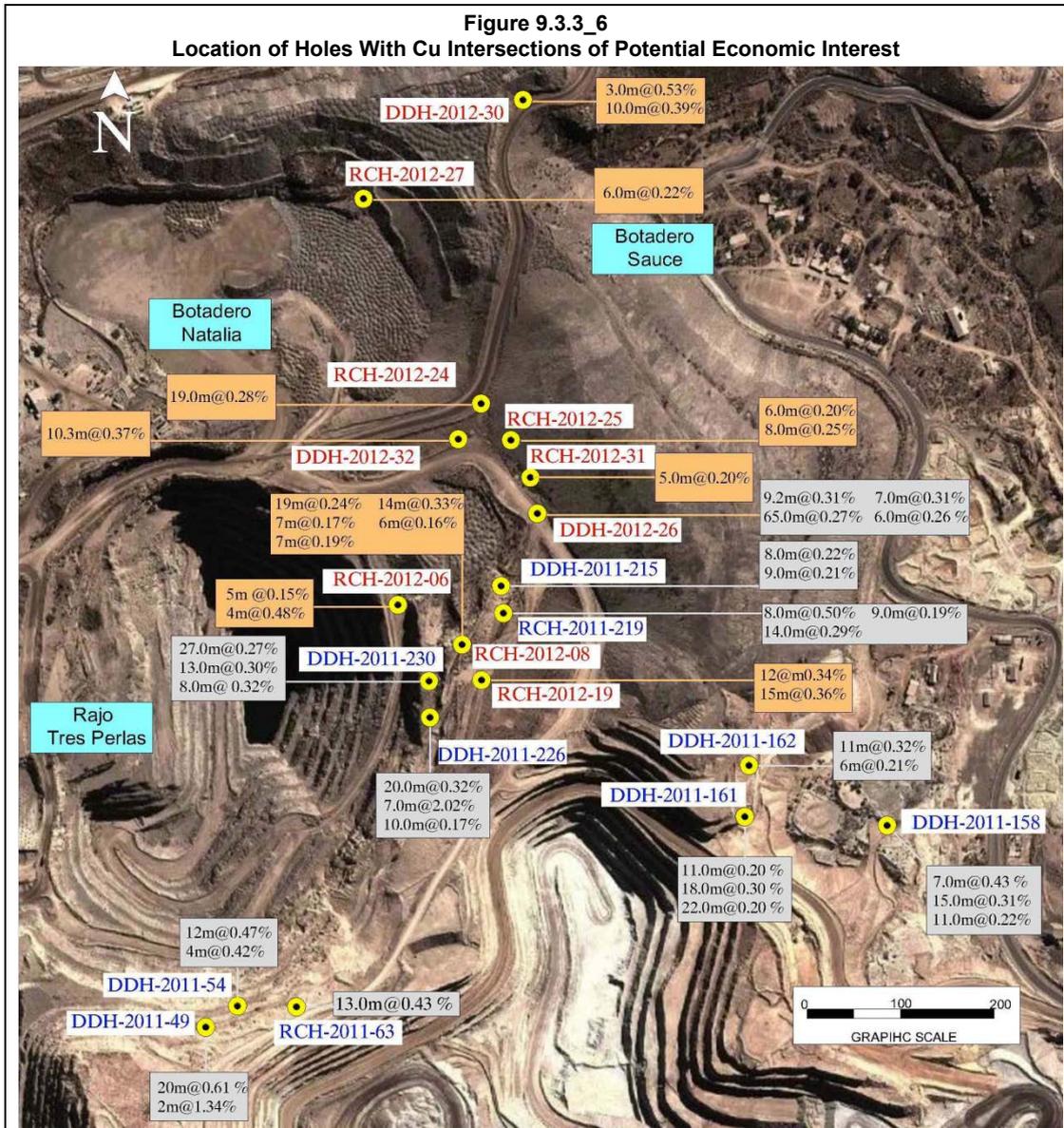
As part of the programme holes have also been drilled to the north-east to test the relationship between mineral resources at Tres Perlas- Natalia and at El Sauce, previously categorised as Inferred. Figure 9.3.3\_5 gives a longitudinal section along coordinate 8180E confirming that El Sauce is part of the same deposit, but with much better grades.



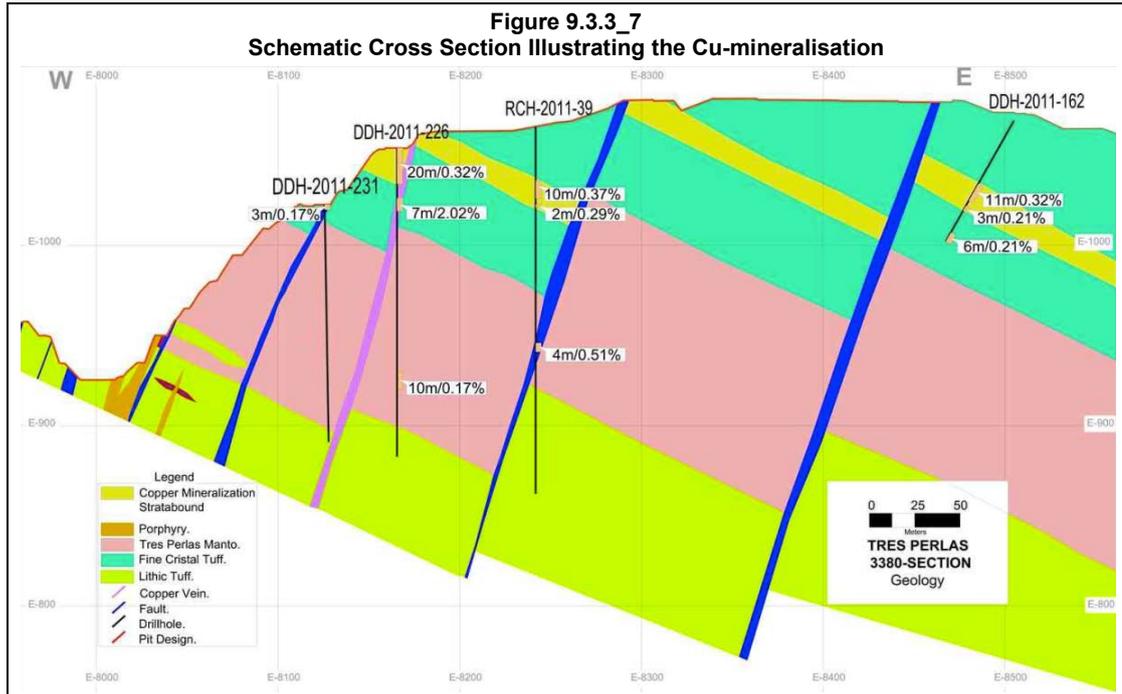
**Cu Mineralisation**

After it was determined in 2011 that the copper mineralisation of Carmen de Andacollo extended northwards into CMD's property all holes in the Tres Perlas Area are analysed for copper.

Figure 9.3.3\_6 shows the location of the holes with Cu intercepts of potential economic interest.



From the results received until now it appears that the copper mineralisation is stratabound, associated with a brittle contact zone within the Crystal Tuff at a short distance above the Tres Perlas manto, and in lenses in the Tres Perlas Manto, associated with subvertical structures. Figure 9.3.3\_7 gives a schematic cross section along 3380N illustrating the relationship of the copper mineralisation with the contact zone above the Tres Perlas Manto and associated with subvertical structures within the Tres Perlas Manto.



### Abejas Area

The area south of Toro and north of Veneros is referred to as the Abejas Area. During 2011 an IP Survey was commissioned over the area (and a number of lines in the La Laja Area north of the Socorro pit) to determine the response of the sulphide rich mantos and establish whether the Floridor, Socorro and Toro mantos continued southwards into this area. Figure 9.3.3\_8 shows the extent of the survey relative to the various pits and the chargeability response at a depth of 100m together with the site of a 400m deep exploration hole.

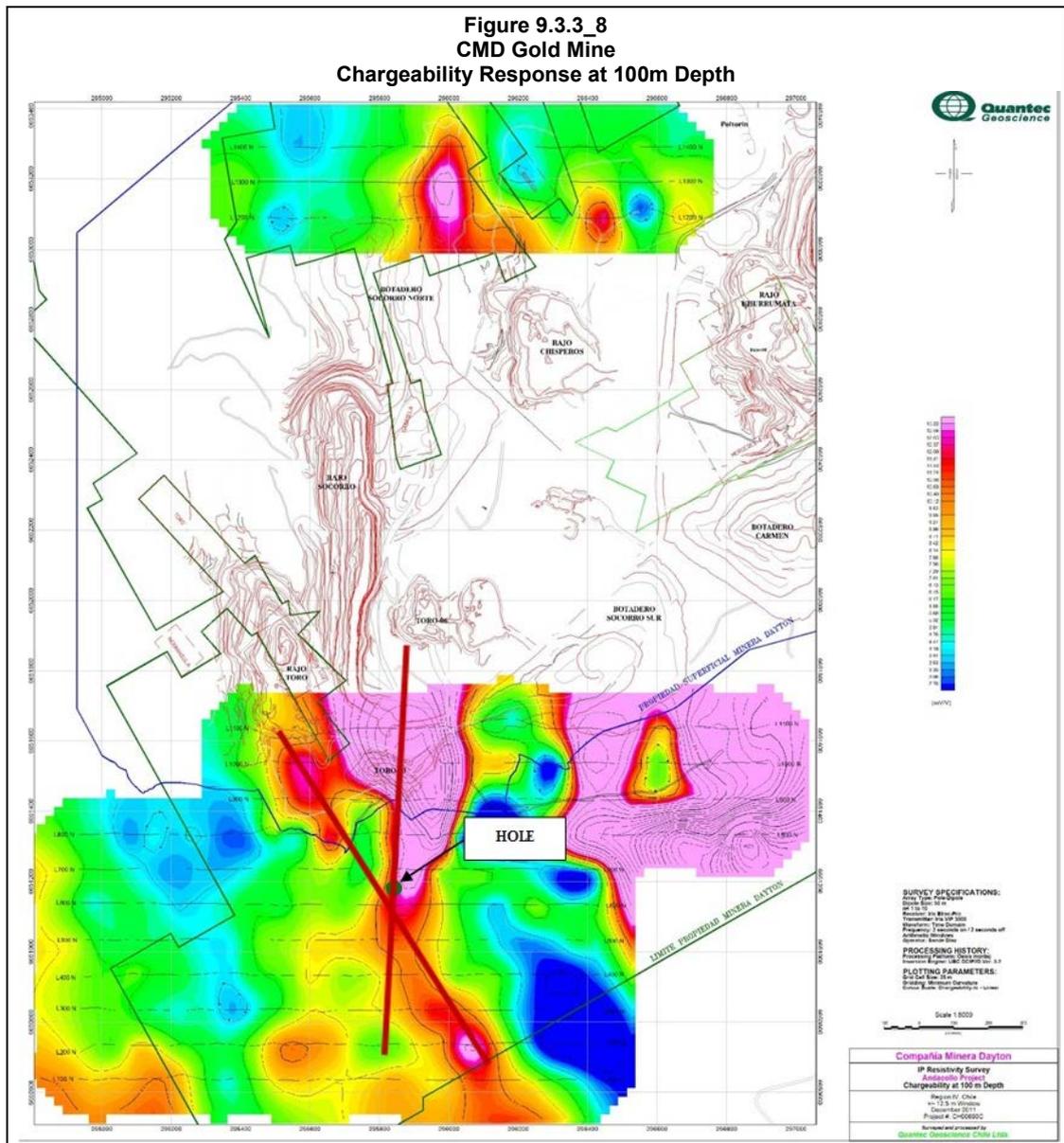
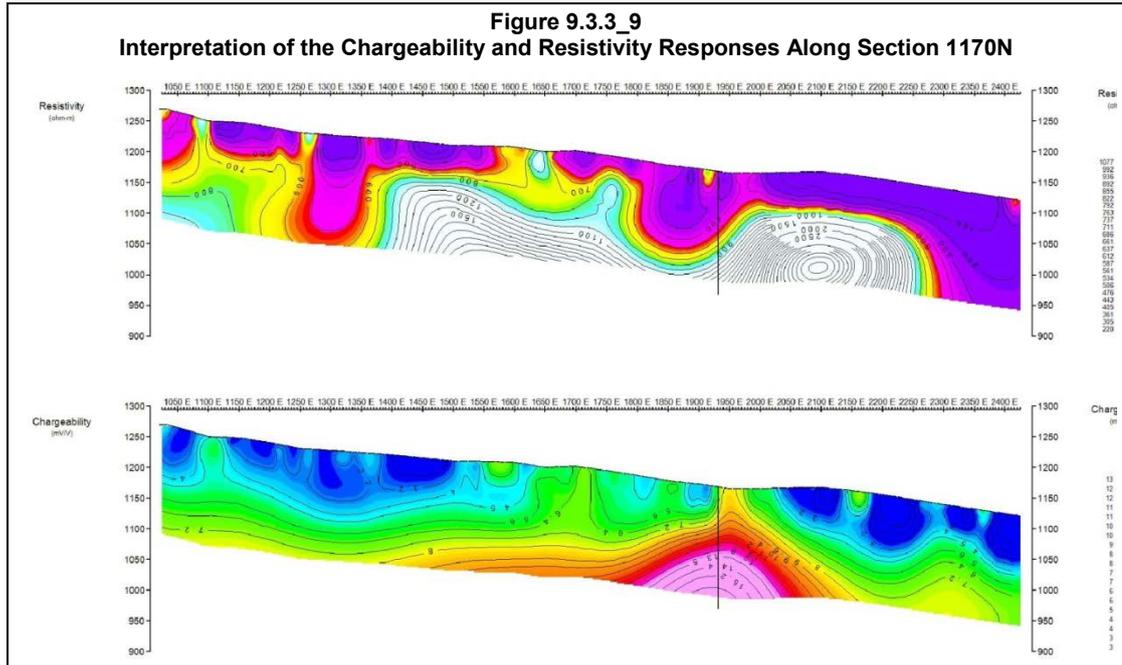


Figure 9.3.3\_9 shows the chargeability and resistivity responses along line 1170N. The section lacks any evidence of east dipping mantos, but with indications of a possible mineralised stock, which was tested by a 400m deep hole.



This particular hole only intersected frequent and strong pyrite mineralisation, partially contained in hydrothermal breccias, but without or with little gold content, which ceases altogether below 180m. Another deep hole drilled 200m further north has stronger gold mineralisation with the best intersection 6m at 1.98 g/t Au from 90m down the holes, but again totally devoid of gold below 195m. The absence of gold, normally associated with the same euhedral pyrite as found further north, could possibly be the result of zonation with precipitation of gold only at greater distance from its source.

## **10 DRILLING**

### **10.1 Introduction**

Extensive drilling has been completed on the Project by Chevron and CMD with approximately 190,000m of drilling in 1,600 holes completed since the project was discovered. Coffey notes that the majority of the drilling is Reverse Circulation (RC).

Table 10.1\_1 describes the summary of drilling information at the CMD Gold Mine subdivided by drill type and prospect. Drilling conducted by CMD under Lachlan Star management has occurred since 2011 and is described in Table 10.1\_1.

### **10.2 Drilling Procedures**

Very little information is available detailing the drilling programs completed by Chevron. Review of the RC and DC drill logs indicated that RC drilling was undertaken using a conventional 5.5" hammer bit. Most of the diamond core diameters were small, with the majority noted as NQ and BQ size.

RC and DC drilling was carried out on behalf of CMD by experienced contractors using appropriate drilling equipment. Coffey Mining has reviewed the historical contracts with the drill contractors and found that industry standard equipment was used. The majority of the diamond drilling has been completed is HQ in size.

Little drilling recovery information is stored in the exploration database which therefore precludes a detailed investigation of the recovery. However, and based primarily on visual inspection of drill recovery achieved during the site visit and discussions with CMD technical staff, it appears that acceptable recoveries have been achieved for the majority of the post Chevron drilling.

#### **10.2.1 Accuracy of Drillhole Collar Locations**

Current practise is survey all drillhole collars with Electronic Distance Measuring (EDM) devices. This survey is completed in local grid (a subset of the Universal Transverse Mercator grid system) using established survey control. As part of the validation process, Coffey Mining checked the survey locations of the drilling against the supplied topography and other known survey control points. The data is consistent with these data and therefore is considered accurate.

#### **10.2.2 Downhole Surveying Procedures**

Historic downhole surveying data was collected at irregular intervals by an unknown methodology, which is assumed to be a single shot downhole camera, for example an Eastman Camera.

Current downhole survey practice uses a Reflex Maxibor II. Review of the 3D data by Coffey Mining suggests deviations encountered are appropriate and that downhole sample locations are accurately known.

**Table 10.1\_1**  
**CMD Gold Mine**  
**Summary of Scope of Historical and current Drilling**

Prospect	Drill Type	Chevron Total		Dayton																				Total				
				1989-1997		1998		1999		2000		2006		2007		2008		2009		2010		2011 (Lachlan Star)				2012 <sup>#</sup> (Lachlan Star)		
				Holes	Meters	Holes	Meters	Holes	Meters	Holes	Meters	Holes	Meters	Holes	Meters	Holes	Meters	Holes	Meters	Holes	Meters	Holes	Meters			Holes	Meters	
Tres Perlas	TPL	RC Diamond	78	7,916	188	21,415	4	1,048			44	5,015	1	318	3	1,041							21	2,437	24	4,018	363	43,208
Tres Perlas West	TPW	RC Diamond			166	15,896	10	2,453						4	1,314												180	19,663
Natalia	NAT	RC Diamond	7	497	84	10,708	3	735	9	986			1	350													104	13,276
El Sauce	ELS	RC Diamond			71	11,988																		11	2,040	82	14,028	
Churrumata	CHU	RC Diamond	44	3,811	194	30,866	29	5,213			5	657			22	4,784	6	282	22	2,057	1	360	16	2,841	359	53,779		
Socorro	SOC	RC Diamond	78	7,573	127	10,545	27	2,418	2	258			17	1,863							6	776	13	2,246	270	25,679		
Toro-Cabañas	TOC	RC Diamond	22	1,631	50	4,141			20	632	27	2,491	12	894							1	165	18	3,293	19	3,458		
Toro	TOR	RC Diamond			3	698										13	835	5	378	8	884	17	697			46	3,492	
Floridor	FLO	RC Diamond																					59	8,208	59	8,208		
Las Loas	LL	RC Diamond												6	651	13	1,560	28	2,943			5	751			52	5,905	
Chisperos	CHI	RC Diamond	5	281	76	10,421					4	405				4	277			8	983					97	12,367	
Veneros-Abejas	VEN	RC Diamond	6	350	2	469														6	520	7	615			21	1,954	
La Laja	LLJ	RC Diamond																		2	219			4	1,287	6	1,506	
																				1	168	2	360			2	360	
<b>Total</b>			<b>240</b>	<b>22,058</b>	<b>1070</b>	<b>133,438</b>	<b>84</b>	<b>13,630</b>	<b>41</b>	<b>2,503</b>	<b>80</b>	<b>8,568</b>	<b>31</b>	<b>3,425</b>	<b>35</b>	<b>7,790</b>	<b>37</b>	<b>3,001</b>	<b>58</b>	<b>5,999</b>	<b>70</b>	<b>9,482</b>	<b>216</b>	<b>30,758</b>	<b>49</b>	<b>9,158</b>	<b>1,881</b>	<b>231,131</b>

<sup>#</sup> Until end March 2012

### **10.3 Drilling Orientation**

The vast majority of drillholes in the shallow dipping CMD Gold Mine mineralization were collared vertically. A number of holes were drilled with shallow dip to intersect mineralization appropriately.

Coffey Mining considers the orientation of the drilling appropriate for the mineralization styles encountered.

### **10.4 Topographical Control**

Topography has been generated from a Total Station survey completed by CMD surveyors. This topography is to an accuracy of  $\pm 1\text{m}$  and compares well with the drillhole collar survey data. Coffey Mining considers the topography to be of medium confidence.

## **11 SAMPLING PREPARATION, ANALYSES AND SECURITY**

### **11.1 Diamond Core and RC Sampling and Logging**

Internal CMD reports outline the procedures used for diamond core sampling on the historic drilling data (pre Lachlan Star), but there has been no discussion of the RC sampling procedures, even though the majority of the mineral resource database comprises RC data on the historic drilling data (pre Lachlan Star),.

According to the CMD internal reports, half core samples were taken at 1m intervals within geological units. The core was split using a diamond saw. Based on discussions with CMD personnel, core sampling by CMD seems to have been conventional and appropriate, and undertaken to expected industry standards.

The RC chips are collected via a cyclone in plastic bags, which are replaced every one metre of drill advance. The material is weighted, and it is recorded in the field register whether dry, moist or wet. The sample size is reduced at the rig by means of riffles to a sample of approximately 20kgs and the balance stored for future reference. A field duplicate is taken every 20 samples. From the sample approximately 1kg is extracted for logging of the cuttings, with a small quantity retained in plastic containers for future reference. The samples are collected in the field by staff from an independent laboratory for transport to the sample preparation facility for further reduction, drying when applicable and sample preparation.

From communication with CMD geological staff, it is apparent that historic RC samples were collected by CMD in a conventional manner via a cyclone and a splitter at the rig site. Large samples were reportedly collected for primary crushing prior to analysis.

### **11.2 Sample Recovery**

RC and DC drilling was carried out on behalf of CMD by experienced contractors using appropriate equipment and a core size of mainly HQ. There do not seem to have been any issues regarding sample recovery or wet RC sampling, although no sample recovery data has been sighted by Coffey Mining. According to documentation acquired from CMD, booster compressors were made available in order to keep the majority of RC samples dry. In addition, the weight of 80% of the RC samples had to be at least 38kg, and this was stipulated in the RC drilling contracts in an attempt to maintain acceptable RC recoveries.

### **11.3 Sample Quality**

Due to the unavailability of documentation for the historic data (pre Lachlan Star) Coffey Mining is unable to provide comment on the accuracy and precision of the historic assay data. Coffey Mining has considered this in the mineral resource classification.

The current sampling procedures adopted for drilling are consistent with current industry practice.

## 11.4 Sample Security

Current Lachlan Star RC sampling procedures require samples to be collected in staple closed bags once taken from the rig or core yard. They are then transported to the Lachlan Star offices to be picked up by the laboratory truck. The laboratory truck then takes them to the laboratory directly.

Reference material is retained and stored at the Lachlan Star offices as well as chips derived from RC drilling, half-core and photographs generated by Diamond drilling, and duplicate pulps and residues of all submitted samples. Assessment of the data indicates that the assay results are generally consistent with the logged alteration and mineralization, and are entirely consistent with the anticipated tenor of mineralization.

## 11.5 Analytical Laboratories

Preparation and assaying of samples from the CMD Gold Mine deposits has been carried out at the following independent laboratories:

- ALS Geolab located at Avenida La Fruua 1130 Barrio Industrial El Chañar Coquimbo, IV Región, Chile (La Serena).
  - Under current review for ISO Certification. (ISO 9001:2008 pending).
- SGS located at Avda. Ossandón 275, Coquimbo, IV Región, Chile (La Serena).
  - Under current review for ISO Certification. (ISO 9001:2008 pending).
- Geolanalytica located at Gerónimo Mendez # 1740, Barrio Industrial, El Chañar, Coquimbo, IV Región, Chile (La Serena).
  - ISO 9001-2008 (Current)
  - Pending Certification OHSAS 18.001
- Activation Laboratory(Actilabs) located at Avenida La Cantera 2270, Coquimbo, IV Región, Chile (La Serena).
  - ISO 9001-2008. (Current).
  - SCC (CAN-P-4E). (Current)
- CMD Gold Mine Site. Geolanalytica supervised laboratory.

All assays associated with resource drilling at the CMD Gold Mine have been completed by external commercial laboratories. Blasthole assays were completed at the on-site laboratory (Geoanalítica).

External laboratories have included Geolab, SGS, Geoanalytica and Actilabs. All of these laboratories were located in Chile.

The sample preparation flowsheet for fire assay comprised primary crushing of the entire sample to -10#(mesh) followed by homogenisation and riffle splitting of the crushed sample to create a sub-sample weighing approximately 4kg, which was milled to a nominal particle size of -28#. This material was then split in a riffle splitter to create a sub-sample of approximately 300g, which was then milled to a nominal particle size of -150#. Aliquots of 40g were extracted for fire assay. It is not known if any variations to this protocol occurred at the historic commercial laboratories.

Screened fire assays (SFA) and gravimetric analysis have been used extensively by CMD, however Coffey Mining considers SFA and gravimetric analysis to be unnecessary, and a conventional fire assay (FA) should be adequate for routine analyses.

## 11.6 Bulk Density Determinations

The current procedures for bulk density measurement requires samples are taken every 10 metres of core and upon every change in lithology and/or alteration zone and only of core in good condition. Bulk density determinations are reportedly carried out using the weight in air versus weight in water method by immersing whole drill core. Samples that could be affected by water such as those containing soluble minerals, or susceptible to adsorbing water (clays, limonite, illite), or containing much specularite, are covered by parafine before immersion.

Table 11.6\_1 gives typical density ranges for various rock types.

<b>Table 11.6_1</b>			
<b>CMD Gold Mine</b>			
<b>Typical Density Ranges for Various Rock Types</b>			
<b>Rock Type</b>	<b>Density (g/cm<sup>3</sup>)</b>		
	<b>Minimum</b>	<b>Maximum</b>	<b>Average</b>
Porphyry			
Tres Perlas Manto	2.29	2.89	2.62
Fine Crystalline Tuff	2.46	2.91	2.69
Lithic Tuff	2.33	2.88	2.62
Lithic Tuff - Dacite	2.49	2.85	2.65
Floridor Manto	2.52	2.78	2.65
Socorro Manto	2.47	2.84	2.67
Toro Manto	2.42	2.78	2.60
Churumata Manto	2.43	2.99	2.69

The bulk density values used are within the expected range for the rock types, although all deposits would benefit from additional data.

## 11.7 Quality Control Procedures

There have been a number of assessments made of the quality control assay data associated with blasthole sampling, but as mentioned previously, only minor blasthole data were used for the resource estimates at Churumatta.

According to CMD, quality control procedures implemented during resource drilling programs included the collection of filed duplicates (second sample for the interval) at a frequency of 1 in 20 (5%), as well as the insertion of standard reference samples into the sample batches.

No CMD quality control data pertaining to the historic resource drilling programs (Pre Lachlan Star) have been located, and this has impacted on the Coffey Mining resource classifications. Coffey Mining however has taken into consideration the affirmative results from current reconciliations as detailed in Appendix E and in addition previous global production data since 1995 described in Table 6.3\_1 and Table 6.3\_2, and is discussed further in Section 12. Coffey Mining notes that new quality control procedures adopted by Lachlan Star in January 2011 require the insertion of a certified standard at a rate of 1 in 30 for all resource drilling.

## 12 DATA VERIFICATION

While no definitive and detailed quality control data has been located by Coffey Mining for the historic drilling (pre Lachlan Star) during the site visit and estimation studies, verification of the drilling data is possible and has been completed based on reconciliation studies completed using the production data (mining and plant data). Globally, the drillhole data assay data, and the grade estimation tenor, compare favourably with the production grade control data and plant production data when modifying factors such as recovery and ore loss and dilution are applied. Reconciliation of the current resource and reserve estimates versus production is presented as Appendix E, with this information supporting the overall veracity of the drillhole assaying. Coffey Mining notes that this reconciliation while broadly is in agreement with grade estimation tenor is limited to the location of the ore source, as some additional material is defined by grade control outside the resource boundaries.

### 12.1 Assessment of Quality Control Data

No quality control data directly associated with the historic mineral resource database have been located.

The post Lachlan Star ownership has resulted in the application of an extensive QA/QC programme for the 2011 and 2012 drill programmes. Dependant on the exploration phase and the data type (RC or Diamond drilling) the quality control data available for assessment includes the following:

- Standards (independently submitted commercial standards)
- Blanks (previously assayed material returning less than detection assays)
- Field Duplicates (pulp duplicates; a 50g sample from a second 200g pulp split)
- Pulp Repeats (a second 25g sub-sample from the original 200g pulp split)
- Umpire Assay (Use of an independent laboratory Actilabs to verify the Geoanalytica laboratory data)

The quality control data of drilling used in the mineral resource estimation has been assessed statistically using a number of comparative analyses for each dataset. The objectives of these analyses were to determine relative precision and accuracy levels between various sets of assay pairs and the quantum of relative error. The results of the statistical analyses are analysed using summary plots, which include the following:

- *Thompson and Howarth Plot*, showing the mean relative percentage error of grouped assay pairs across the entire grade range, used to visualise precision levels by comparing against given control lines.
- *Rank % HARD Plot*, which ranks all assay pairs in terms of precision levels measured as half of the absolute relative difference from the mean of the assay pairs (% HARD), used to visualise relative precision levels and to determine the percentage of the assay pairs population occurring at a certain precision level.

- *Mean vs. % HARD Plot*, used as another way of illustrating relative precision levels by showing the range of % HARD over the grade range.
- *Mean vs. %HRD Plot* is similar to the above, but the sign is retained, thus allowing negative or positive differences to be computed. This plot gives an overall impression of precision and also shows whether or not there is significant bias between the assay pairs by illustrating the mean percent half relative difference between the assay pairs (mean % HRD).
- *Correlation Plot* is a simple plot of the value of assay 1 against assay 2. This plot allows an overall visualisation of precision and bias over selected grade ranges. Correlation coefficients are also used.
- *Quantile-Quantile (Q-Q) Plot* is a means where the marginal distributions of two datasets can be compared. Similar distributions should be noted if the data is unbiased.
- *Standard Control Plot* shows the assay results of a particular reference standard over time. The results can be compared to the expected value, and the  $\pm 10\%$  precision lines are also plotted, providing a good indication of both precision and accuracy over time.
- *Cusum Plots* illustrate the cumulative sum of the deviation from the expected value of a particular reference standard or from the mean of the assays over time. These plots are used to determine direction and severity of bias, and to illustrate changes in grade over time.

### 12.1.1 External Standards

CMD submitted commercial standards sources from commercial company Geostats, Australia that represent the anticipated grade range of the deposits being drilled. The standards cover the assaying for exploration completed during the 2011 - 2012 resource drilling programme. The submitted commercial Geostats standards and the accepted mean values are provided in Table 12.1.1\_1.

<b>Table 12.1.1_1</b>		
<b>CMD Gold Mine</b>		
<b>Au Standard Analytical Reference Material – Certified Values</b>		
<b>Standard</b>	<b>Expected Mean Value (Au ppm)</b>	<b>Range</b>
G308-1	0.23	0.21 – 0.25
G907-1	0.79	0.74 – 0.84
G308-3	2.50	2.39 – 2.61
GLG307-1(Blank)	<0.01	<0.01 – 0.03
G904-6	0.36	0.34 – 0.38
G907-2	0.89	0.83 – 0.95
G910-7	0.51	0.48-0.54
G910-1	1.42	1.36 – 1.48

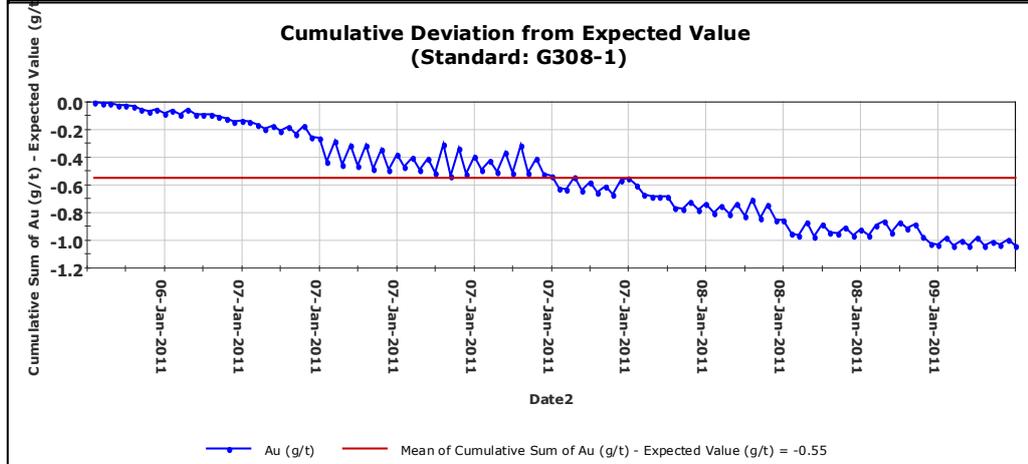
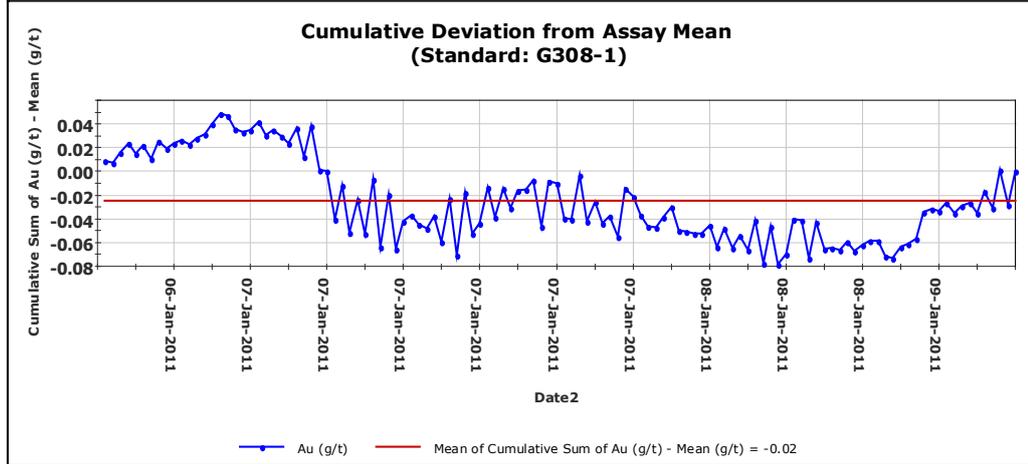
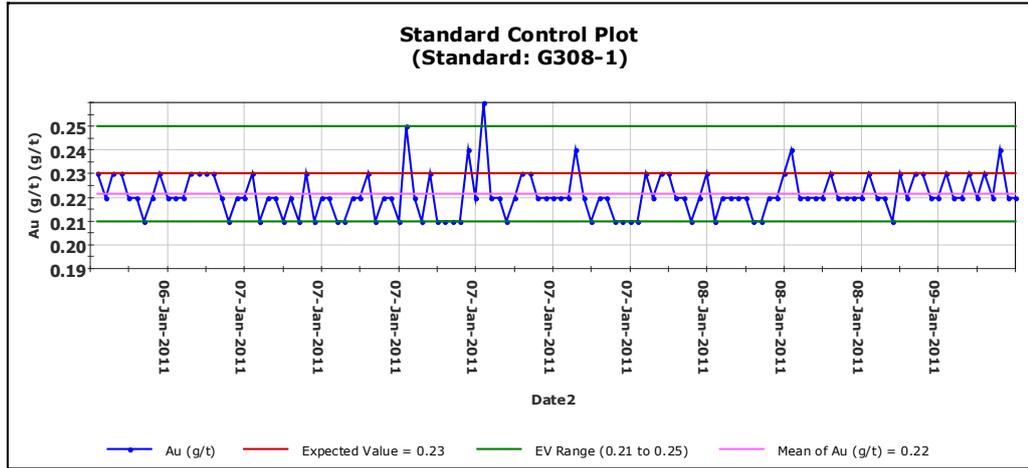
Results for 1260 separate analyses were statistically assessed. As displayed in Table 12.1.1\_2, the vast majority of the submitted standards reported within the accepted 10% tolerance. Generally low biases are evident, indicating the assaying for this period of exploration was accurate.

Coffey Mining considers the CMD submitted standards indicate the assaying completed by Activation Laboratory (Actilabs) for the 2011 and 2012 drill programmes is accurate and appropriate for gold resource estimation studies.

Table 12.1.1_2 CMD Gold Mine Standard Analytical Reference Material Assayed Statistics – Au ppm							
Standard Code	Source	No of Analyses	Minimum	Maximum	Mean	Standard Deviation	Bias
<0.01	Geostats	197	0.00	0.09	0.00	-	-
GS308-1	Geostats	120	0.21	0.26	0.22	0.01	-3.77%
G907-1	Geostats	111	0.71	0.84	0.78	0.02	-1.77%
G308-3	Geostats	102	2.27	2.68	2.46	0.07	-1.60%
GLG307-1	Geostats(Blank)	246	<0.01	0.36	0.01	0.03	+48.78%
G904-6	Geostats	140	0.01	1.54	0.35	0.11	-3.23
G907-2	Geostats	139	0.23	1.03	0.86	0.08	-3.44
G910-7	Geostats	128	0.01	0.63	0.49	0.07	-4.09
G910-1	Geostats	77	0.82	1.54	1.41	0.09	-0.74

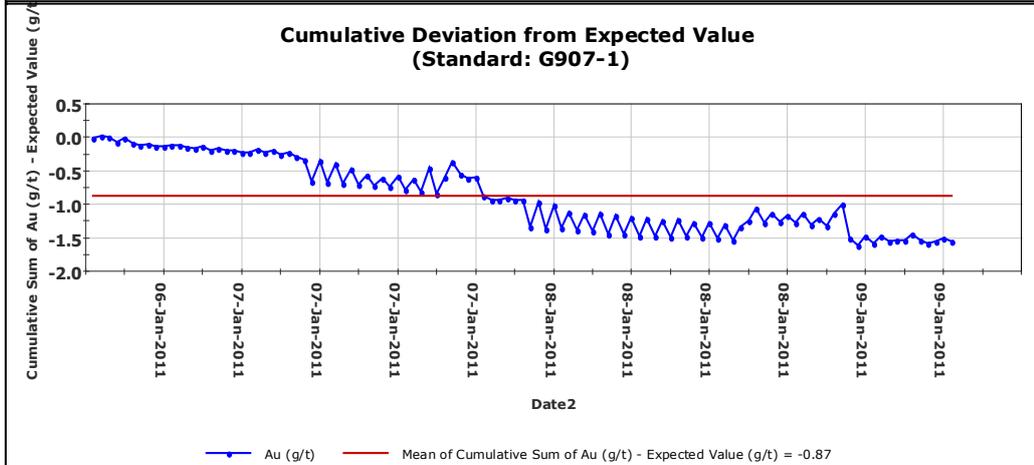
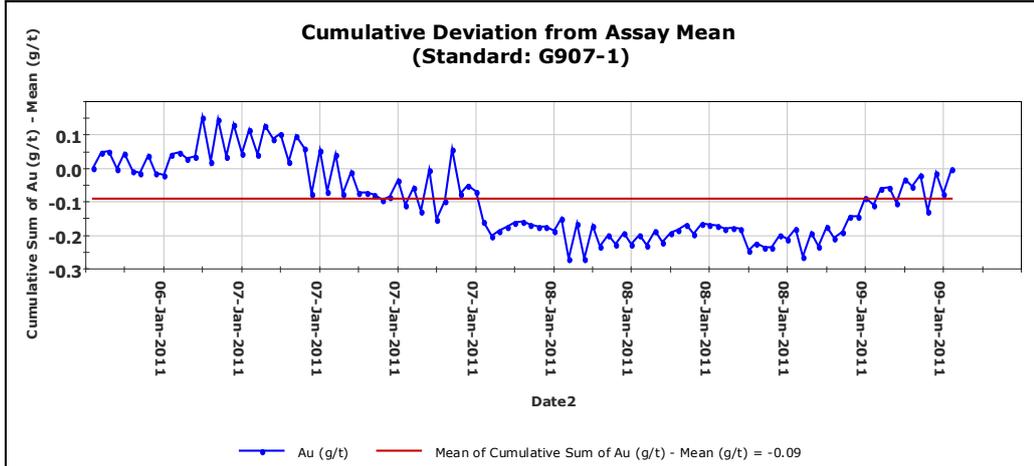
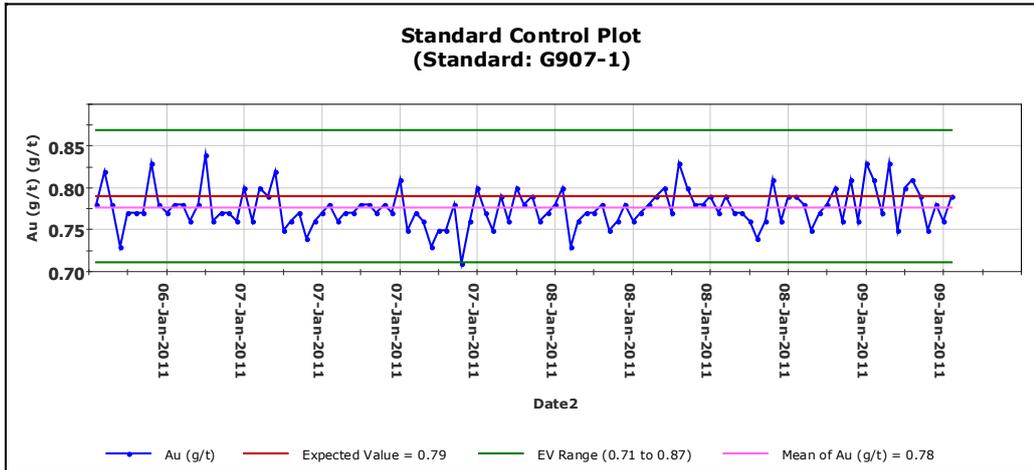
**Figure 12.1.1\_1  
CMD - Standard G308-1**

Standard:	G308-1	No of Analyses:	120
Element:	Au (g/t)	Minimum:	0.21
Units:		Maximum:	0.26
Detection Limit:		Mean:	0.22
Expected Value (EV):	0.23	Std Deviation:	0.01
E.V. Range:	0.21 to 0.25	% in Tolerance	99.17 %
		% Bias	-3.77 %
		% RSD	3.95 %



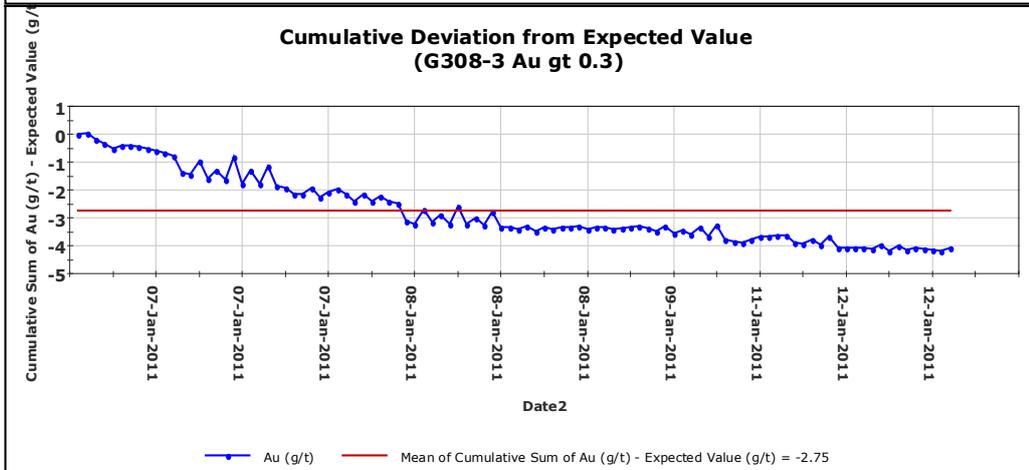
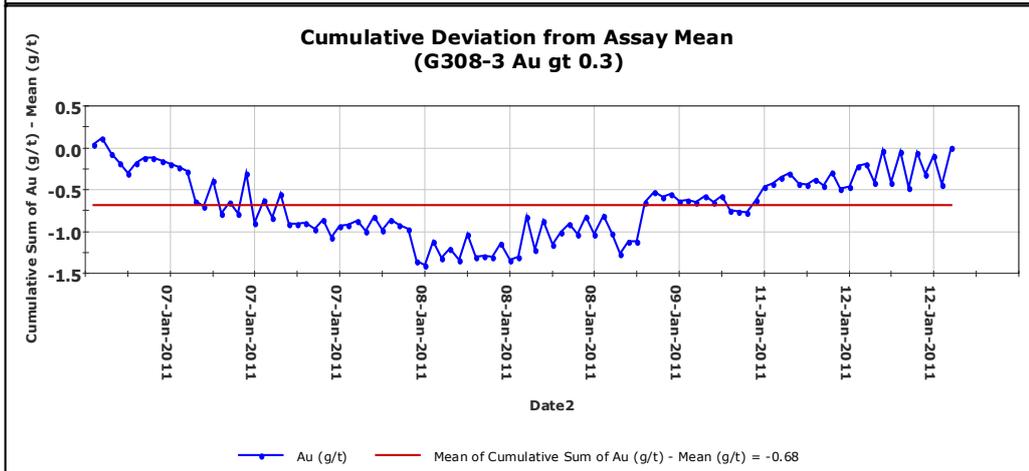
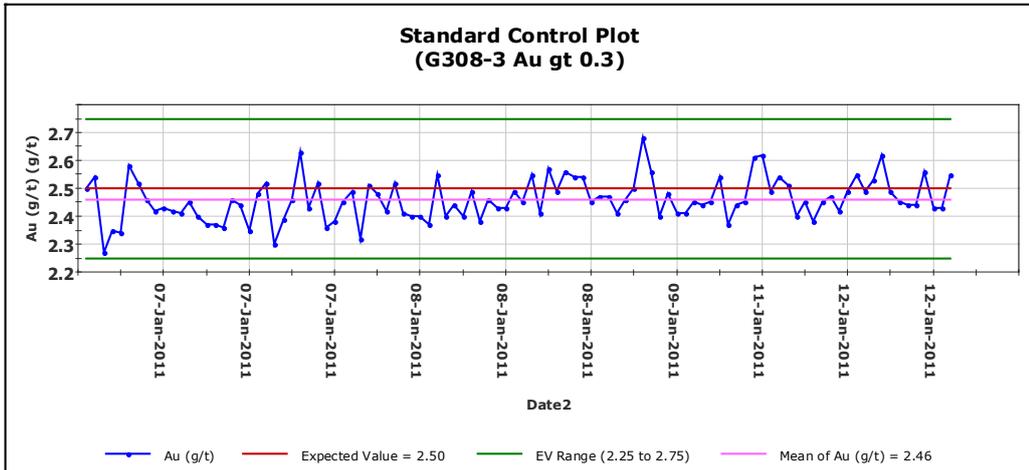
**Figure 12.1.1\_2**  
**CMD - Standard G907-1**

Standard:	G907-1	No of Analyses:	111
Element:	Au (g/t)	Minimum:	0.71
Units:		Maximum:	0.84
Detection Limit:		Mean:	0.78
Expected Value (EV):	0.79	Std Deviation:	0.02
E.V. Range:	0.71 to 0.87	% in Tolerance	99.10 %
		% Bias	-1.77 %
		% RSD	2.95 %



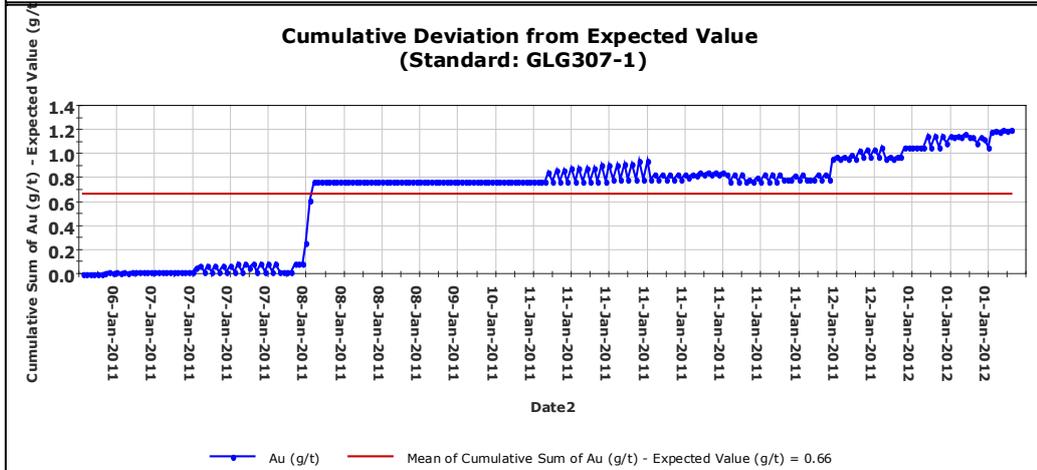
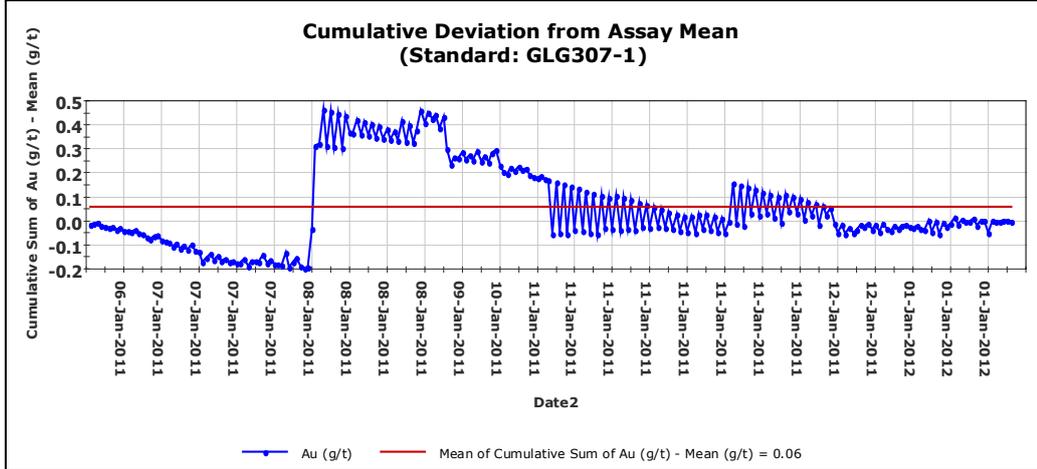
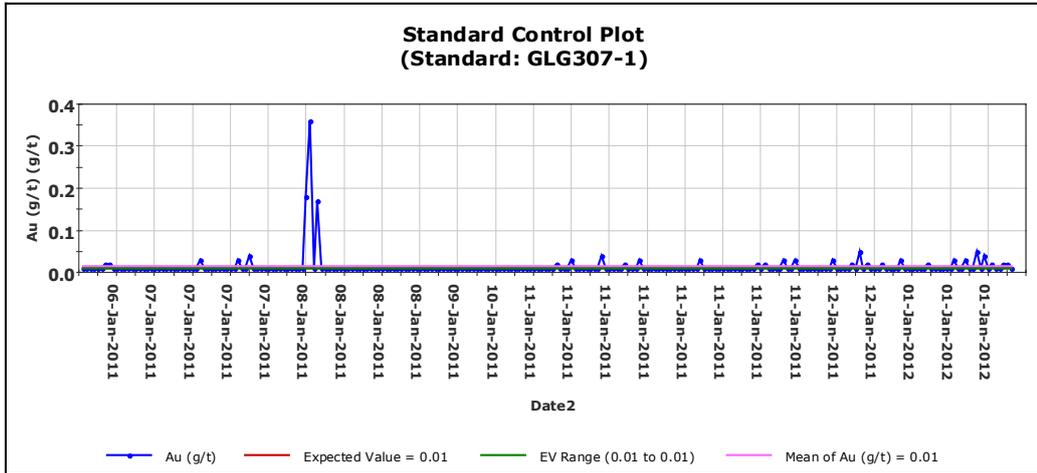
**Figure 12.1.1\_3  
CMD - Standard 308-3**

Standard:	G308-3	No of Analyses:	102
Element:	Au (g/t)	Minimum:	2.27
Units:		Maximum:	2.68
Detection Limit:		Mean:	2.46
Expected Value (EV):	2.50	Std Deviation:	0.07
E.V. Range:	2.25 to 2.75	% in Tolerance	100.00 %
		% Bias	-1.60 %
		% RSD	3.01 %



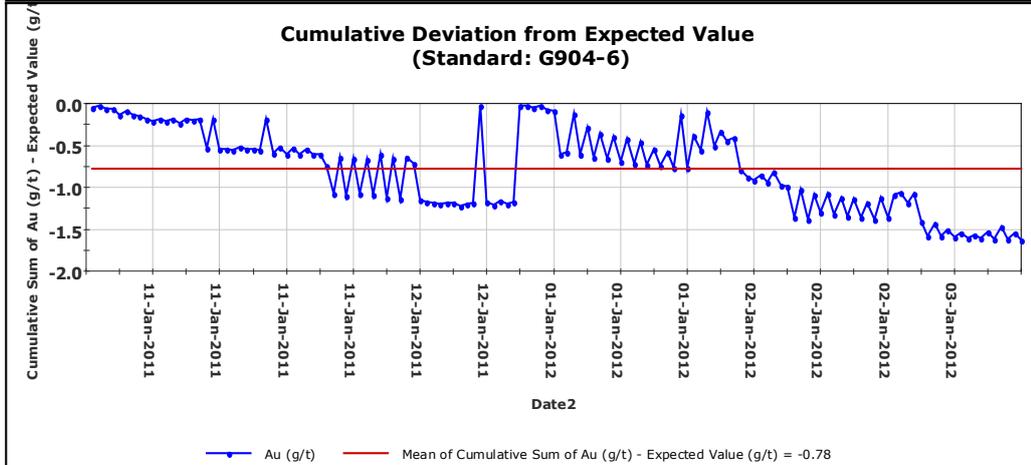
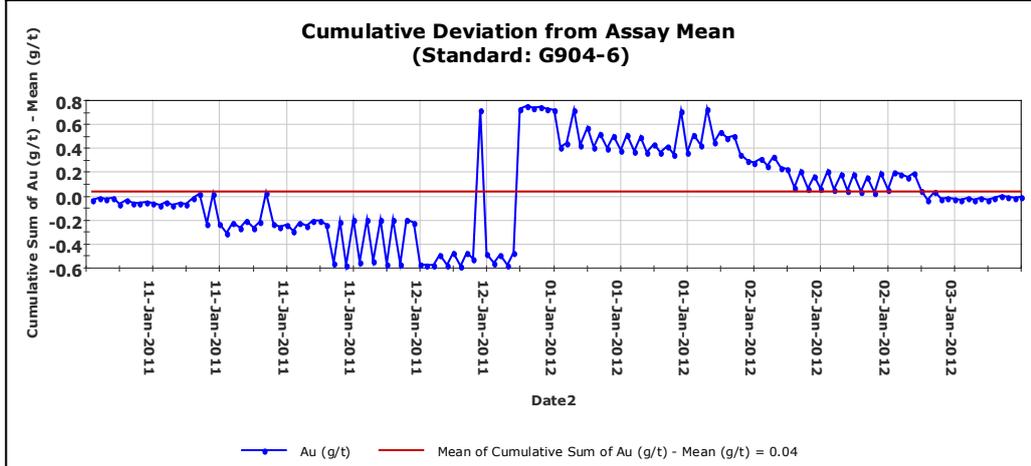
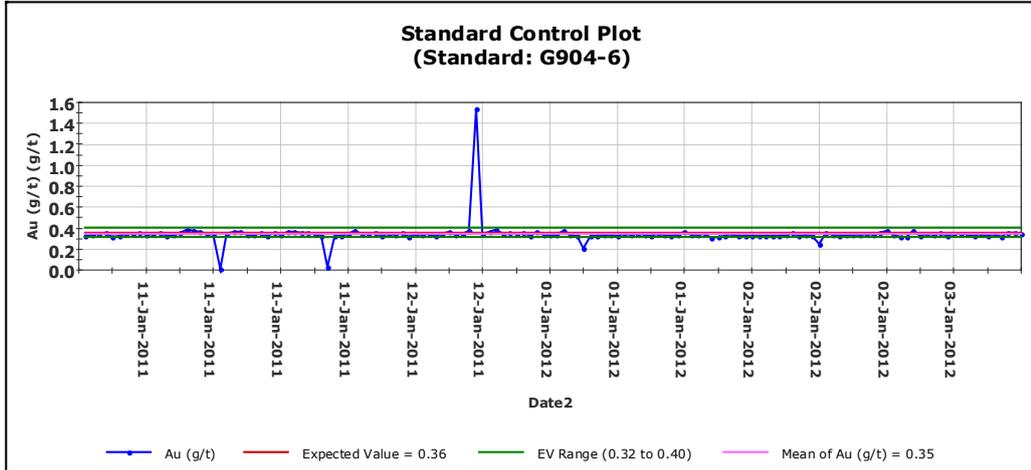
**Figure 12.1.1\_4**  
**CMD – Standard: GLG307-1**

Standard:	GLG307-1	No of Analyses:	246
Element:	Au (g/t)	Minimum:	0.01
Units:		Maximum:	0.36
Detection Limit:		Mean:	0.01
Expected Value (EV):	0.01	Std Deviation:	0.03
E.V. Range:	0.01 to 0.01	% in Tolerance	86.99 %
		% Bias	48.78 %
		% RSD	183.19 %



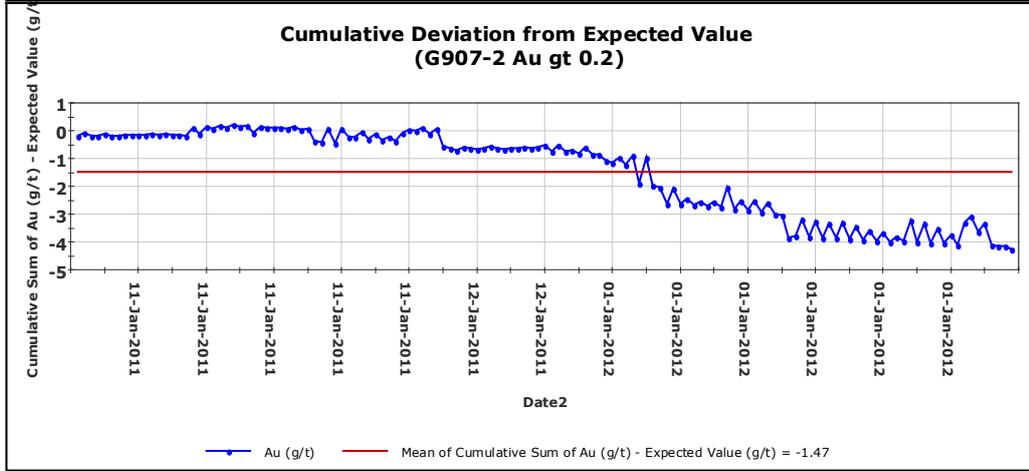
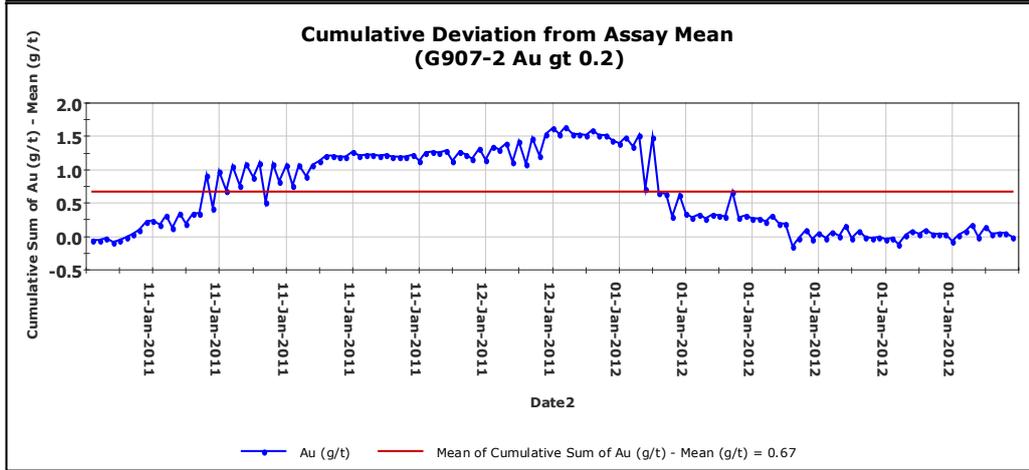
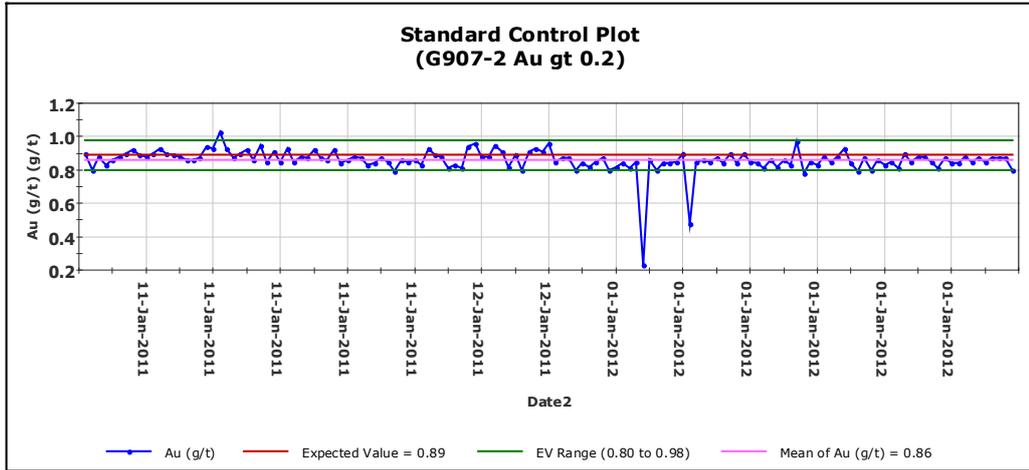
**Figure 12.1.1\_5**  
**CMD - Standard G904-6**

Standard:	G904-6	No of Analyses:	140
Element:	Au (g/t)	Minimum:	0.01
Units:		Maximum:	1.54
Detection Limit:		Mean:	0.35
Expected Value (EV):	0.36	Std Deviation:	0.11
E.V. Range:	0.32 to 0.40	% in Tolerance	95.71 %
		% Bias	-3.23 %
		% RSD	31.63 %



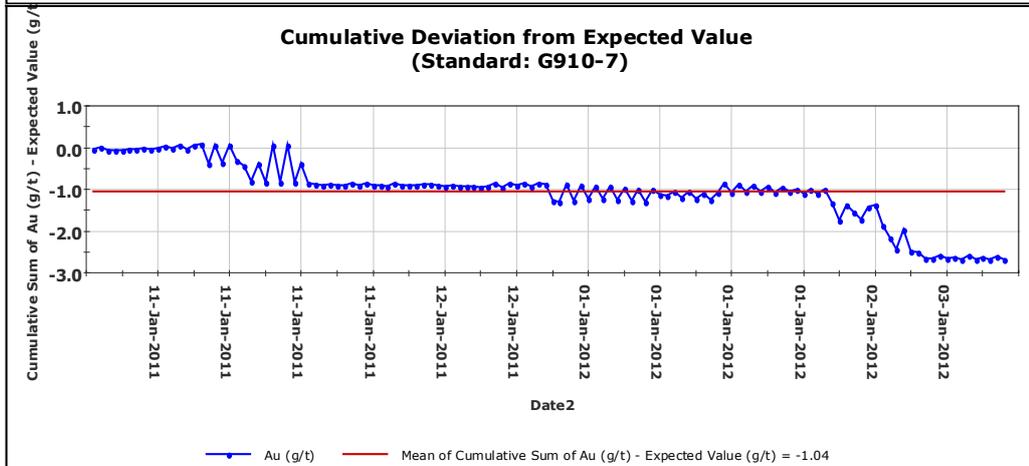
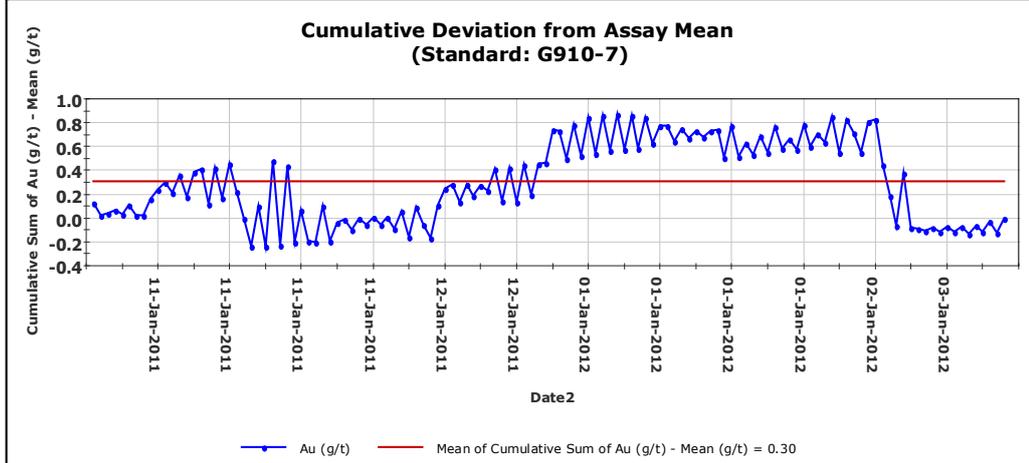
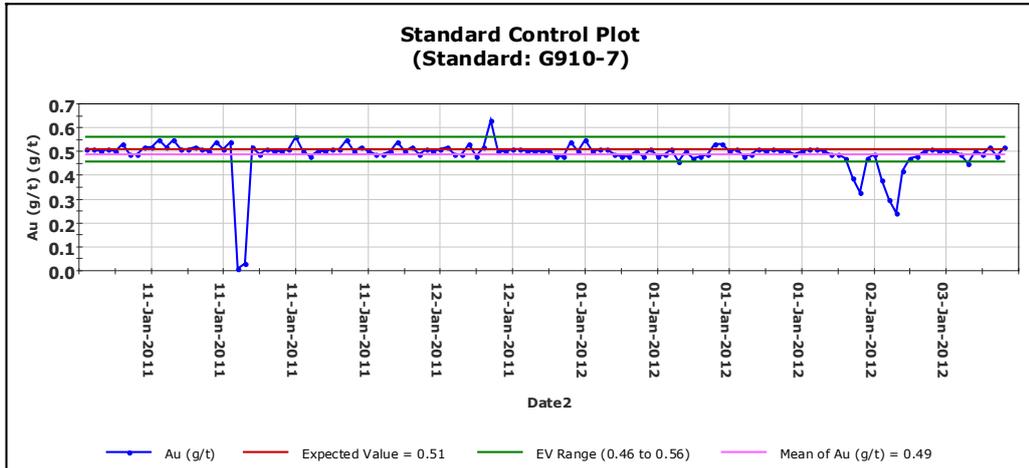
**Figure 12.1.1\_6  
CMD - Standard G907-2**

Standard:	G907-2	No of Analyses:	139
Element:	Au (g/t)	Minimum:	0.23
Units:		Maximum:	1.03
Detection Limit:		Mean:	0.86
Expected Value (EV):	0.89	Std Deviation:	0.08
E.V. Range:	0.80 to 0.98	% in Tolerance	90.65 %
		% Bias	-3.44 %
		% RSD	8.78 %



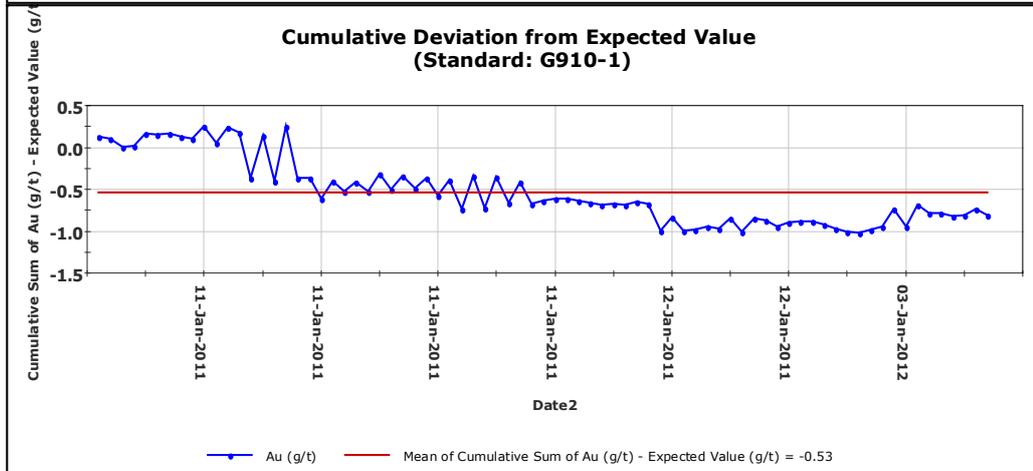
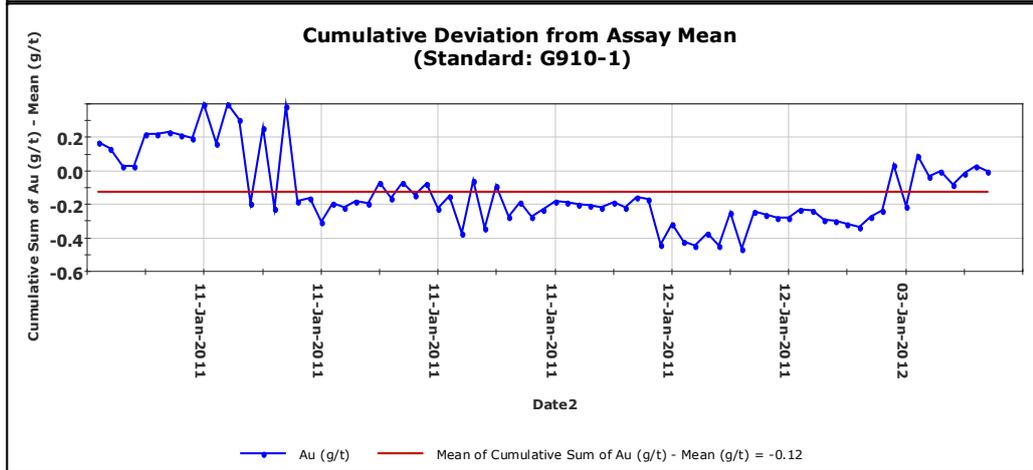
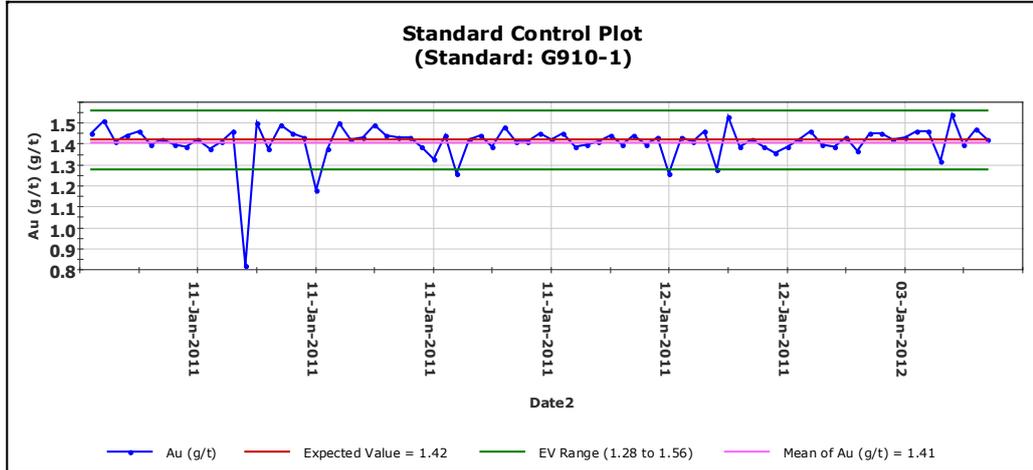
**Figure 12.1.1\_7  
CMD - Standard G910-7**

Standard:	G910-7	No of Analyses:	128
Element:	Au (g/t)	Minimum:	0.01
Units:		Maximum:	0.63
Detection Limit:		Mean:	0.49
Expected Value (EV):	0.51	Std Deviation:	0.07
E.V. Range:	0.46 to 0.56	% in Tolerance	92.19 %
		% Bias	-4.09 %
		% RSD	14.87 %



**Figure 12.1.1\_8  
CMD - Standard G910-1**

Standard:	G910-1	No of Analyses:	77
Element:	Au (g/t)	Minimum:	0.82
Units:		Maximum:	1.54
Detection Limit:		Mean:	1.41
Expected Value (EV):	1.42	Std Deviation:	0.09
E.V. Range:	1.28 to 1.56	% in Tolerance	94.81 %
		% Bias	-0.74 %
		% RSD	6.27 %



### 12.1.2 Field Duplicates

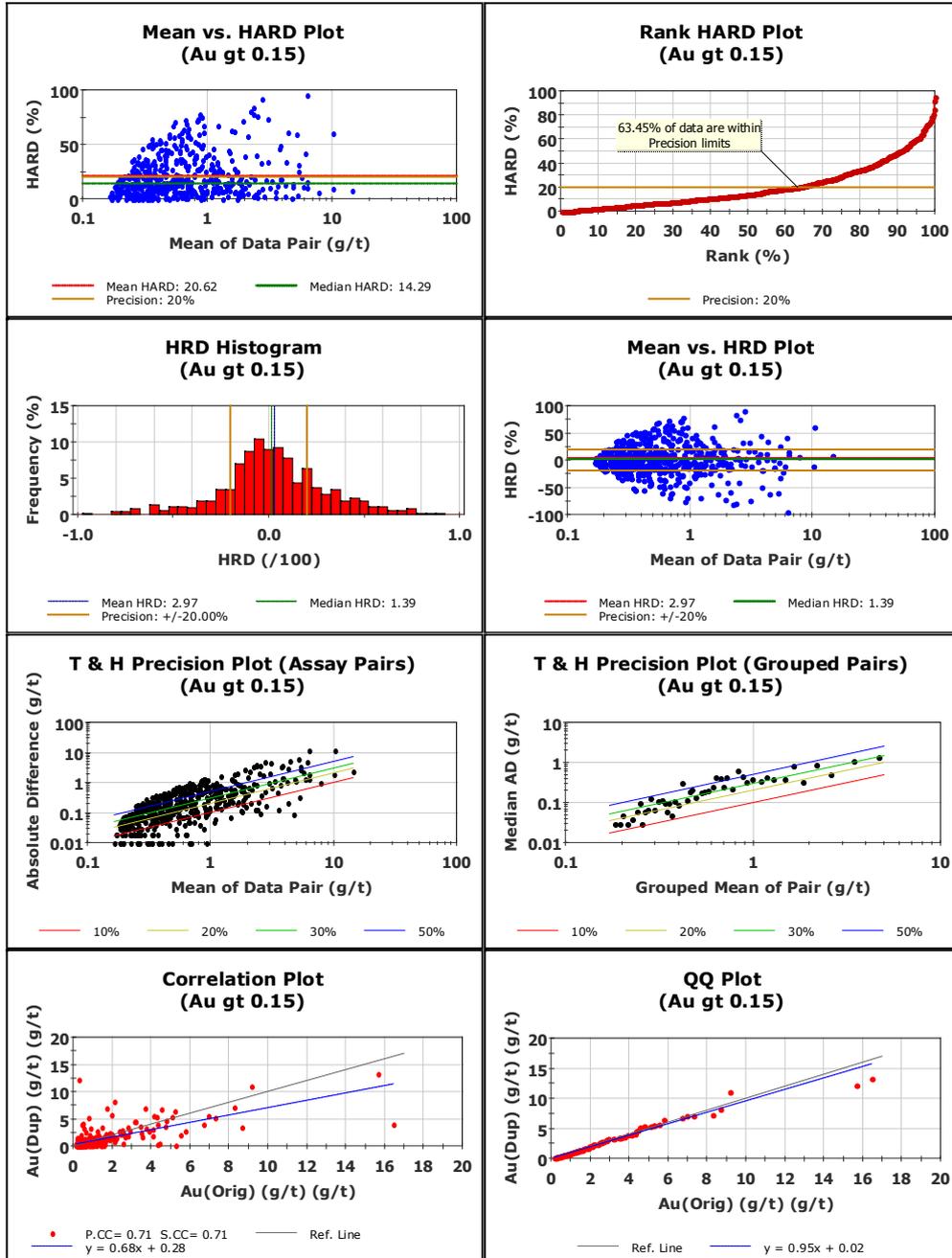
A total of 550 field duplicate pairs were analysed greater than 0.15 g/t Au. Summary statistics are presented in Table 12.1.2\_1.

Table 12.1.2_1 CMD Gold Mine Field Duplicate Assay Statistics						
Standard Code	No of Analyses	Minimum	Maximum	Mean	Standard Deviation	Co-Efficient of Variation
Original	550	0.16	16.47	0.94	1.49	1.58
Duplicate	550	0.16	13.35	0.92	1.43	1.56

The field duplicate comparative dataset shows acceptable repeatability with 64% of paired data plotting within the 20% accepted HARD precision limits. The means for both the original and the duplicate assays are similar.

Figure 12.1.2\_1  
 CMD – Field Duplicates  
 (Au gt 0.15)

	Au(Orig) (g/t)	Au(Dup) (g/t)	Units		Result
No. Pairs:	550	550		Pearson CC:	0.71
Minimum:	0.16	0.16	g/t	Spearman CC:	0.71
Maximum:	16.47	13.35	g/t	Mean HARD:	20.62
Mean:	0.94	0.92	g/t	Median HARD:	14.29
Median:	0.47	0.42	g/t	Mean HRD:	2.97
Std. Deviation:	1.49	1.43	g/t	Median HRD:	1.39
Coefficient of Variation:	1.58	1.56			



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### 12.1.3 Umpire Laboratory Testing

A total of 280 umpire assays were analysed by Actilabs on pulps as an umpire on the results from the Geoanalytica laboratory. Summary statistics are presented in Table 12.1.3\_1.

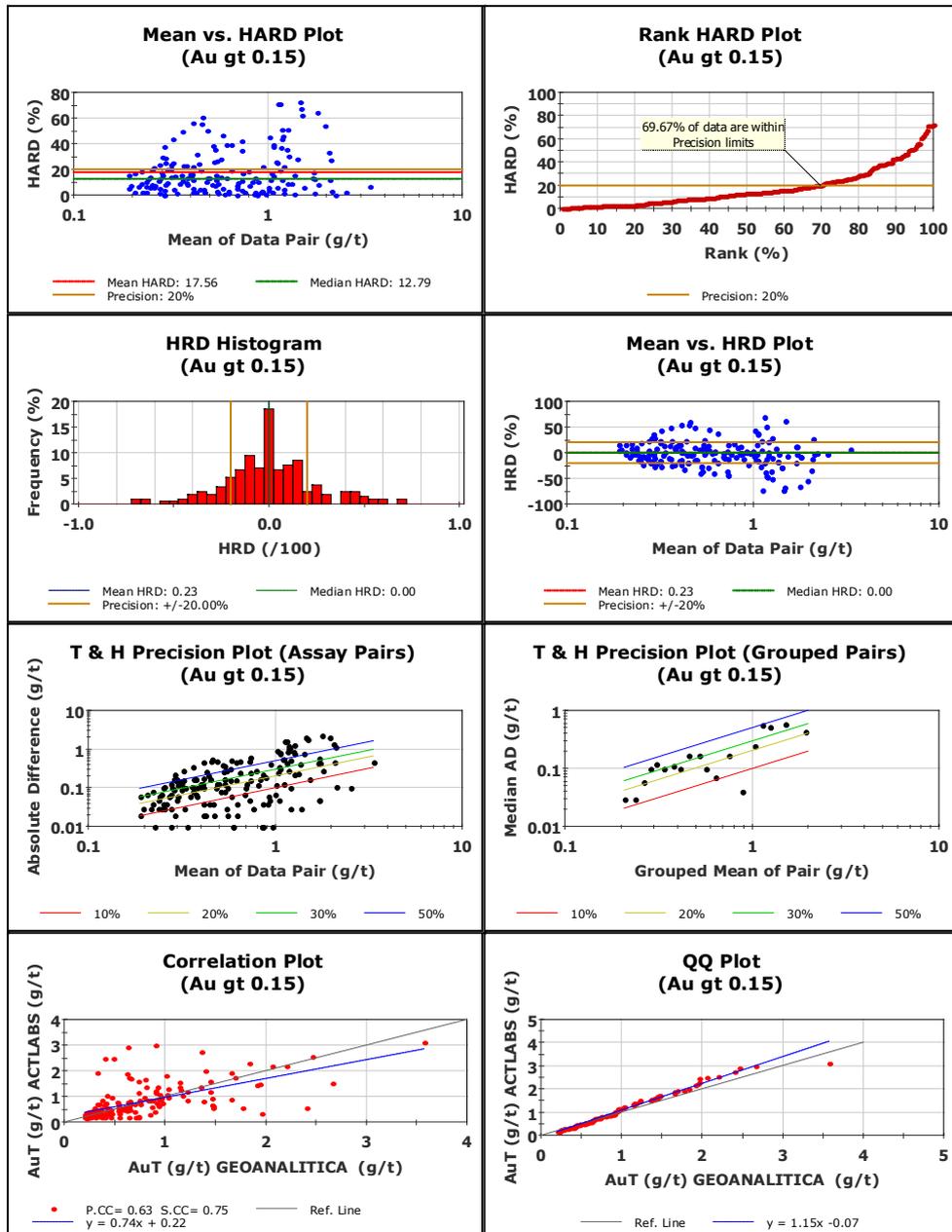
<p style="text-align: center;"><b>Table 12.1.3_1</b>  <b>CMD Gold Mine</b>  <b>Umpire Assay Statistics</b></p>						
<b>Standard Code</b>	<b>No of Analyses</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Co-Efficient of Variation</b>
Original	280	0.01	3.67	0.57	0.56	0.96
Duplicate	280	0.01	6.57	0.59	0.71	1.20

The Umpire assay comparative dataset shows acceptable repeatability with 70% of paired data plotting within the 20% accepted HARD precision limits greater than 0.15 g/t Au. The means for both the Geoanalytica and the Actilabs assays are similar.

Figure 12.1.3\_1  
CMD – Field Duplicates

### Umpire Geoanalytica vs Actilabs (Au gt 0.15)

	AuT (g/t) GEOANALI TICA	AuT (g/t) ACTLABS	Units		Result
No. Pairs:	211	211		Pearson CC:	0.63
Minimum:	0.20	0.16	g/t	Spearman CC:	0.75
Maximum:	3.57	3.11	g/t	Mean HARD:	17.56
Mean:	0.69	0.73	g/t	Median HARD:	12.79
Median:	0.52	0.49	g/t	Mean HRD:	0.23
Std. Deviation:	0.53	0.62	g/t	Median HRD:	0.00
Coefficient of Variation:	0.77	0.85			



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### Summary of Quality Control Data

The key points from the quality control review include:

- Commercial standards have been submitted by CMD for the 2011 and 2012 drill programs, with the available standards indicating that acceptable accuracy was achieved.
- Umpire Laboratory duplicates indicate acceptable levels of accuracy were achieved in assaying by Actlabs and Geoanalytica.
- The CMD quality control data indicate that acceptable levels of accuracy were achieved in sampling and assaying in the 2011 and 2012 drill programmes.

## **12.2 Assessment of Project Database**

Current drillhole data and the historic databases is managed onsite at the CMD Gold Mine by a dedicated database manager who is proficient with the database software.

The supplied drilling data for each deposit were reviewed and validated by Coffey Mining prior to being finalized into an appropriate format for resource evaluation.

The following general activities were undertaken during database validation:

- Cross check total hole depth and final sample depth data.
- Check for overlapping and missing sampling intervals.
- Replace less than detection limits with 0.01 values.
- Replace un-sampled intervals (blanks) with -99 for exclusion from data compositing and resource estimation routines.
- Check drillhole survey data for unusual or suspect downhole deviations.
- Check lithology and alteration codes.

Minor errors were noted in the supplied databases, which were corrected by Coffey Mining.

Coffey Mining completed an additional database validation check on site, where a selection of the top 150 assay values under 100g/t Au in the database were correlated and matched with the original assay certificates on file at the CMD Mine. The results of the validation check showed an acceptable correlation of the original assays matching the database. The current validated project databases are considered globally robust.

## 13 MINERAL PROCESSING AND METALLURGICAL TESTING

### 13.1 Introduction

The metallurgical section of this report was based on data sent by Lachlan Star in the form of spreadsheets and monthly reports from the CMD Gold Mine and the Update of Feasibility Study Report from Bechtel Corporation, dated May 1993.

The CMD Gold Mine was commissioned in 1995 and consisted of a three stage crushing and heap leach operation with a capacity of 10,850 tonnes per day producing approximately 100,000oz of gold per annum.

The crushing plant capacity was increased to 18,000tpd in 1997 with the addition of more tertiary crushing capacity. The mining operation was temporarily shut down in September 2000 due to low gold prices however the leaching of the pads continued from 2000 until 2004.

Oro Chile acquired the project and operations recommenced in March 2006. The operation was shutdown in September 2008 as the main ore sources became depleted. Exploration continued and the plant was restarted in April 2009 sourcing mineralized material from the Las Loas deposit. The throughput has since been reduced to approximately 7,000tpd due to reduced mineralized material availability.

Lachlan Star purchased the mine in December 2010, and immediately made a significant investment in expanding the exploration program for the mine. This work has not only increased the Mineral Resource, but importantly identified a very large quantity of low grade mineralisation associated with the manto geology. The current tertiary crushing and leaching operation uses an economic cut-off grade of around 0.3g/t Au. Lachlan Star commenced a program of leach trials in October 2011 to measure the achievable recovery for different crushing configurations. This test work has focussed on two separate processes:

- A coarse crushed leaching trial, consisting of ore crushed through the primary and secondary crusher to a size of approximately 35mm, commenced on October 9, 2011; and
- A run of mine (ROM) dump leach trial, consisting of blasted ore without any additional crushing, commenced on October 14, 2011.

### 13.2 Metallurgy Testing and Performance

#### 13.2.1 Coarse Crush and Dump Leach Pre-Production Testwork

##### First Trial

In October 2011, Lachlan Star commenced two trials of leaching ore sourced directly from the pit, having been blasted but not crushed, and a second trial with coarse crushed ore from two stage crushing (approximately 35mm). The initial trial material was sourced from the Toro Pit area. Figure 13.2.1\_1 shows the nature of the material used for the first ROM and coarse crush leaching trials.

Figure 13.2.1\_1  
First ROM and Coarse Crush Leaching Trial

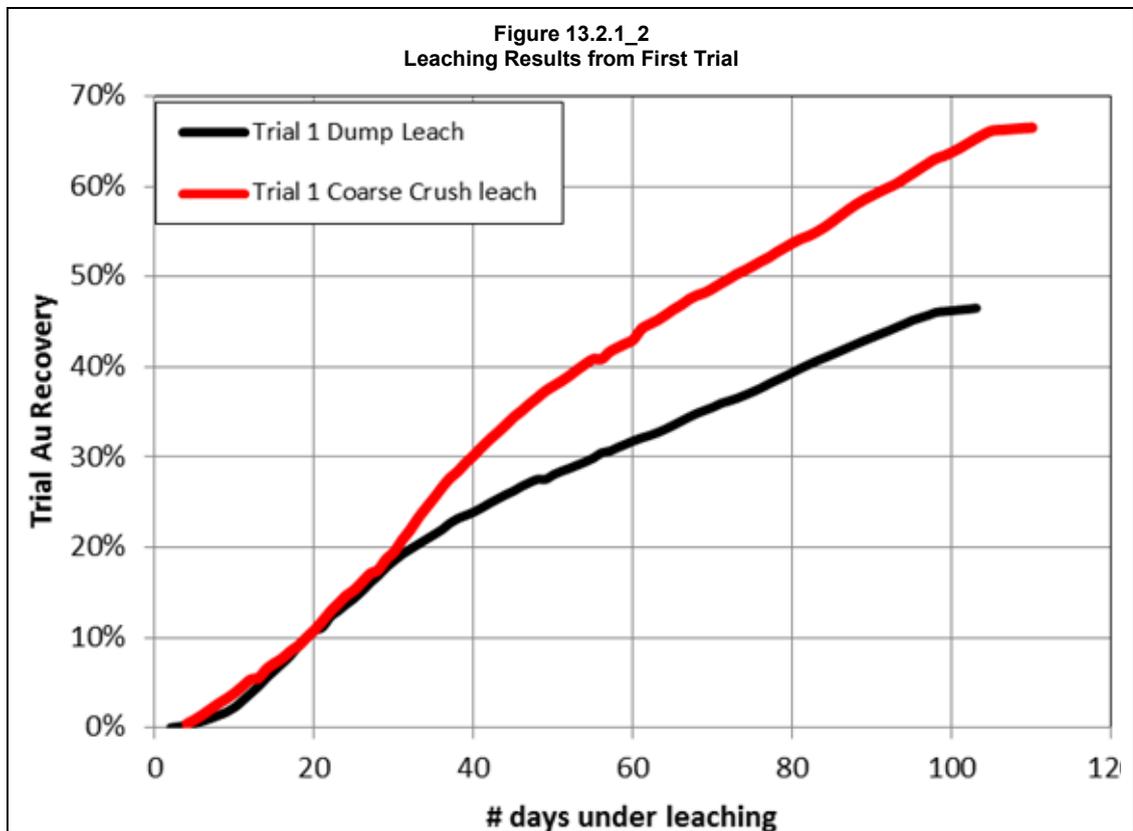


The methodology for the trials was as follows:

- Low grade mineralised material was selected for each trial based on data collected from assays of blast hole sampling. Blast hole data indicated that the average grade of mineralised rock was 0.20 g/t Au, which was below the economic cut-off grade for the normal process of leaching ore crushed to 9mm (3/8”).
- Each trial was placed on separate lined leach pads. Total material on the dump leach trial (uncrushed) was 7,328 tonnes, whilst the coarse crushed trial totalled 7,693 tonnes. Once the total tonnage had been placed on each pad, “wobbler” sprinklers were installed and each trial irrigated with cyanide solution with an application rate of 10L per m<sup>2</sup> per hour (L/m<sup>2</sup>/hr).
- Each trial was leached continuously for a period of around 100 days, with the concentration of gold in solution measured by sampling the pregnant leach solution (PLS) every 4 hours, and weighting the individual results on a daily basis to determine the quantity of gold leached in solution each day.
- At the end of both trials the remnant tailing (ripios) was crushed through the tertiary crusher to allow the systemic sampling of the ripios via the belt sampler after the tertiary crusher. This allowed the grade of gold in the ripios to be accurately measured, allowing the total gold recovery to be more accurately estimated. Back calculation of the head grade indicated that the material from both the coarse crushed and ROM trials was 0.30g/t Au

### Results of First Trial - Toro

The results of the first trial are summarised in Figure 13.2\_2, showing the recovery curve for dump leaching and 2-stage crushed leaching.



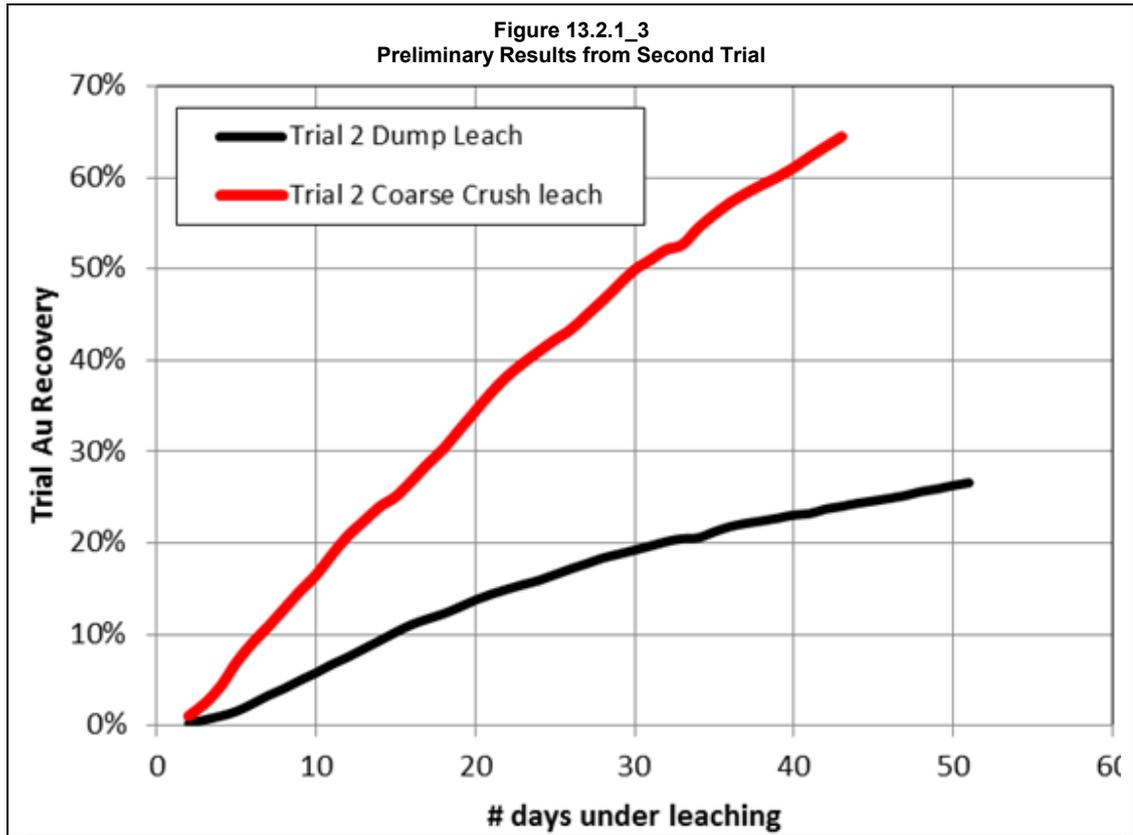
Over 103 days of constant leaching, the estimated recovery of the dump leach trial was 46.5% of the gold contained in the ore. For the material that was 2-stage crushed, the estimated recovery was 66.5%, achieved over a total leach time of 110 days.

### Second Trial - Tres Perlas

On the 31<sup>st</sup> January 2012 a second trial commenced, duplicating the methodology of the first, but using ore from Tres Perlas. The secondary crushed trial heap contained 5,470 tonnes of material at a grade of 0.26g/t, whilst the dump leach trial was 7,503 tonnes at a grade of 0.30g/t.

At the time of the completion of this report, leaching had been conducted on the uncrushed trial for a period of 53 days whilst the crushed material had been leached for 44 days.

Figure 13.2.1\_3 illustrates the preliminary results for the second leaching trial. The trial was not complete at the time of preparation of this Technical Report, with approximately another 55 days of leaching remaining. Also, the crushing of the remnant material after the end of the trial is required in order to determine the grade of the residue, which in turn allows the original head grade to be back calculated. Until this has been completed the results can only be considered preliminary in nature.



#### Comparison of first and second trials

Figure 13.2.1\_4 shows the comparison of the results of the first trial with the preliminary results for the second dump leach trials. This indicated that the leach kinetics for both dump leach trials was similar at 52 days of leaching.

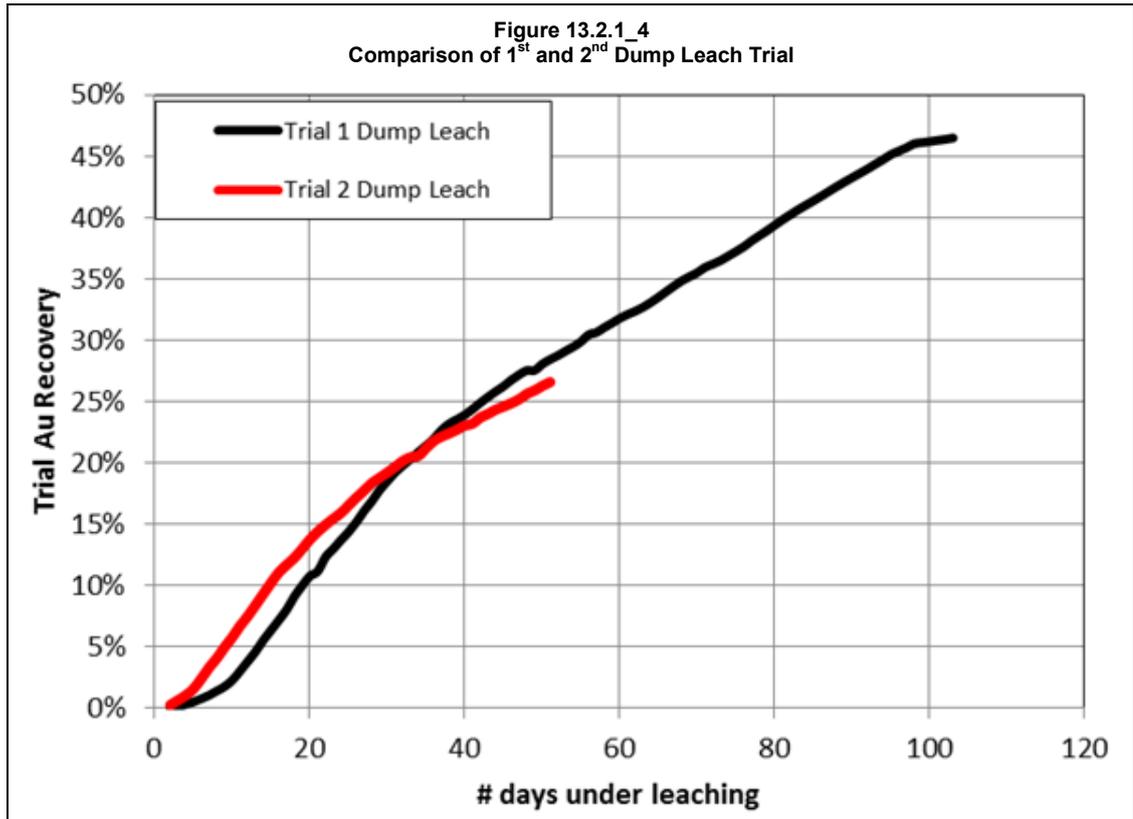
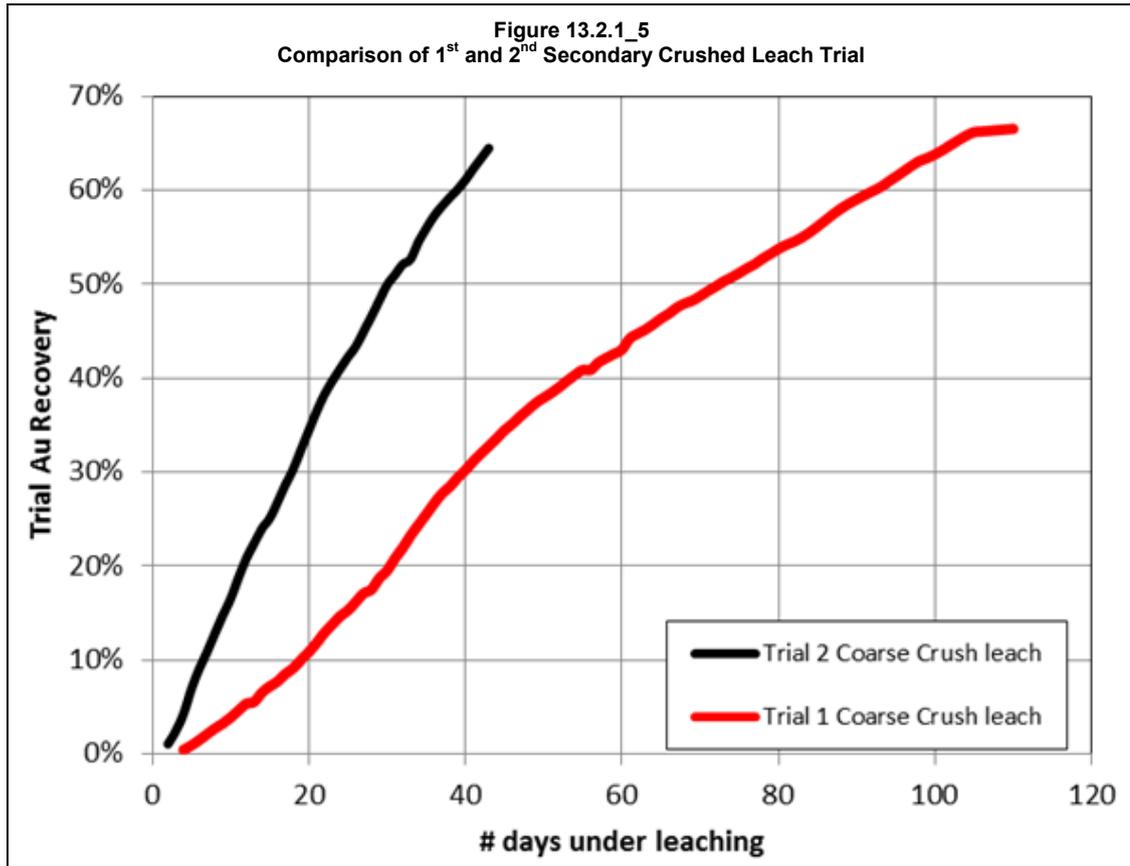


Figure 13.2.1\_5 illustrates the comparison of the secondary crushed leaching trial, with the results for the first trial on material from Toro, and the preliminary results for the second trial using material from Tres Perlas.



The difference between the results shown in Figure 13.2.1\_5 are likely a result of the fact that head grade was estimated by blast hole sampling, which may be underestimating the average grade of the trial material. The head grade will be confirmed once the residue of the trial is crushed and sampled allowing the head grade to be back calculated. The slope for the Toro test (red line) was also steeper than that shown in the graph above prior to the measurement of the grade of the ripios and determining the calculated head grade. This head grade correction is an important step in ascertaining the true process recovery

These trials indicate that there is potential to optimise the crushed size for ore stacked onto the leach pads, reducing the amount of energy and cost required to recover gold, with the aim of improving operational profitability.

### 13.2.2 Historical Pre-Production Testwork

#### Crushed Size Determination

Over the years a considerable amount of metallurgical testing has been performed with metallurgical monitoring after start of operations.

Chevron Resources completed numerous agitated and column leach tests at both CIMM and INTEC laboratories in Santiago, Chile which indicated that the mineral tested could be treated by heap leaching with recoveries of around 75% for material crushed to less than 0.5 inch (-13mm).

After CMD acquired the project it initiated column leach tests at SGS Laboratories in Santiago on oxide mineralized material and a mix of transitional and primary mineralized materials for four different size fractions. Table 13.2.2\_1 shows the results for these tests after 90 days of leaching.

The results showed that both mineralized material types appear amenable to heap leaching and that crushed size is an important determinant of recovery. The conclusion of the test work by Chevron and CMD was that heap leaching of the mineralized material would be feasible, subject to confirmation by additional testing.

<b>Table 13.2.2_1</b> <b>CMD Gold Mine</b> <b>Results of Column Tests on Oxide and Mixed mineralized material by SGS Laboratories</b>		
<b>Material</b>	<b>Crushed Size (in inches)</b>	<b>Recovery (%)</b>
Mixed	1	62.0
	1/4	67.4
	1/2	77.7
	3/8	80.3
Oxide	1	70.1
	1/4	74.0
	1/2	77.3
	3/8	87.9

### Leaching

CMD subsequently appointed INTEC-Chile to conduct numerous column leach tests to determine key operational variables such as crush size, leach time, solution application rates, reagent strengths predominantly on Tres Perlas material and bottle roll tests to determine variability of the ore within each deposit.

Although Bechtel in its feasibility study report did not specifically identify sample locations or discuss representativeness of the samples tested, it mentions that bulk samples from each deposit were tested to determine the primary operating variables and establish optimum leach conditions. Samples from the core drilling programme were tested to confirm results at depth in the deposits and bottle roll tests were conducted on samples from drill cuttings throughout each deposit both laterally and vertically to test variability of each ore deposit.

Table 13.2.2\_2 summarizes the results of bottle roll tests on the material of the various deposits at a size of -10 Tyler mesh. (-1.68mm).

Table 13.2.2_2 CMD Gold Mine Results of Bottle Roll Tests on Material of Various Deposits					
Deposit	Tests	Feed Grade (g/t Au)	Au Recovery (%)	NaCN Consumption (kg/t)	CaO Consumption (kg/t)
Tres Perlas	200	1.19	75.3	3.42	0.36
Churrumata	31	1.61	84.8	2.64	0.30
Socorro North	26	3.03	80.2	2.67	0.29
Natalia	9	2.25	84.0	1.91	0.51
Toro Oxide	2	1.66	87.6	1.95	0.54

The bottle roll tests indicated good recoveries at the chosen particle size. Table 13.2.2\_3 gives the effect of particle size on both oxide and sulphide mineralized material from Tres Perlas.

The results show that incorporating a milling step would increase the recovery of gold considerably, but also at much higher reagent consumption. Tests using gravity and flotation separation indicated an overall recovery in the mid- nineties for all deposits.

Table 13.2.2_3 CMD Gold Mine Results of Bottle Roll Tests on Oxide and Sulphide Material at Coarse and Fine Sizes					
Material	Particle Size	Au Grade (g/t)	Au Recovery (%)	NaCN Consumption (kg/t)	CaO Consumption (kg/t)
Oxide	100% -1.68mm	1.05	73.8	0.92	0.33
	60% -0.075mm	1.10	93.1	3.41	0.91
Sulphide	100% -1.68mm	1.91	88.1	0.90	0.11
	60% -0.075mm	1.95	94.3	2.59	0.28
Upper Sulfide	60% -0.075mm	1.52	85.8	2.39	0.42
Lower Sulfide	60% -0.075mm	1.34	88.2	3.15	0.31

### Conclusion

Table 13.2.2\_4 gives the metallurgical recovery as a function of crush size for ranges typically used for heap leaching.

Table 13.2.2_4 CMD Gold Mine Results of Column Tests to Determine Optimal Heap Leach Crush Size					
Parameter	Leach Column				
	C-01	C-02	C-03	C-04	C-05
Particle Size (inches)	-5	-3/4	-1/2	-3/8	-1/4
Recovery after 31 Days (%)	27.8	56.6	56.4	65.4	66.9
Cyanide Consumption (kg/t)	0.43	0.65	0.54	0.67	0.59

The conclusion drawn was that, although the -1/4 inch size gave the highest recovery, the difference with the recovery of the -3/8 inch material was too little to warrant the extra crushing cost.

Tests to determine the impact of irrigation rate for 5, 10 and 20 litres per hour per square metre concluded that the rate of 10 L/hr/m<sup>2</sup> gave the most optimal kinetics of recovery/cyanide consumption relationship with 63.3% of the gold recovered after 31 days and 0.48kg of cyanide consumed.

Tests on cyanide concentration during the curing phase indicated that 0.8kg/t gave the best results. Results for column tests on material with a gold grade of 1.14g/t to determine the optimal cyanide concentration in the leach solution are summarized in Table 13.2.2\_5.

<b>Table 13.2.2_5</b>				
<b>CMD Gold Mine</b>				
<b>The Effect of the NaCN Concentrate in the Leach Solution on Leach Performance</b>				
<b>Parameter</b>	<b>Leach Column</b>			
	<b>C-11</b>	<b>C-06</b>	<b>C-12</b>	<b>C-13</b>
NaCN Concentration in Solution (kg/t)	0.25	0.50	1.00	2.00
Gold Recovery after 31 Days (%)	65.8	63.3	67.8	68.2
NaCN Consumption (kg/t)	0.27	0.48	0.66	1.04

The results show that slightly higher recoveries are achieved at much higher cyanide consumption. The optimal concentration appears to be between 0.25kg/t and 0.50kg/t.

Tests found that a resting period in irrigation did not have any effect, positive or negative, on the leach performance, nor did the use of water from a different source than the CMD Gold Mine.

Limited work on determining the degree by which copper leaches shows that 20% of the copper dissolves into solution. As certain areas such as Tres Perlas contain up to 0.1% Cu, this would indicate that for every 1,000 tonnes leached 200 kilograms of copper will dissolve into solution. A copper recovery circuit has subsequently been added to the current flowsheet. (Refer Section 17.1)

Table 13.2.2\_6 summarizes the optimal leach conditions as established by testwork on the Tres Perlas deposit.

<b>Table 13.2.2_6</b>		
<b>CMD Gold Mine</b>		
<b>Optimal Leach Conditions</b>		
<b>Metallurgical Parameter</b>	<b>Units</b>	<b>Value</b>
Crush Size	Inch	-3/8
Solution Application Rate	L/hr/m <sup>2</sup>	10
NaCN Curing Concentration	kg/t	0.8
NaCN Solution Concentration	g/l	0.25
Leach Pile Height	Metre	8

Mineralogical investigation to determine the reasons for the variable heap leach recovery indicated a rough relationship of coarsening gold from the northeast (Tres Perlas) to the southwest Toro) and from sulphide material to oxide material. The effect of coarse gold is to slow down the kinetics of gold dissolution and to increase overall cyanide consumption. Gold was found to be included to various degrees in quartz and pyrite (insoluble) and limonite (partially soluble). The best mineralogical conditions were found to be at the Tres Perlas oxide area (87.5% free gold) and Tres Perlas sulphide area (68.4% free gold) with the other deposits having less than 50% free gold.

Mineralogical investigation of the material after leaching showed that free gold no longer existed, apart from occasional grains of partially dissolved coarse gold (up to 50 microns), indicating the efficiency of the leaching process.

Table 13.2.2\_7 reproduces the forecast gold recoveries and reagent consumptions by deposit in the feasibility study after review of all testwork results.

According to Bechtel it had not been possible to draw a grade-recovery curve to predict gold extraction for the deposits. They concluded that, because bottle roll tests could not be used to correlate gold recovery with either gold grade, rock type or deposit geometry, the estimate of recovery for the full scale operation could only be derived on an average global basis for the life of the deposit.

Deposit	Head Grade (Au g/t)	Recovery (%)	Consumption (kg/t)	
			NaCN	CaO
Tres Perlas	0.93	76	0.34	3.25
Churumata	1.32	65	0.58	
Socorro Norte	2.25	72	0.75	
Tres Perlas West	0.97	76	0.34	
Natalia	2.13	65	0.58	

### 13.2.3 Metallurgical Performance of 3-Stage Crushed Production

The operation has a substantial track record for metallurgical performance having been in operation since 1995. For heap leach operations the amount of gold recovered is a function of the cumulative amount of cyanide that it is exposed to. With cyanide in solution added by sprinkler irrigation at a rate which is set by the permeability of the heap, the cumulative amount of cyanide exposure is a function of time.

The historical irrigation rate at the CMD Gold Mine aims to average at 10 litres/hour per square metre, with a cyanide concentration of approximately 0.5kg NaCN per cubic metre of solution and an approximate alkalinity of pH 9.8.

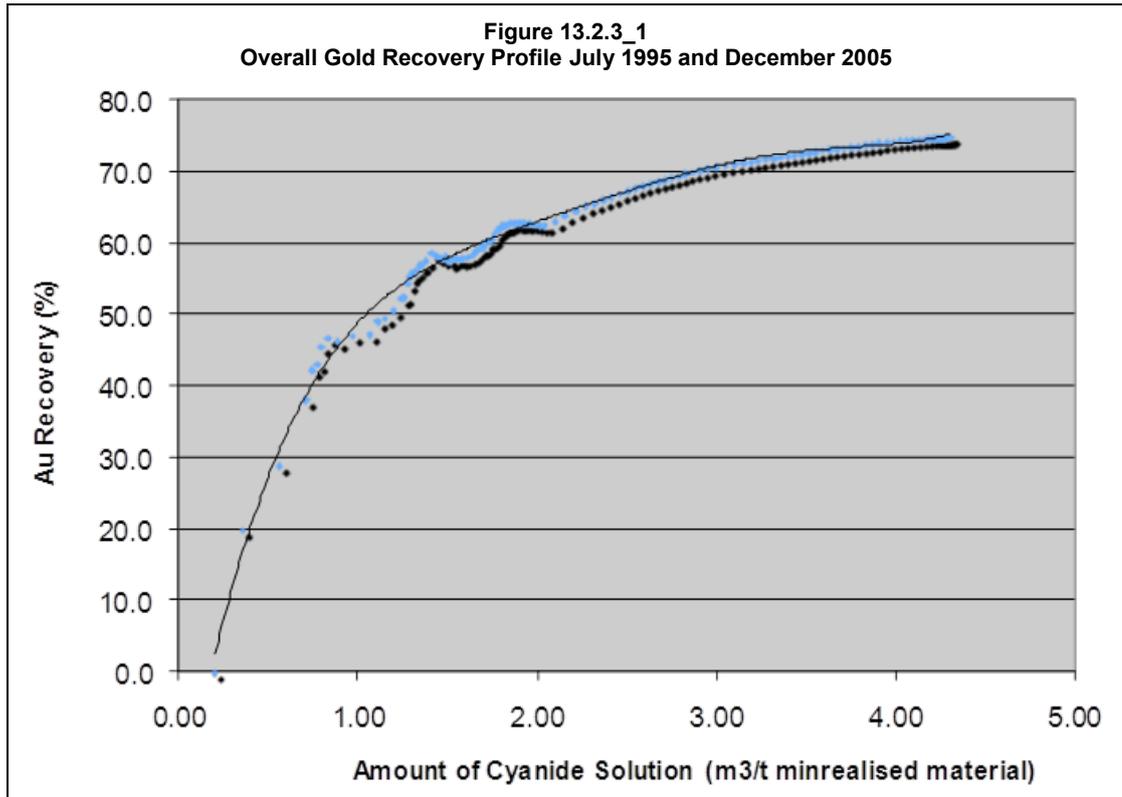
The current design criteria provided by Lachlan Star includes a target cyanide consumption of 0.5kg/t ore and is in line with the historical data. Recent production data indicates that current cyanide consumption rates are in the order of 0.65kg/t, which is a significant reduction from the very high consumption experienced when stacking of ore between older Phase 3 and Phase 4 heaps, which greatly increased the total tonnage of ore under irrigation and hence the total volume of leach solution in circulation. The reasons for this reduction were:

- the adoption of the dynamic pad concept (or on-off pad), which is discussed in detail in Section 17. The dynamic pad allows for greater efficiency in the use of cyanide; and
- an increase in overall throughput. Over 2011, cyanide addition was relatively constant, at between 7 and 8 tonnes added per day. Consequently increased throughput resulted in lower consumption per unit (kg/t).

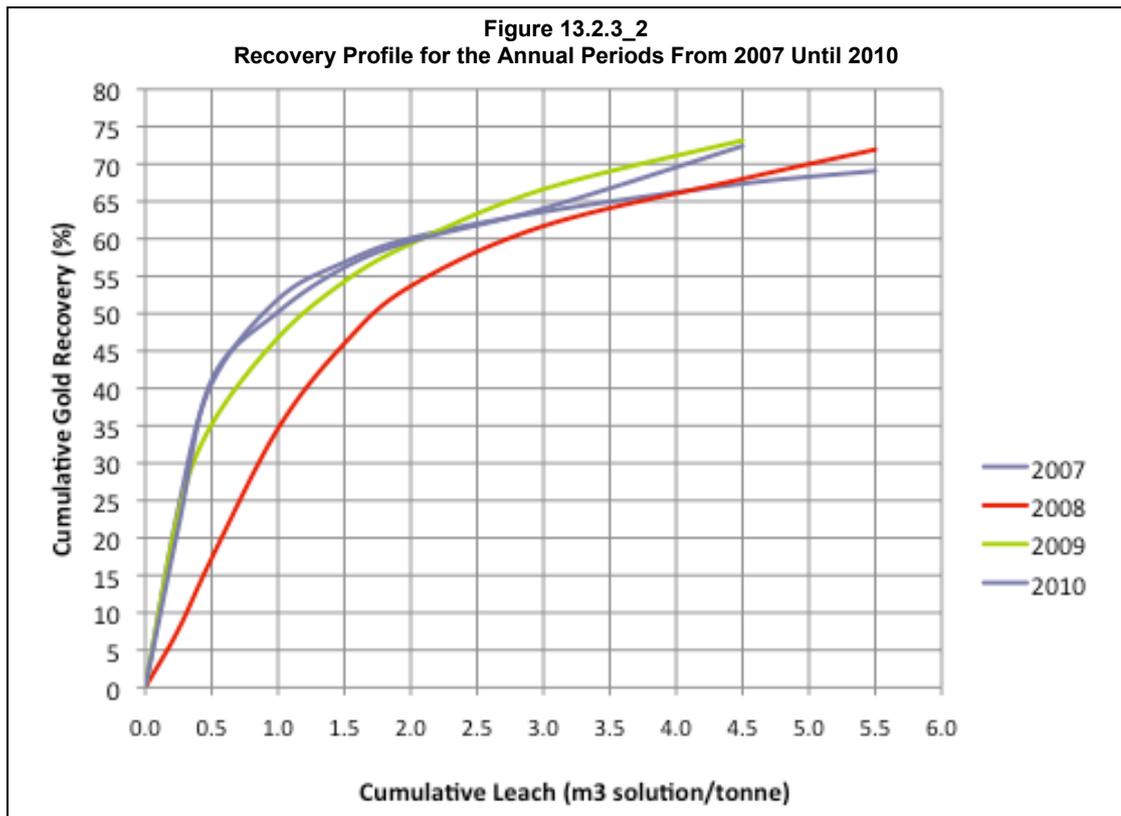
Cyanide consumption is expected to remain at a greater level than that historically achieved until the current Phase 5 stacking has reached the same level as the adjoining heaps. At this point CMD Gold Mine intends to install new pad linings over the barren heaps onto which new material will be stacked, and increase the surface area available for dynamic leaching. This will significantly reduce the volume of solution in circulation and the cyanide consumption is expected to return to the historical average. The cashflow model assumed a cyanide consumption of 1.00 kg/t of ore crushed during this intermediate period and then returns to the 0.55kg/t long term historical average.

Figure 13.2.3\_1 gives the overall recovery as a function of cumulative cyanide addition for the first production cycle between July 1995 and December 2005.

When stacking of ore stopped in December 2000, the cumulative amount of cyanide solution per tonne of ore was 2.27m<sup>3</sup>/t ore for a total recovery of 65.3%. The graph in Figure 13.2.3\_1 illustrates that an additional recovery of approximately 10% was achieved in the subsequent five years of leaching.



The kinetics of recovery is a function of many parameters, such as type of material, amount of ounces added to the stack, stacking height, number of lifts, permeability, etc. The overall profile is a composite of a number of profiles such as illustrated in Figure 13.2.3\_2 with the recovery profiles for the material stacked in the years 2007 until 2010 as per column leach tests on composites for those years.

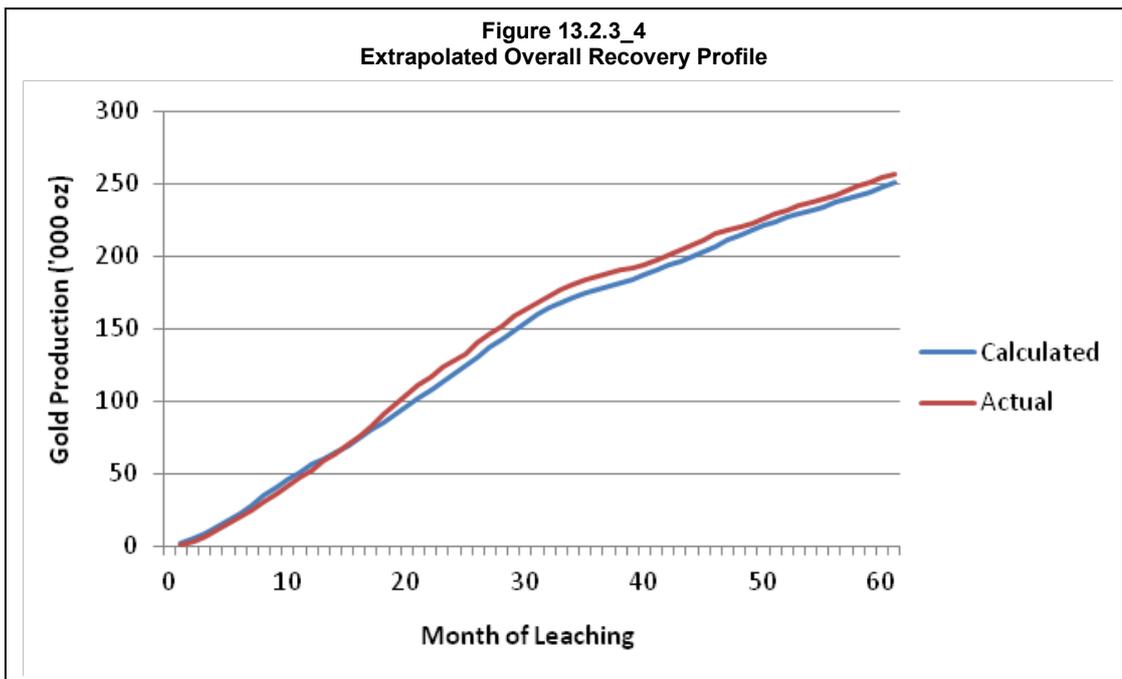
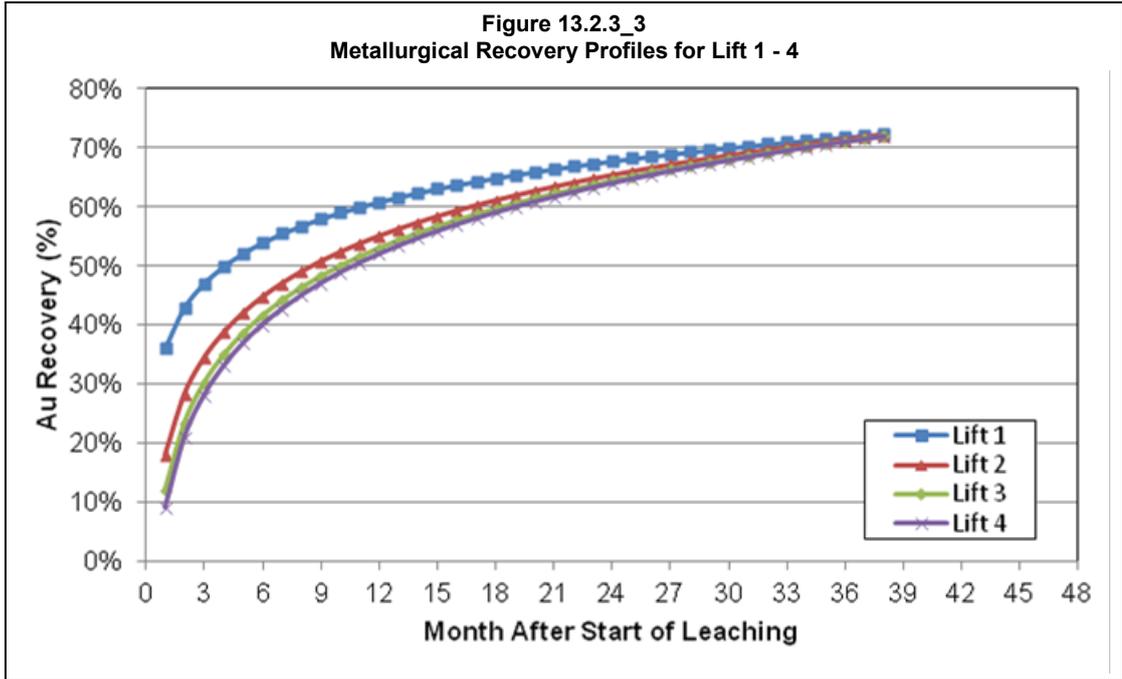


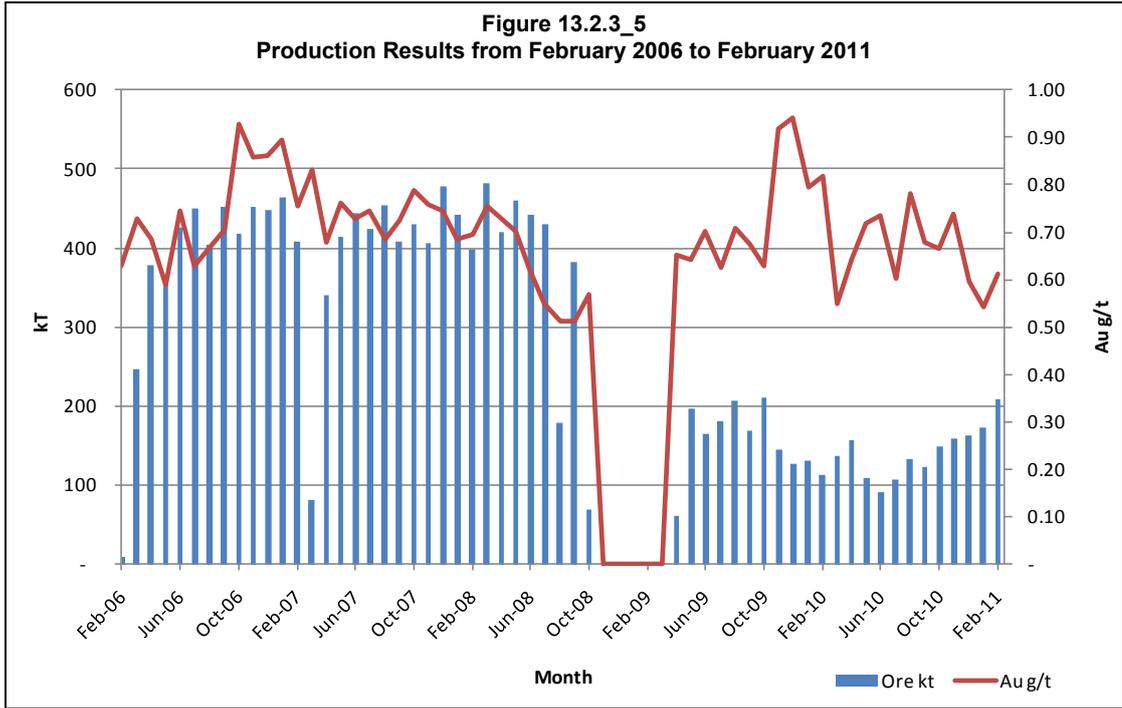
From the discussion under the previous metallurgical testwork results and the different recovery curves for the years as shown in the graphs above, it is apparent that the various deposits show differences in amenability to heap leaching and the recovery profile for the material currently being stacked may well differ from the historical profiles. Whereas Phases I to IV had material stacked that was exclusively from the mantos in the Old Pits, Phase V has important amounts of vein material from the Las Loas pits. However, the graphs show that the final recoveries do not differ much from each other, provided they have similar crushed grades.

The metallurgical department of CMD has over the years build up a database on the kinetics of the process and Figure 13.2.3\_3 gives the relationships for average recovery over time for the various lifts.

The overall accuracy of these relationships has been verified against historical production performance from April 2006 until March 2011. Figure 13.2.3\_4 shows the actual gold recovered in ounces compared to calculated based on the recovery curves in the preceding diagram.

Production for the period February 2006 through February 2011 is shown below in Figure 13.2.3\_5. The decrease in monthly production since the shutdown in March 2009 is due to the smaller scale mining equipment utilized in the Las Loas deposit. Plant throughput for the period was approximately 5,000tpd (currently 7,000tpd as more ore is sourced from the Old Pits). The average gold grade is similar before and after the shutdown period.





## **14 MINERAL RESOURCE ESTIMATES**

### **14.1 Tres Perlas Deposit**

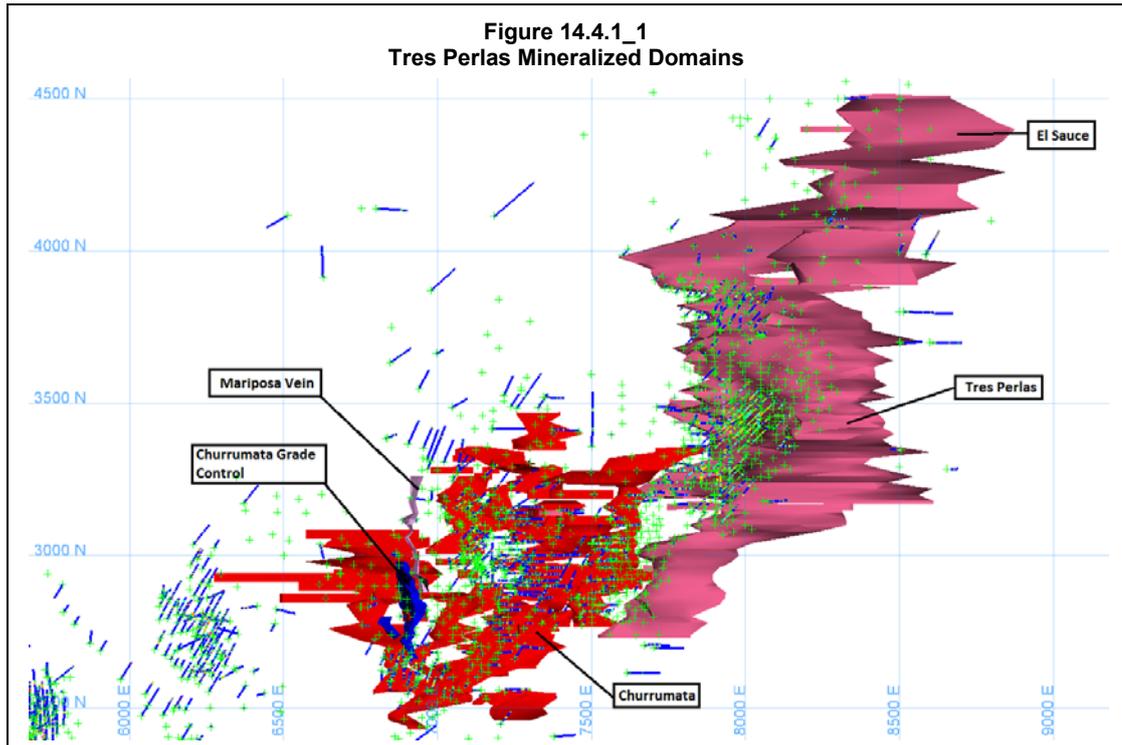
The updated April 2012 Tres Perlas mineralisation model now contains the previously separately reported (Independent Technical Report 2011) and modelled Churrumata and El Sauce mineralisation in a combined model. This represents a greater geological understanding and acknowledgement of the continuity of the mineralizing system seen at CMD. The Tres Perlas deposit was modelled using the Vulcan software package. Mineral Resource estimates for Tres Perlas have been generated by Coffey Mining on the basis of exploration data and analytical results available up to 28<sup>th</sup> March 2012.

#### **14.1.1 Geological Modelling**

A geological model of the mineralisation was generated by Coffey Mining based on a nominal 0.15/t Au cutoff grade and geological interpretations supplied by Lachlan Star. Mineralization is dispersed variably throughout the dacite unit and interpreted fault/vein structure systems. Mineralization appears to be gradational across the contacts of the dacite, with adjacent rhyolite and andesite units, and within the various units around mineralized structures.

East West oriented drillhole sections showing rock types and drillhole sample grades were interpreted resulting in 69 mineralized domains being constructed in the Churrumata area mineralisation and 13 major domains in the Tres Perlas/El Sauce area mineralisation, as shown in Figure 14.4.1\_1. Two domains at Churrumata were developed from grade control data. Domain continuity varies from north to south. Of the domains interpreted in the Churrumata area mineralisation, 8 domains are significant and capture the vast majority of mineralisation and of the domains interpreted at Tres Perlas/El Sauce area mineralisation 5 domains are significant and capture the vast majority of mineralisation.

The base of oxidation surface was constructed from logged depths in the drillholes however the majority of the mineralisation lies in the transitional/sulphide portion of the oxidation profile. The digital terrain model is the general topography covering the entire CMD Gold Mine area, termed mina\_231110 based in the November 2011 site survey. Backfill at the Natalia pit was also separately wireframed.



### 14.1.2 Statistical Analysis

The mineralization is defined by a total of 1022 drillholes. Samples within the domains were composited to 3m down-the-hole lengths. Splitting of original sample intervals occurs as there are in situ sample length in excess of 3m, however based on tests completed this has not introduced bias by overly deflating the variance or distorting the mean grade of the composite data. Residual composites  $\geq 0.5\text{m}$  in length were retained as calculated, while those  $< 0.5\text{m}$  long were removed.

Grade outliers in the 3m composites were examined to determine high grade cuts. A variety of differing top cuts was applied on the basis of spatial distribution and probability plots to the largest 9 domains. Cut and uncut means are included in Table 14.1.2\_1.

Table 14.1.2_1 CMD Gold Mine Summary Descriptive Statistics, Tres Perlas Deposit									
Mineralization Domain	Mean	Number	Std Dev	Variance	Minimum	Median	Maximum	Top Cut (N)	Declustered Cut Mean
TP 101	0.29	620	0.87	0.76	0.01	0.19	20.8	3.0 (3)	0.29
TP102	0.41	10,232	0.89	0.80	0.01	0.21	41.6	4.0 (24)	0.38
TP103	0.16	27	0.14	0.02	0.01	0.13	0.57	-	0.16
TP104	0.52	16	0.76	0.57	0.01	0.20	3.3	3.0 (1)	0.43
TP107	0.46	199	0.48	0.23	0.03	0.31	3.49	3.0 (1)	0.46
TP108	0.28	32	0.37	0.14	0.03	0.18	2.10	-	0.18
TP110	0.96	158	1.56	2.43	0.01	0.50	15.7	3.0 (8)	0.83
TP112	0.60	99	0.82	0.68	0.06	0.39	7.10	3.0 (2)	0.56
CH301	0.67	3,298	1.73	2.98	0.01	0.27	44.7	4.0 (28)	0.57
CH401	0.15	18,096	0.70	0.50	0.01	0.04	51.2	3.0 (21)	0.13
TP501	0.12	2,466	0.39	0.15	0.01	0.06	16.2	3.0 (2)	0.11
TP601	0.10	2,485	0.18	0.03	0.01	0.07	5.9	3.0 (1)	0.10
ES201	1.24	122	4.87	23.7	0.07	0.32	52.8	3.0 (9)	0.71

### 14.1.3 Variography

For the study, variography is based on the 3m composites. Several types of variograms and variogram fans were calculated for the cut grade data, including the traditional variogram, the correlogram and a Gaussian variogram.

The correlograms proved to display reasonable structure and were modelled. The nugget was determined from the close spaced down-the-hole data, with a lag distance of 5m and an omni-directional search. The ranges were determined from directional variograms for example for the El Sauce domains with a lag distance of 20m in the east-west (major), 20m north-south (semi-major) and 8m vertical (minor). The variogram model parameters for the major zones are detailed in Table 14.1.3\_1 to Table 14.1.3\_3.

Table 14.1.3_1 CMD Gold Mine Tres Perlas model Churrumata domains - Variogram Model Parameters											
Co	Rotation			C <sub>1</sub>	Range 1 (m)			C <sub>2</sub>	Range 2 (m)		
	Azimuth	Plunge	Dip		Major	Semi	Minor		Major	Semi	Minor
0.35	0	0	-25	0.36	25	25	8	0.29	75	75	20

Table 14.1.3_2 CMD Gold Mine Tres Perlas model El Sauce zone domains- Variogram Model Parameters											
Co	Rotation			C <sub>1</sub>	Range 1 (m)			C <sub>2</sub>	Range 2 (m)		
	Azimuth	Plunge	Dip		Major	Semi	Minor		Major	Semi	Minor
0.34	0	0	-25	0.36	20	20	8	0.30	65	65	18

Table 14.1.3_3 CMD Gold Mine Tres Perlas model Tres Perlas domains - Variogram Model Parameters											
Co	Rotation			C <sub>1</sub>	Range 1 (m)			C <sub>2</sub>	Range 2 (m)		
	Azimuth	Plunge	Dip		Major	Semi	Minor		Major	Semi	Minor
0.36	0	0	-25	0.35	35	35	8	0.29	95	95	20

### 14.1.4 Block Model Development

A block model panel size of 10mE by 20mN by 5mRL was selected to best represent the available data, the data characteristics (variability as defined by variography), and the envisaged mining practises (open-cut).

Details of the block model are shown in Table 14.1.4\_1.

Table 14.1.4_1 CMD Gold Mine Block Model Extents, Tres Perlas Deposit			
	Extent (m)	Dimensions (m)	Minimum Subcell Dimensions
X	6,400 – 9,000	10	2.0
Y	2,400 – 4,800	20	2.0
Z	600 – 1,300	5	2.5

All variables necessary to record the domain coding, resource grade estimates and related estimation statistics, density assignments and resource category assignments were incorporated into the block model.

Bulk density was assigned on the basis of the bulk density database and assumptions for the oxide and waste. A bulk density of 2.6t/m<sup>3</sup> has been assigned to the block model for sulphide mineralisation.

#### 14.1.5 Grade Estimation

The grade estimate at Tres Perlas was generated using Ordinary Kriging(OK) and 3m composite data selected from within the interpreted mineralisation domains. The kriging parameters were determined from the variography (Section 14.4.3) and a sample search routine was derived based on detailed neighbourhood testing. Grade was generally interpolated in three passes as follows:

- 1st pass: 50m by 50m by 8m (major, semi-major and minor axes respectively) ellipsoid search with a minimum of 12 and maximum of 24 composites selected for estimation, and a maximum distance without composite of 15m.
- 2nd pass: 100m by 100m by 20m sample search, a minimum of 8 and maximum of 24 composites collected, and no maximum distance without composite.
- 3rd pass: 250m by 250m by 35m sample search, a minimum of 4 and maximum of 24 composites collected, and no maximum distance without composite.

All domains were interpolated simultaneously, using a block discretisation of 5mE by 5mN by 1mRL. A high grade limit was placed on the 2<sup>nd</sup> and 3<sup>rd</sup> pass for values greater than 2 g/t Au that limited grades at or above this threshold to a sample search distance of 25m (major axis), 25m (semi-major axis) and 10m (minor axis). Searches were oriented to the direction of the variography for each domain.

Similar to previous deposits, the validation of the grade estimate was completed and included both visual comparisons and statistical review of the input data versus the block model grade estimate. The visual review shows the estimate has adequately map the input data where sufficient data existed. However in the regions of low data density, the estimates appeared to be less robust and showed evidence of smoothing. The average grade of the models compares well with the declustered mean grade of the composites on a domain-by-domain basis, albeit those domains where capture the majority of the drilling data reproduce the input better than the minor domains.

#### 14.1.6 Mineral Resource Reporting

The mineral resource estimate of the Tres Perlas deposit has been classified as a combination of Indicated and Inferred Mineral Resources with reference to the guidelines outlined in NI43-101.

The definitive criteria used for resource classification is based on a combination of the drilling data density, distance to the nearest informing input data and the slope of regression. Drill density is insufficient to classify the smaller domains and mineralised halos as Indicated, even where the occasional block estimate is of a reasonable quality.

The Tres Perlas mineral resource, as estimated by Coffey Mining, is summarized in Table 14.1.6\_1. The model is reported using the general topography covering the entire CMD Gold Mine area based in the November 2011 site survey.

<b>Table 14.1.6_1</b> <b>CMD Gold Mine</b> <b>Tres Perlas Mineral Resource Estimate</b>				
<b>Resource Category</b>	<b>Lower Cutoff (Au g/t)</b>	<b>Tonnes (Mt)</b>	<b>Grade (Au g/t)</b>	<b>Metal (Koz Au)</b>
Indicated	0.15	112.6	0.37	1,332
Inferred	0.15	104.3	0.34	1,126

## 14.2 Chisperos Deposit

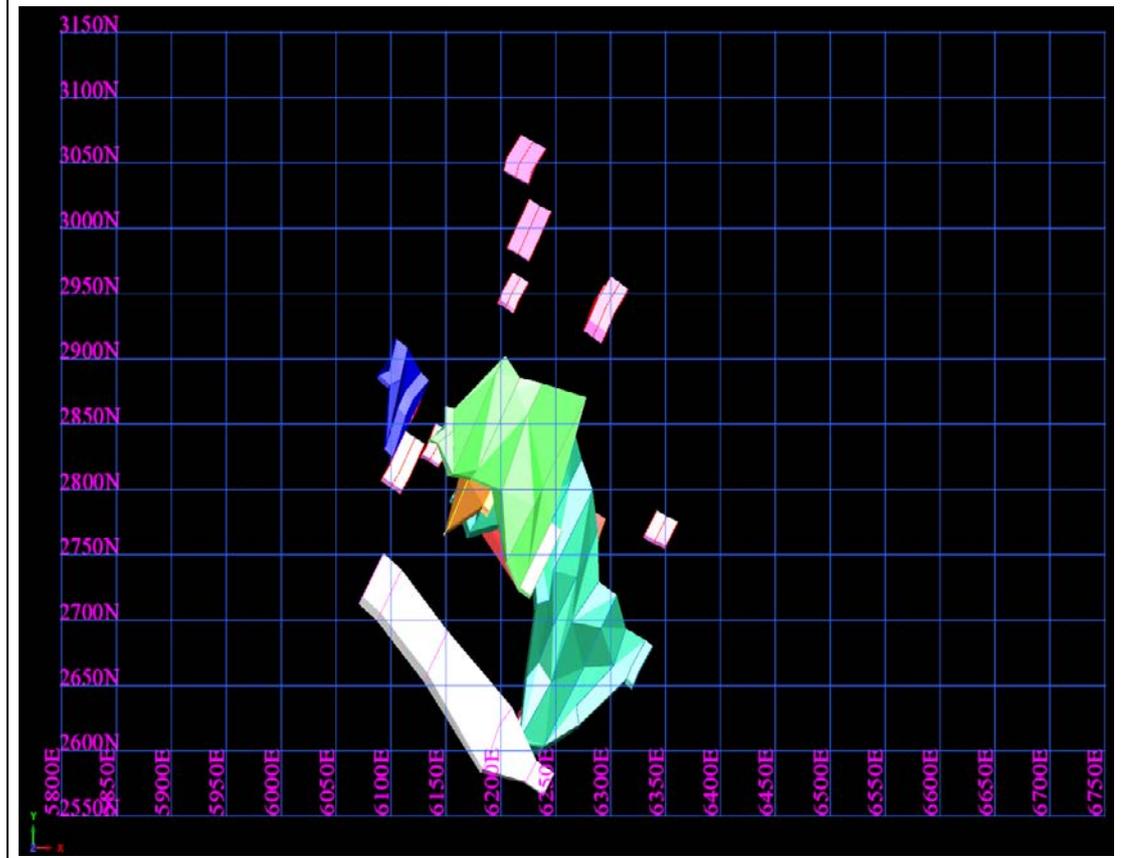
Mineral Resource estimates for Chisperos have been generated by Coffey Mining on the basis of exploration data and analytical results available up to 16<sup>th</sup> March 2011.

### 14.2.1 Geological Modelling

The wireframe at a nominal 0.3g/t Au cutoff grade was constructed from outlines interpreted by Coffey Mining on north-northeast (030°) oriented drillhole sections showing rock types and sample grades. Interpretation of the mineralized zones resulted in 4 larger domains, 2 intermediate domains and 16 small domains based on single intercepts. Domain continuity varies from northwest to north-south. (See Figure 14.2.1\_1)

The base of oxidation surface was constructed from logged depths in the drillholes. The surface was expanded horizontally by 300m to the block model boundaries. The base of oxidation lies generally approximately 10m below the natural surface. The topography is the general topography covering the entire CMD Gold Mine area.

Figure 14.2.1\_1  
Chisperos Mineralized Domains



#### 14.2.2 Statistical Analysis

The mineralization is defined by a total of 60 drillholes. Sample lengths vary from 0.05m to 2.25m. Samples within the domains were composited to 5m down-the-hole, matching the model block height. The regular composite length of 5m coincides with the likely future open cut mining bench height, decreases the impact of random variability due to assay precision, and reduces the variance of skewed data. Splitting of original sample intervals occurs, but this has not introduced a bias. Residual composites  $\geq 2$ m in length were retained as calculated, while those  $< 2$ m long were added to the previous 5m composite (uphole) by length weighted averaging.

Grade outliers in the 5m composites were examined to determine high grade cuts. A top cut of 5g/t Au was applied on the basis of spatial distribution and probability plots. The top cut affects 5 composites and results in a minor decrease in average composite grade, from 0.99g/t Au to 0.97g/t Au.

Cell declustering was completed to investigate the statistical character of the composites considering the relatively clustered (non regular) sampling distribution. Declustering of the data at incremental increases in cell size was used to determine the optimal declustering grid at which the mean grade stabilises. A moving window of 55m E-W by 40m N-S by 5mRL was selected as optimal. Cut and declustered means are included in Table 14.2.2\_1.

Table 14.2.2_1 CMD Gold Mine Summary Descriptive Statistics, Chisperos Deposit									
Mineralization	Mean	Number	Std Dev	Variance	Minimum	Median	Maximum	Top Cut (N)	Declustered Cut Mean
Au g/t	0.99	440	1.15	1.31	0.01	0.60	7.97	5.00 (5)	0.91

### 14.2.3 Variography

For the study, variography is based on the 5m composites. Several types of variograms and variogram fans were calculated for the cut grade data, including the traditional variogram, the correlogram and a variogram based on Gaussian (normalized) transformed composite data.

The Gaussian variograms proved to display reasonable structure and were modelled and therefore selected as the basis for the grade estimation. The modelled Gaussian variograms were then back-transformed to allow use in kriging. The nugget was determined from the close spaced down-the-hole data, with a lag distance of 5m and an omni-directional search. Strongest grade continuity is interpreted to be oriented vertically. The ranges were determined from directional variograms with a lag distance of 30m in the vertical (major), 30m north-south (semi-major) and 20m east-west (minor). The variogram model parameters are detailed in Table 14.2.3\_1.

Table 14.2.3_1 CMD Gold Mine Chisperos - Variogram Model Parameters											
Co	Rotation			C <sub>1</sub>	Range 1 (m)			C <sub>2</sub>	Range 2 (m)		
	Azimuth	Plunge	Dip		Major	Semi	Minor		Major	Semi	Minor
0.33	0	90	0	0.34	60	30	15	0.32	140	90	55

### 14.2.4 Block Model Development

A block model panel size of 10mE by 20mN by 5mRL was selected to best represent the available data, the data characteristics (variability as defined by variography), and the envisaged mining practises (open-cut).

Details of the block model are shown in Table 14.2.4\_1.

Table 14.2.4_1 CMD Gold Mine Block Model Extents, Chisperos Deposit			
	Extent (m)	Dimensions (m)	Minimum Subcell Dimensions
X	5,950 – 6,450	10	1.25
Y	2,510 – 3,110	20	2.5
Z	965 - 1250	5	0.625

All variables necessary to record the domain coding, resource grade estimates and related estimation statistics, density assignments and resource category assignments were incorporated into the block model. Bulk density was assigned on the basis of the bulk density database and assumptions for the oxide and waste. The bulk density values assigned to the block model were as follows:

- Sulfide ore 2.7t/m<sup>3</sup>,
- Oxide ore 2.5t/m<sup>3</sup>,
- Sulfide waste 2.6t/m<sup>3</sup> (Oxide waste 2.4t/m<sup>3</sup>).

#### 14.2.5 Grade Estimation

Grade estimation within the interpreted mineralized envelopes was undertaken by Ordinary Kriging based on the 5m composite gold data for each domain. The estimation parameters are based on the variography described in Section 14.2.3 with the sample search routine based on detailed neighbourhood testing. The grade interpolation was completed in two passes as summarized as follows:

- 1st pass: 70m(major) by 50m(semi-major) by 30m(minor), octant search, collecting a minimum of 12 and maximum of 16 composites, The maximum allowed distance without a composite was 15m.
- 2nd pass: 70m(major) by 50m(semi-major) by 30m(minor) sample search, collecting a minimum of 6 and maximum of 16 composites. No maximum distance without a composite has been applied.

The search parameters were selected to achieve an estimation quality consistent with an Indicated and Inferred Resource category, as defined by the geostatistical parameter slope of regressions (>0.7 for the 1st pass and <0.7 for the 2nd pass). All domains were interpolated simultaneously, using a block discretisation of 5mE by 10mN by 1mRL.

Validation of the estimate was completed, including both visual and statistical review. The validation included a visual comparison of the input data against the model. The statistical review included a comparison of the declustered mean grade of the input composites against the model grade. Visual review showed the estimate to adequately map the input data where sufficient data existed, however in the regions of low data density, the estimates appeared to be less robust and showed evidence of smoothing.

#### 14.2.6 Mineral Resource Reporting

The mineral resource estimate of the Chisperos deposit has been classified as a combination of Indicated and Inferred Mineral Resources with reference to the guidelines outlined in NI43-101.

The definitive criteria used for resource classification is based on a combination of the drilling data density, distance to the nearest informing input data and the slope of regression. Indicated blocks were defined as those that had a slope of regression in the first pass >0.7 in RD13 or RD14 (the two largest domains). All remaining blocks were classified as Inferred.

Drill density is insufficient to classify the smaller domains as Indicated, even where the occasional block estimate is of a reasonable quality.

The Chisperos mineral resource, as estimated by Coffey Mining, is summarized in Table 14.2.6\_1. The model is reported using the general topography covering the entire CMD Gold Mine area based in the April 2011 site survey and is not depleted for mining post April 2011.

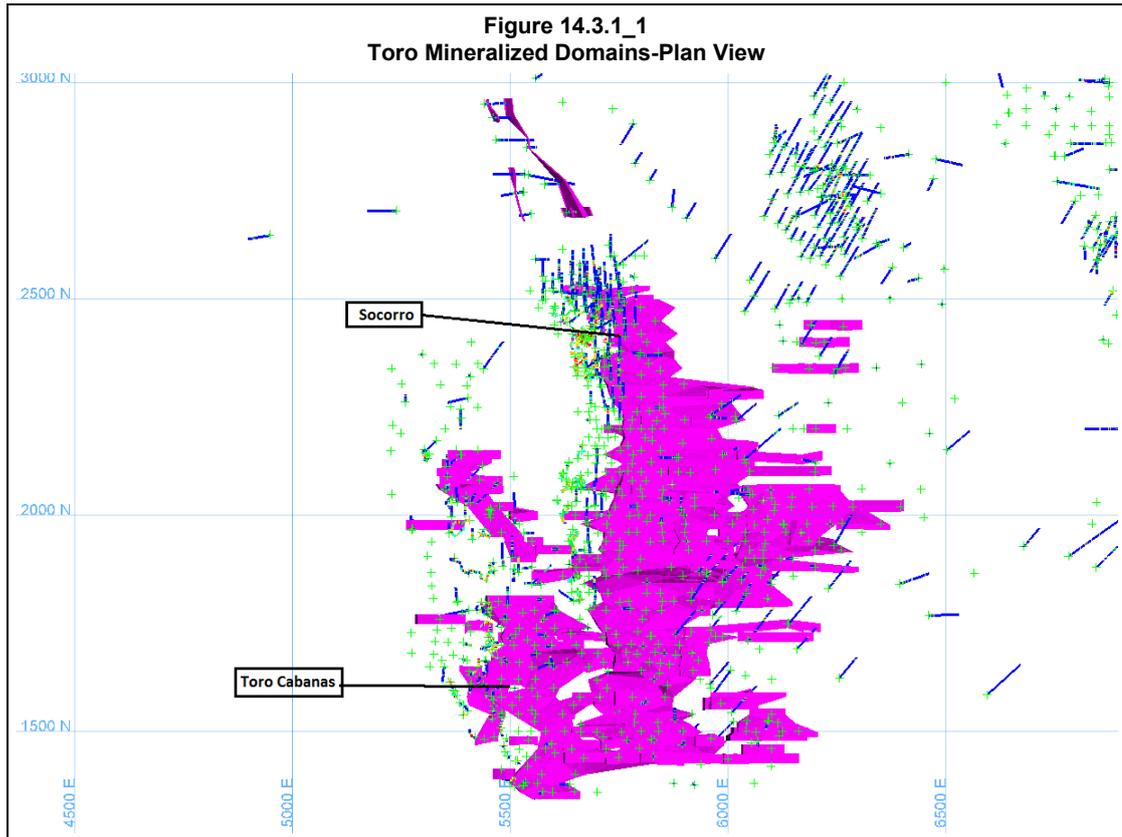
Table 14.2.6_1 CMD Gold Mine Chisperos Mineral Resource Estimate				
Resource Category	Lower Cutoff (Au g/t)	Tonnes (Mt)	Grade (Au g/t)	Metal (Koz Au)
Indicated	0.3	1.0	1.10	36
Inferred	0.3	1.4	0.95	43

### 14.3 Toro Deposit

The updated April 2012 Toro mineralisation model contains the Toro Cabanas mineralization area and the Socorro mineralization area interpreted using recent drilling in 2011/2012. This represents a greater geological understanding and acknowledgement of the continuity of the mineralizing system seen at CMD. The Toro mineralisation was modelled using the Vulcan software package. Mineral Resource estimates for Toro have been generated by Coffey Mining on the basis of exploration data and analytical results available up to 14th December 2011 for Toro.

#### 14.3.1 Geological Modelling

The Toro mineral resource contains the Toro Cabanas mineralization area and the Socorro mineralization area. The wireframe at a nominal 0.15 g/t Au cutoff grade was constructed from outlines interpreted by Coffey Mining based on a geological interpretation supplied by Lachlan Star. Interpretation was based on east west oriented drillhole sections showing rock types and sample grades. Interpretation of the mineralized zones resulted in 142 domains being constructed (Figure 14.3.1\_1) comprising 6 larger domains. Domain continuity varies from north to south.



The topography is the general topography covering the entire CMD Gold Mine area, termed mina\_231110 based in the November 2011 site survey.

### 14.3.2 Statistical Analysis

The mineralization is defined by a total of 842 drillholes. Sample lengths vary from 0.05m to 2.55m. Samples within the domains were composited to 3m down-the-hole lengths. Compositing decreases the impact of random variability due to assay precision, and reduces arithmetic averaging of skewed data. Splitting of original sample intervals occurs, but this has not introduced a bias. Residual composites  $\geq 0.5$ m in length were retained as calculated, while those  $< 0.5$ m long were removed.

Grade outliers in the 3m composites were examined to determine high grade cuts. A top cut of 5g/t Au was applied on the basis of spatial distribution and probability plots to the largest 6 domains and all others.

Declustering of the data at incremental increases in grid size was used to determine the optimal declustering grid at which the mean grade stabilises. A moving window of 40m E-W by 40m N-S by 5mRL was applied to decluster the grade. Cut and declustered means are included in Table 14.3.2\_1.

Table 14.3.2_1 CMD Gold Mine Summary Descriptive Statistics, Toro Deposit									
Mineralization Domain	Mean g/t	Number	Std Dev	Variance	Minimum	Median	Maximum	Top Cut g/t(N)	Declustered Cut Mean g/t
101	0.80	615	1.00	1.01	0.01	0.49	13.7	5.0 (5)	0.77
102	0.73	186	0.89	0.80	0.01	0.44	7.3	5.0 (1)	0.72
106	0.86	83	2.98	8.87	0.01	0.43	27.3	5.0 (1)	0.59
>106	0.91	234	1.78	3.18	0.01	0.44	17.3	5.0(5)	0.77
Halo within topo	0.23	21,067	1.25	1.56	0.01	0.03	117.2	5(25)	0.21

### 14.3.3 Variography

For the study, variography is based on the 3m composites. Several types of variograms and variogram fans were calculated for the cut grade data, including the traditional variogram, the correlogram and a Gaussian variogram.

The correlograms proved to display reasonable structure and were modelled. The nugget was determined from the close spaced down-the-hole data, with a lag distance of 5m and an omni-directional search. The ranges were determined from directional variograms with a lag distance of 15m in the east-west (major), 15m north-south (semi-major) and 5m vertical (minor). The variogram model parameters are detailed in Table 14.3.3\_1.

Table 14.3.3_1 CMD Gold Mine Torro Cabanas/Socorro - Variogram Model Parameters											
Co	Rotation			C <sub>1</sub>	Range 1 (m)			C <sub>2</sub>	Range 2 (m)		
	Azimuth	Plunge	Dip		Major	Semi	Minor		Major	Semi	Minor
0.35	0	0	-25	0.35	26	26	10	0.30	110	110	13

### 14.3.4 Block Model Development

A block model panel size of 10mE by 20mN by 5mRL was selected to best represent the available data, the data characteristics (variability as defined by variography), and the envisaged mining practises (open-cut).

Details of the block model are shown in Table 14.3.4\_1.

Table 14.3.4_1 CMD Gold Mine Block Model Extents, Toro- Deposit			
	Extent (m)	Dimensions (m)	Minimum Subcell Dimensions
X	5,100 – 6,400	10	2.0
Y	1,200 – 3,000	20	2.0
Z	700 - 1400	5	1.0

All variables necessary to record the domain coding, resource grade estimates and related estimation statistics, density assignments and resource category assignments were incorporated into the block model.

Bulk density was assigned on the basis of the bulk density database and assumptions for the oxide and waste. A 2.6t/m<sup>3</sup> bulk density was assigned to the block model for the sulfide mineralized material.

#### 14.3.5 Grade Estimation

Grade estimation within the interpreted mineralized envelopes was undertaken by OK based on the 3m composite gold data generated for each domain, kriging parameters were determined from the variography discussed in Section 14.3.3. The sample search parameters have been selected based on detailed neighbourhood testing which allows for optimisation of the estimation plan. Grade was generally interpolated in three passes as follows:

- 1<sup>st</sup> pass: Based on a 50m by 50m by 10m (major, semi-major and minor axes respectively), ellipsoid search with a minimum of 12 and maximum of 24 composites, where a max. distance without a composite of 15m was used.
- 2<sup>nd</sup> pass: 100m by 100m by 20m sample search using a, minimum of 8 and maximum of 24 composites. No max. distance without composite criteria was applied.
- 3<sup>rd</sup> pass: 250m by 250m by 35m, sample search using a minimum of 4 and maximum of 24 composites. No maximum distance without composite was applied.

All domains were interpolated simultaneously, using a block discretisation of 5mE by 5mN by 1mRL. A high grade limit was placed on the 2<sup>nd</sup> and 3<sup>rd</sup> pass for values greater than 3g/t Au. This limited the sample search to composites below the grade threshold if these higher grade samples were outside a sample search distance of 25m (major axis), 25m (semi major axis) and 10m (minor). Searches were oriented to be consistent the model variography for each domain.

Validation of the estimate was completed and included both visual and statistical review. The visual comparison was undertaken by comparing the input data, using the composites, against the estimated grades in the model. The statistical review included a comparison of the declustered mean grade of the input composites against the model grade.

Based on the validation, the estimate adequately maps the input data where sufficient data existed, with grade trends reproduced acceptably in the model. However in the regions of low data density, the estimates appeared to be less robust and an increased level smoothing was noted, albeit that the smoothing is still considered acceptable.

#### 14.3.6 Mineral Resource Reporting

The mineral resource estimate of the Toro deposit has been classified as a combination of Indicated and Inferred Mineral Resources with reference to the guidelines outlined in NI 43-101.

The definitive criteria used for resource classification is based on a combination of the drilling data density, distance to the nearest informing input data and the slope of regression. Drill density is insufficient to classify the smaller domains and mineralised halos as Indicated, even where the occasional block estimate is of a reasonable quality.

The Toro mineral resource containing the Toro Cabanas mineralization area and the Socorro mineralization area, as estimated by Coffey Mining, is summarized in Table 14.3.6\_1. The model is reported using the general topography covering the entire CMD Gold Mine area based in the November 2011 site survey and is not depleted for mining post April 2011.

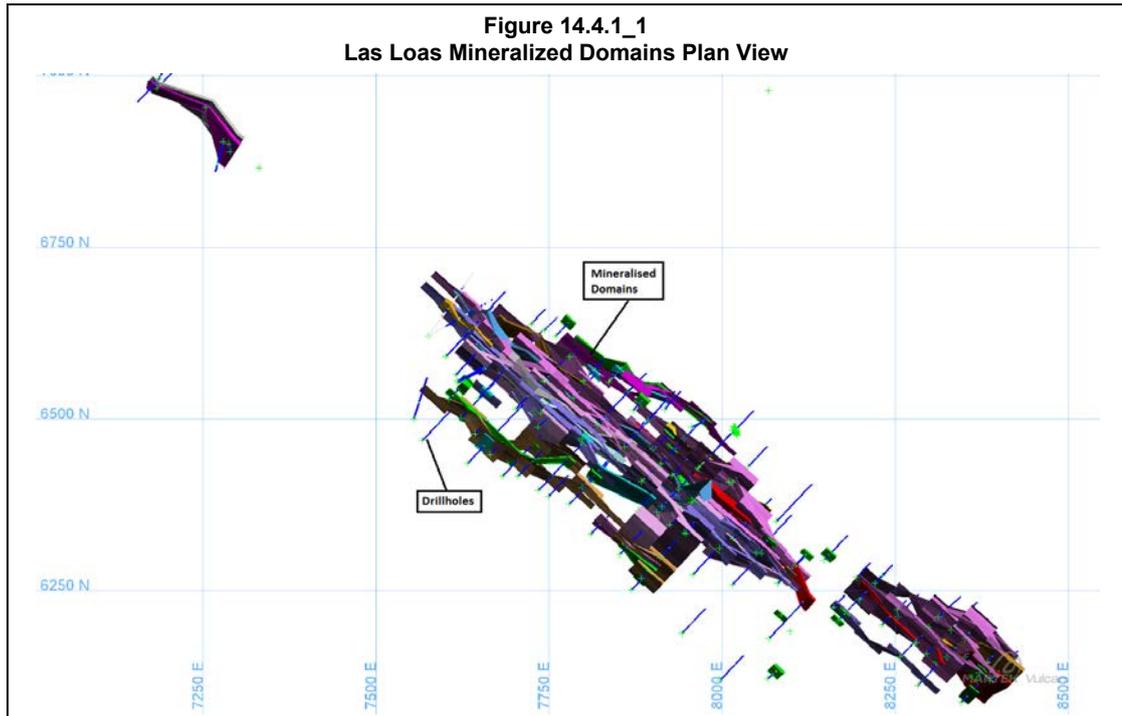
Table 14.3.6_1 CMD Gold Mine Toro Mineral Resource Estimate				
Resource Category	Lower Cutoff (Au g/t)	Tonnes (Mt)	Grade (Au g/t)	Metal (Koz Au)
Indicated	0.15	17.5	0.62	348
Inferred	0.15	11.6	0.36	135

#### 14.4 Las Loas Deposit

Mineral Resource estimates for Las Loas have been generated by Coffey Mining on the basis of exploration data and analytical results available up to 16<sup>th</sup> March 2011.

##### 14.4.1 Geological Modelling

The wireframe representing mineralisation were generated by Coffey Mining at a nominal 0.2-0.3g/t Au cutoff grade. These mineralisation domains have been based on a geological interpretation supplied by Lachlan Star. The interpretation was based on east west oriented drillhole sections showing rock types and drillhole sample grades. The interpretation resulted in a total of 62 domains being constructed, as shown in Figure 14.4.1\_1. 10 larger domains, which contained the majority of sample data and were volumetrically the most significant of the zones, were interpreted.



The base of oxidation surface was constructed from logged depths in the drillholes. The topography is the general topography covering the entire CMD Gold Mine area, termed mina\_231110 based in the November 2011 site survey.

#### 14.4.2 Statistical Analysis

The mineralization is defined by a total of 72 drillholes. Samples within the domains were composited to 2m down-the-hole lengths. Compositing decreases the impact of random variability due to assay precision, and reduces arithmetic averaging of skewed data. Splitting of original sample intervals occurs, but this has not introduced a bias. Residual composites  $\geq 0.5\text{m}$  in length were retained as calculated, while those  $< 0.5\text{m}$  long were removed.

Grade outliers in the 2m composites were examined to determine high grade cuts. A variety of top cuts was applied on the basis of spatial distribution and probability plots to the largest 10 domains. Cut and uncut means are included in Table 14.4.2\_1.

Mineralization Domain	Mean	Number	Std Dev	Variance	Minimum	Median	Maximum	Top cut (N)	Cut Mean
Au g/t 101	0.83	294	0.93	0.86	0.01	0.51	7.3	4.0 (3)	0.80
Au g/t 102	1.47	52	2.45	6.02	0.01	0.74	12.9	3.0 (2)	1.01
Au g/t 103	0.52	85	0.46	0.21	0.01	0.36	27.3	-	0.52
Au g/t 104	1.34	69	2.34	5.5	0.01	0.82	19.3	3.0 (1)	1.09
Au g/t 105	1.46	61	3.94	15.56	0.01	0.50	30.6	3.0 (1)	0.93
Au g/t 106	1.21	35	1.82	3.30	0.01	0.38	6.88	2.0 (4)	0.73
Au g/t 107	0.83	38	1.22	1.49	0.01	0.38	7.44	3.0 (2)	0.68
Au g/t 108	0.72	41	0.81	0.66	0.01	0.43	4.01	2.0 (3)	0.64
Au g/t 109	1.20	17	2.58	6.66	0.01	0.31	11.2	2.0 (2)	0.64
Au g/t 110	1.20	23	1.48	2.19	0.01	0.58	6.11	2.0 (4)	0.84
Aug/t >110	0.76	122	0.72	5.53	0.01	0.46	7.06	2.0(4)	0.70

### 14.4.3 Variography

For the study, variography is based on the 2m composites. Several types of variograms and variogram fans were calculated for the cut grade data, including the traditional variogram, the correlogram and a Gaussian variogram.

The correlograms proved to display reasonable structure and were modelled. The nugget was determined from the close spaced down-the-hole data, with a lag distance of 5m and an omni-directional search. The ranges were determined from directional variograms with a lag distance of 18m in the east-west (major), 18m north-south (semi-major) and 8m vertical (minor). The variogram model parameters are detailed in Table 14.4.3\_1.

Table 14.4.3_1 CMD Gold Mine Las Loas - Variogram Model Parameters											
Co	Rotation			C <sub>1</sub>	Range 1 (m)			C <sub>2</sub>	Range 2 (m)		
	Azimuth	Plunge	Dip		Major	Semi	Minor		Major	Semi	Minor
0.35	310	0	80	0.35	26	26	10	0.30	80	95	13

### 14.4.4 Block Model Development

A block model panel size of 10mE by 20mN by 5mRL was selected to best represent the available data, the data characteristics (variability as defined by variography), and the envisaged mining practises (open-cut).

Details of the block model are shown in Table 14.4.4\_1.

Table 14.4.4_1 CMD Gold Mine Block Model Extents, Las Loas Deposit			
	Extent (m)	Dimensions (m)	Minimum Subcell Dimensions
X	7,000 – 8,600	10	2.0
Y	6,000 – 7,100	10	2.0
Z	700 – 1,200	5	1.0

All variables necessary to record the domain coding, resource grade estimates and related estimation statistics, density assignments and resource category assignments were incorporated into the block model.

Bulk density was assigned on the basis of the bulk density database and assumptions for the oxide and waste. A bulk density of 2.5t/m<sup>3</sup> has been assigned to the block model for sulphide ore.

#### 14.4.5 Grade Estimation

Grade estimation within the interpreted mineralized envelopes was undertaken by ordinary kriging based on the 3m composite gold data for each domain, kriging parameters determined from the variography and a sample search routine based on detailed neighbourhood testing. Grade was generally interpolated in three passes as follows:

- 1st pass: 50m by 50m by 8m, (major, semi-major and minor axes respectively) ellipsoid search with a minimum of 8 and maximum of 24 composites, selected for estimation, and a maximum distance without composite of 15m.
- 2nd pass: 100m by 100m by 20m, sample search, a minimum of 6 and maximum of 24 composites selected, and, no maximum distance without composite criteria applied.
- 3rd pass: 250m by 250m by 35m, sample search, a minimum of 3 and maximum of 24 composites selected, and, no maximum distance without composite criteria.

All domains were interpolated simultaneously using a block discretisation of 5mE by 10mN by 1mRL. A high grade limit was placed on the 3<sup>rd</sup> pass for values greater than 3g/t Au which limited sample selection to a maximum distance of 20m, 20m and 10m for the major, semi-major and minor axes respectively. Searches were oriented to the direction of the variography for each domain.

Validation of the estimate was completed, including both visual and statistical review. The validation included a visual comparison of the input data against the model. The statistical review included a comparison of the mean grade of the input composites against the model grade.

Visual review showed the estimate to adequately map the input data where sufficient data existed, however in the regions of low data density, the estimates appeared to be less robust and showed evidence of smoothing.

#### 14.4.6 Mineral Resource Reporting

The mineral resource estimate of the Las Loas deposit has been classified as a combination of Indicated and Inferred Mineral Resources with reference to the guidelines outlined in NI43-101.

The definitive criteria used for resource classification is based on a combination of the drilling data density, distance to the nearest informing input data and the slope of regression. Drill density is insufficient to classify the smaller domains as Indicated, even where the occasional block estimate is of a reasonable quality.

The Las Loas mineral resource, as estimated by Coffey Mining, is summarized in Table 14.4.6\_1. The model is reported using the general topography covering the entire CMD Gold Mine area based in the April 2011 site survey and is not depleted for mining post April 2011.

Table 14.4.6_1 CMD Gold Mine Las Loas Mineral Resource Estimate				
Resource Category	Lower Cutoff (Au g/t)	Tonnes (Mt)	Grade (Au g/t)	Metal (Koz Au)
Indicated	0.3	2.86	0.79	73
Inferred	0.3	1.53	0.77	37

## 14.5 Mineral Resource Discussion

Coffey Mining considers there to be no material impediments to the potential economic extraction of the mineral resources, and hence classification of the mineral resources, by any other known environmental, permitting, legal, title, taxation, socio-economic, marketing or political factors other than issues noted and discussed in the relevant sections of this report. It is noted that the majority of the mineral resources described in this report are the extensions of previously and currently mined open pits at the CMD Gold Mine and the CMD Gold Mine is currently operational.

## 15 MINERAL RESERVE ESTIMATES

### 15.1 Reserve Estimates

The Mineral Reserve estimate has not been updated since the 1<sup>st</sup> August, 2011 Technical Report. The Mineral Reserve will be re-estimated once mine planning and economic evaluation has been completed. The discussion presented in this section is based on the Mineral Resource Estimate detailed in the 1 August 2011 Technical Report and tabulated in Section 6.2 in Table 6.2\_1 in this report.

Mineral Reserves are quoted within specific pit designs based on Indicated Mineral Resources only and take into consideration all appropriate modifying factors including metallurgical parameters, infrastructure requirements and permitting requirements.

The modifying factors used to determine the Mineral Reserves for the Project are detailed in the remainder of Section 15, Section 16 and Section 17 of this report.

It should be noted that the mining operation at the CMD Gold Mine is currently mining to different pit designs to those which define the Mineral Reserves, as the operations are also mining areas that contain Inferred Resources.

Table 15.1\_1 details the Mineral Reserves for the Tres Perlas, Chisperos, Churumata, Las Loas and Toro/Socorro Pits. These Reserves are declared as of 1<sup>st</sup> August 2011 and does not included any deduction due to mining since then.

<b>Table 15.1_1</b>			
<b>CMD Gold Mine</b>			
<b>Summary of Mineral Reserves Estimated as at 1 August 2011</b>			
<b>Deposit</b>	<b>Probable Mineral Reserves</b>		
	<b>Tonnes [Mt]</b>	<b>Au Grade [g/t]</b>	<b>Ounces (koz)</b>
Tres Perlas	3.0	0.7	69
Chisperos	0.8	1.2	29
Churumata	0.3	0.9	8
Las Loas	1.0	0.8	25
Toro/Socorro	0.9	0.8	25
<b>Total</b>	<b>6.0</b>	<b>0.8</b>	<b>157</b>

### 15.2 Mineral Resources Used

The Mineral Reserources that were used as a basis of the Mineral Reserves are the 01 April 2011 Mineral Resources as outlined in Section 6.2., Table 6.2\_1 in this report and repeated in Table 15.2\_1 below.

Table 15.2_1 CMD Gold Mine Summary of Mineral Resources as at 1 April 2011					
Deposit	Resource Category	Lower Cutoff (Au g/t)	Tonnes (Mt)	Grade (Au g/t)	Metal (koz Au)
Tres Perlas/Natalia	Indicated	0.3	15.6	0.50	252
	Inferred	0.3	19.4	0.53	333
Chisperos	Indicated	0.3	1.0	1.10	36
	Inferred	0.3	1.4	0.95	43
Toro Cabanas/Socorro	Indicated	0.3	3.3	0.80	84
	Inferred	0.3	8.2	0.72	188
Churumata	Indicated	0.3	0.6	0.82	16
	Inferred	0.3	8.7	0.78	219
Las Loas	Indicated	0.3	2.86	0.79	73
	Inferred	0.3	1.53	0.77	37
El Sauce	Inferred	0.3	7.10	0.69	156

### 15.3 Pit Optimisation Input Parameters

#### 15.3.1 Based on Indicated Mineral Resources

Pit optimisation studies were undertaken by Lachlan Star personnel using the resource models as described above and the Whittle Four-X pit optimisation package. For given block model, cost, recovery and slope input data, Whittle Four-X software calculates a series of incremental pit shells in which each shell is an optimum for a slightly higher gold price.

The pit optimisation input parameters, including operating parameters, were supplied by Lachlan Star based on past operating performance from the CMD Gold Mine and existing contract mining rates

Costs were determined for an operation based on Probable Mineral Reserves that were determined for the five mining areas at Tres Perlas, Chisperos, Churumata, Las Loas and Toro/Socorro. Costs and metallurgical parameters were applied to each specific optimisation as shown in Table 15.3.1\_1. The costs are an average life of mine estimate based on a split of fixed and variable costs.

Table 15.3.1_1 CMD Gold Mine Optimisation Parameters for Generation of Mineral Reserves						
Parameter	Units	Mining Area				
		Las Loas	Churumata	Chisperos	Toro/Socorro	Tres Perlas
Gold Price	US\$/oz	1,250	1,250	1,250	1,250	1,250
Mining Cost	US\$/t	1.60	1.60	1.60	1.60	1.60
Processing Cost	US\$/t	7.00	7.00	7.00	7.00	7.00
Administration Cost	US\$/t	2.67	2.67	2.67	2.67	2.67
Metallurgical Recovery	Max %	72	72	72	72	72
	Tail g/t	0.18	0.18	0.18	0.18	0.18
Royalty	%	4	2	2	2	2
Dilution	%	15	2	2	2	2
Mining Recovery	%	95	98	98	98	98
Cutoff Grade	g/t	0.42	0.42	0.42	0.42	0.42

Metallurgical recovery is capped at a maximum of 72% with a constant tail of 0.18g/t also applied, which reduces the recovery of material below a gold grade of 0.64g/t.

A mining dilution of 5% and mining recovery of 98% were applied to the Churrumata, Chisperos, Toro/Socorro and Tres Perlas Pits, taking into consideration the Manto style of mineralization that is encountered.

A mining dilution of 15% and mining recovery of 95% were applied to the Las Loas Pit, taking into consideration the mineralization is hosted in vein and shear structures.

The gold price used in the optimisation process was \$1,250/oz, which is higher than currently used by most major gold producers for Mineral Reserve reporting purposes, but less than the spot price at the time of compilation of this document (\$1,678). Coffey Mining consider that the major gold producers are likely to lift the gold price used to generate Mineral Reserves from the present \$900 to \$1,100 per ounce to \$1,100 to \$1,250 per ounce in the near future, if current spot prices are maintained. The current three year trailing average gold price is \$1,256/oz. In addition, the Project has a relatively short mine life, and is therefore less susceptible to long term gold price fluctuations. The use of the \$1,250 gold price is therefore considered to be reasonable for optimisation purposes.

Mining costs were derived from current costs based on the mining contracts with two local mining contractors. Mining costs also include drilling costs incurred by the owner and general mining costs, but exclude supervision, technical services and laboratory costs, which are included in the administration costs as shown in Table 15.3.1\_1 and are applied to ore only.

The processing cost applied to ore tonnes in the optimisation covers the costs associated with crushing, stacking, leaching, refining and tailings.

The fixed costs associated with administration and other items were applied based on average mining or processing rates over the life of mine and are based on historical costs.

Cyanide is a significant portion of the processing cost. The price under the current contract is relatively low at \$2,050/t, when compared to the price achieved under other recent cyanide contracts elsewhere (typically \$2,400/t).

Previous geotechnical investigations were completed between 1998 and 2000 for the Tres Perlas, Churrumata and Socorro Pits, whilst geotechnical analysis for Las Loas was completed in February 2008. Inter-ramp pit wall slope angles used in pit optimisation and design were based on these studies plus the operational experience gained from more than 15 years of mining to depths of between 80m to 150m, with no significant failures. The slope angles were reduced in specific walls to allow for ramp designs. The various overall pit wall slope angles for each deposit are listed in Table 15.3.1\_2.

Table 15.3.1_2 CMD Gold Mine Overall Pit Wall Slope Angles Applied in Optimisations		
Deposit	Slope Angle -Degrees	Slope Angle -Degrees
Las Loas	North Wall 40°	South Wall 50°
Churumata	North Wall 40°	South Wall 50°
Chisperos	East Wall 36°	West Wall 50°
Toro/Socorro	East Wall 50°	West Wall 40°
Tres Perlas - All Sectors	East Wall 50°	West Wall 40°

Most final pit walls will be cutbacks on existing pits and therefore historical geotechnical performance is well known. Where final pit walls will extend deeper than existing pits or be located in different rock types than the existing pits, further geotechnical evaluation is recommended.

## 15.4 Pit Optimisation Results

### 15.4.1 Based on Indicated Mineral Resources

Pit optimisations were undertaken for each of the deposits using the 1 April 2011 Indicated Mineral Resources only, in order to estimate Mineral Reserves.

The pit optimisation results are summarized in Table 15.4.1\_1. It is noted that the operating cashflow as shown in Table 15.4.1\_1 excludes capital expenditure.

The shells in Table 15.4.1\_1 are the highest cashflow shells at a gold price of \$1,250/oz, except for the shell for Tres Perlas, which reflects a slightly larger pit at \$1,400/oz to allow for practical cutback widths. The shells were used as the initial basis for the pit designs.

**Table 15.4.1\_1**  
**CMD Gold Mine**  
**Optimisation Results Based on 1 April 2011 Indicated Mineral Resources Only**

<b>Physicals</b>													
<b>Pit</b>	<b>Shell No.</b>	<b>Indicated</b>			<b>Inferred</b>			<b>Total Material</b>			<b>Waste</b>	<b>Total</b>	<b>Strip Ratio</b>
		<b>tonnes</b>	<b>Rec g/t</b>	<b>Rec oz</b>	<b>tonnes</b>	<b>Rec g/t</b>	<b>Rec oz</b>	<b>tonnes</b>	<b>Rec g/t</b>	<b>Rec oz</b>	<b>dmt</b>	<b>dmt</b>	
Chisperos	13	733,692	1.20	28,275	-	-	-	733,692	1.20	28,275	4,670,513	5,404,205	6.4
Las Loas	13	879,955	0.85	23,923	-	-	-	879,955	0.85	23,923	2,668,456	3,548,411	3.0
Churrumata	12	290,615	0.93	8,715	-	-	-	290,615	0.93	8,715	2,102,215	2,392,830	7.2
Tres Perlas	16	3,087,252	0.74	73,399	-	-	-	3,087,252	0.74	73,399	5,058,996	8,146,248	1.6
Toro/Socorro	12	942,293	0.94	28,567	-	-	-	942,293	0.94	28,567	4,664,157	5,606,450	4.9

<b>Financials</b>								
<b>Pit</b>	<b>Shell No.</b>	<b>Mining Cost</b>	<b>Processing Cost</b>	<b>Total Cost</b>	<b>Cash Cost</b>	<b>Incremental Cost</b>	<b>Revenue</b>	<b>Cashflow</b>
		<b>A\$ '000</b>	<b>A\$ '000</b>	<b>A\$ '000</b>	<b>A\$/oz Au</b>	<b>A\$/oz Au</b>	<b>A\$ '000</b>	<b>A\$ '000</b>
Chisperos	13	8,647	7,095	15,742	786	1,222	25,044	9,302
Las Loas	13	5,677	8,509	14,187	854	1,220	20,756	6,570
Churrumata	10	3,829	2,810	6,639	1,075	1,218	7,718	1,080
Tres Perlas	13	13,034	29,854	42,888	840	1,405	63,777	20,889
Toro/Socorro	13	8,970	9,112	18,082	897	1,223	25,197	7,115

## 15.5 Pit Designs

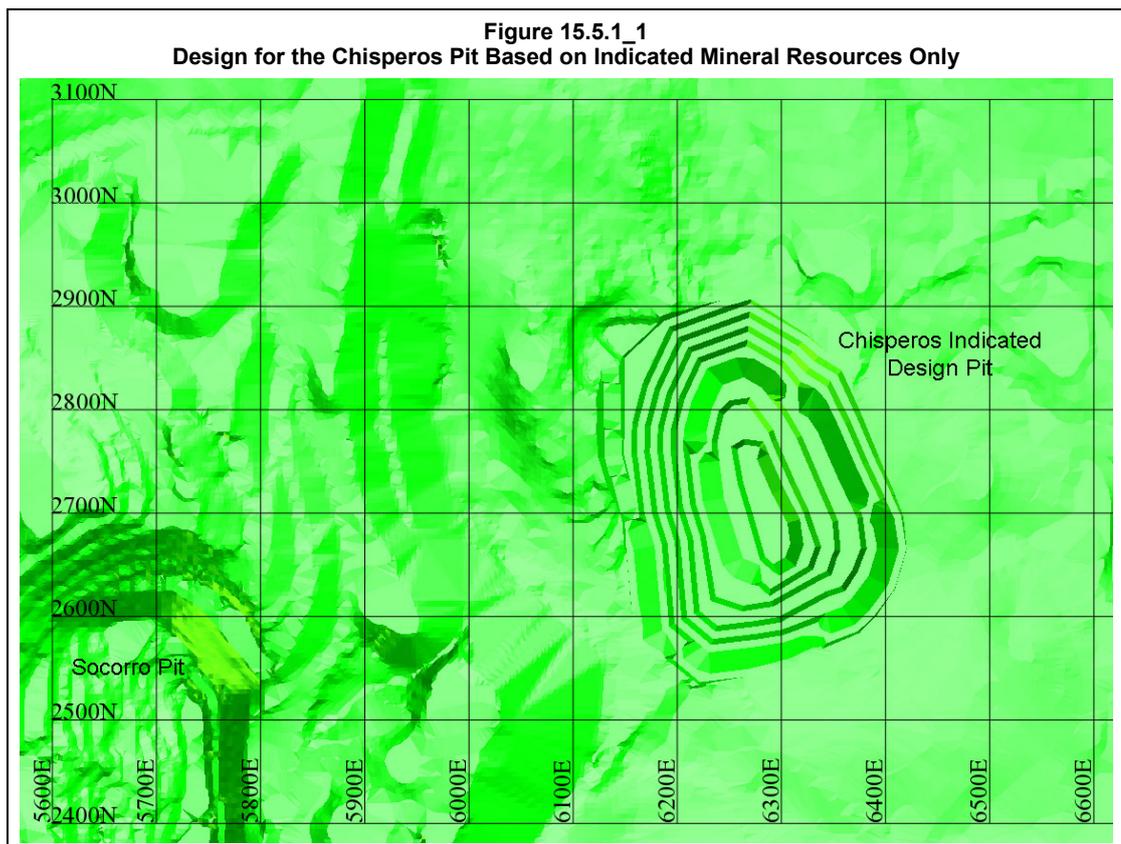
### 15.5.1 Based on 1 April 2011 Indicated Mineral Resources

Pit designs were undertaken for each of the optimized pits based on the selected Whittle pit shells in Table 15.3.1\_1 (pit optimisation results based on Indicated Mineral Resources only)..

The final pit design criteria generally used the following parameters:

- Bench height 15m
- Batter angle 70°
- Berm width 7.1m
- Ramp gradient 1 in 9
- Ramp width 15m.

The designs for the pits for the Indicated Mineral Resources only and for the generation of Mineral Reserves are shown in Figure 15.5.1\_1 through to Figure 15.5.1\_5 for the Chisperos, Las Loas, Churumata, Tres Perlas and Toro/Socorro Pits respectively.



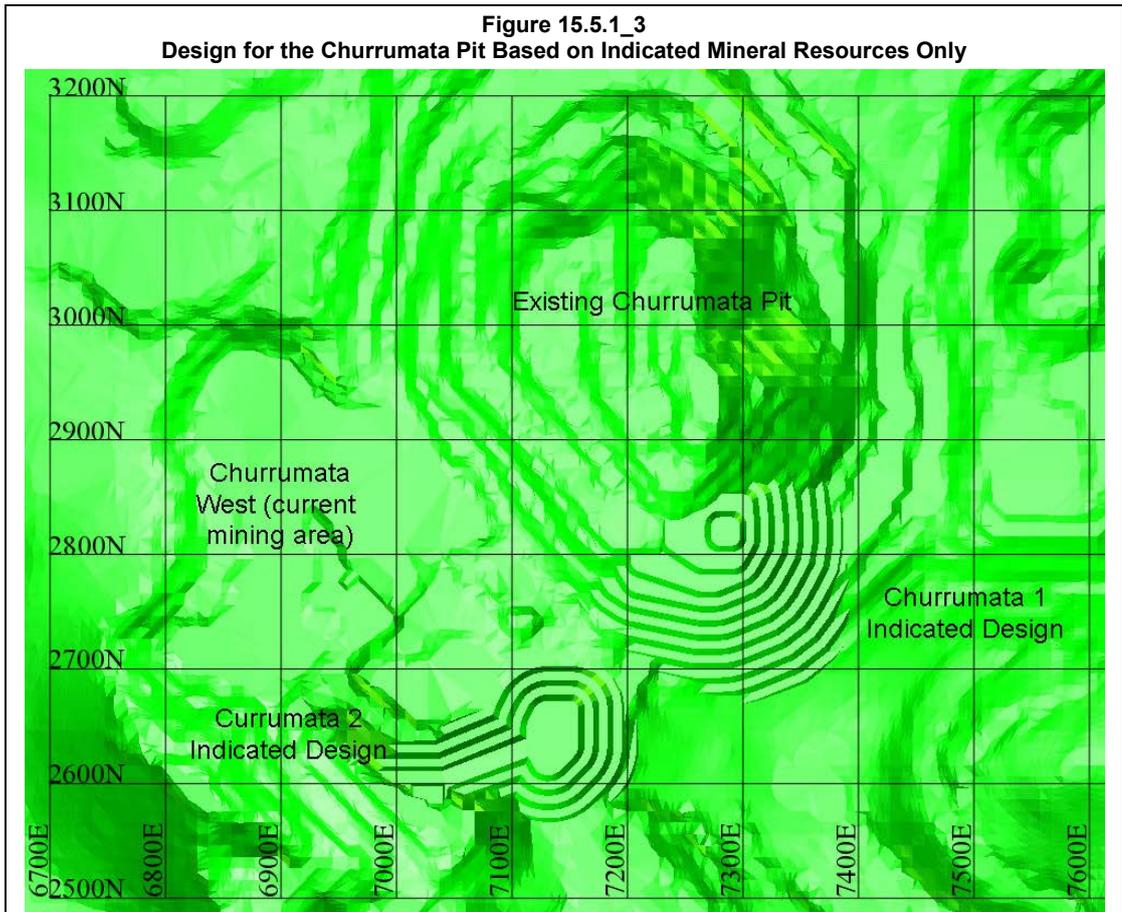
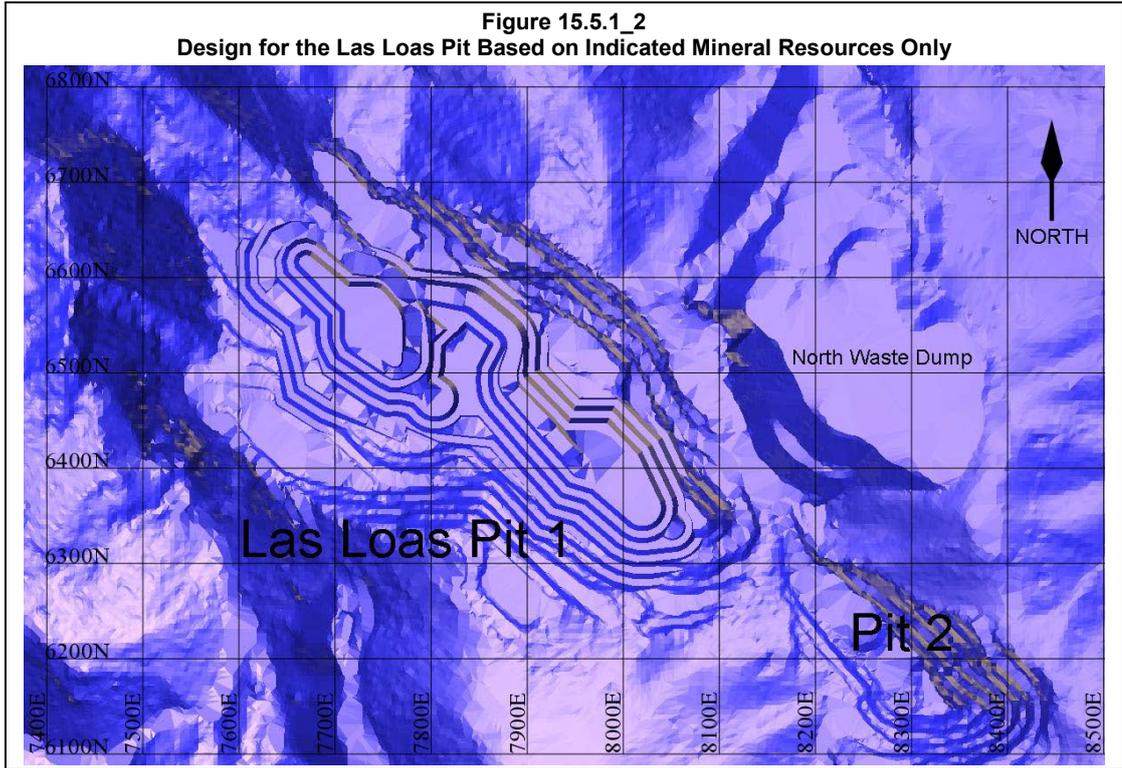
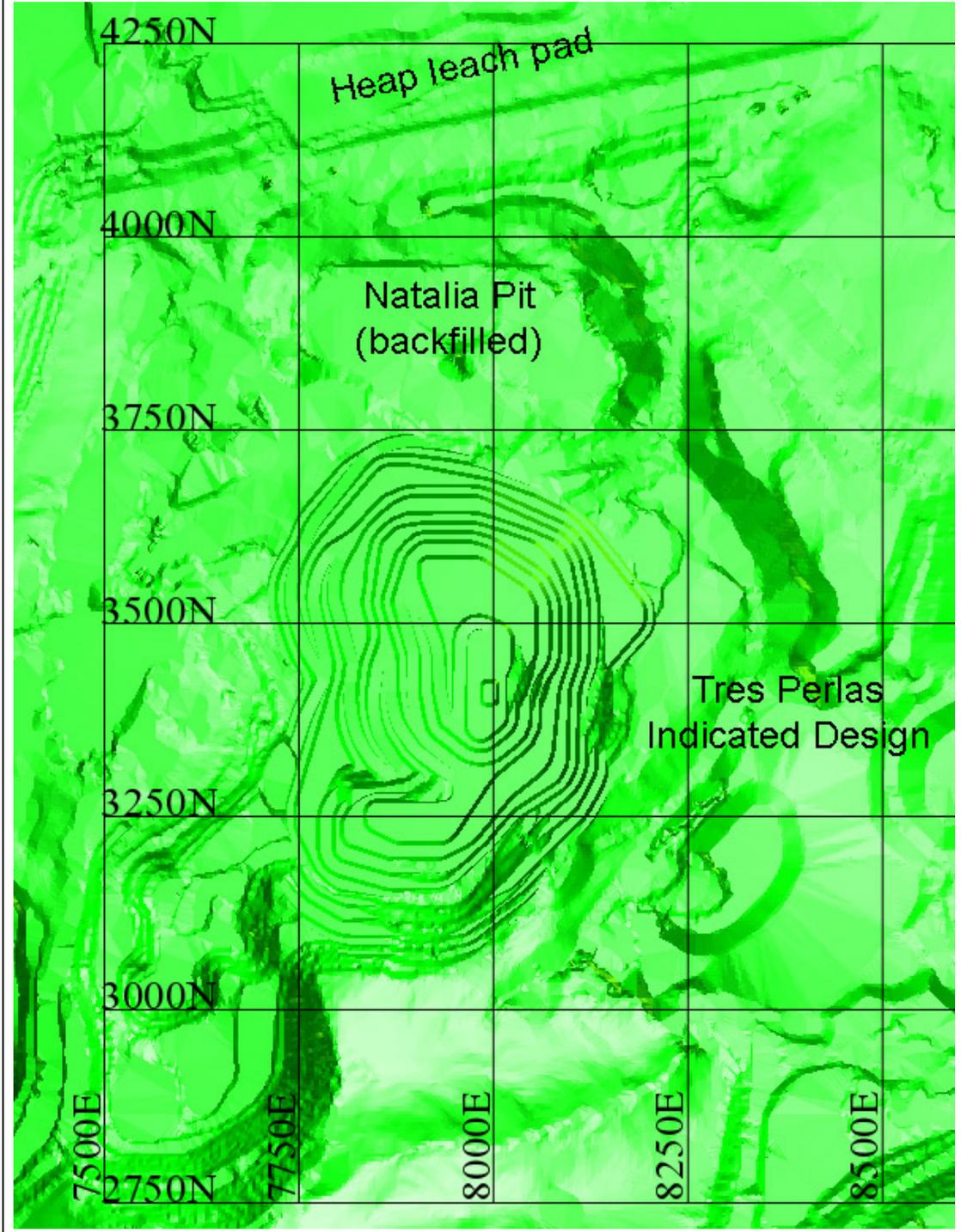


Figure 15.5.1\_4  
Design for the Tres Perlas Pit Based on Indicated Mineral Resources Only



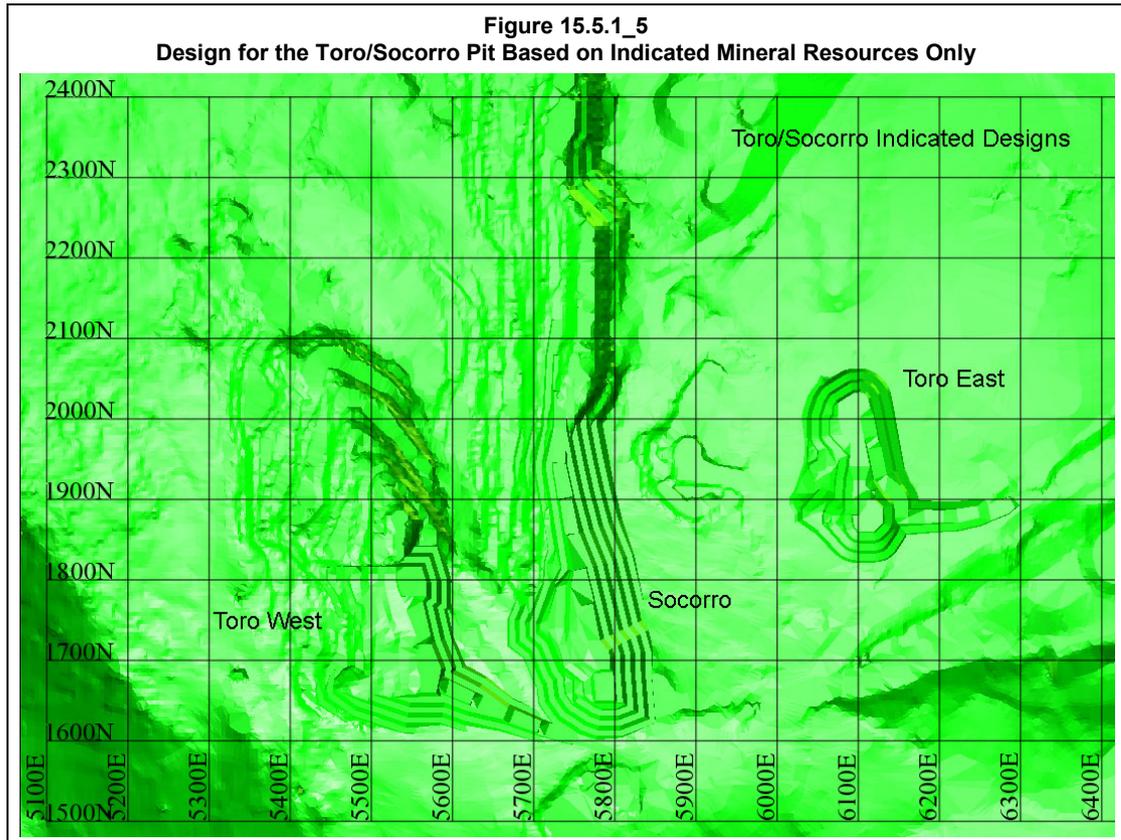


Table 15.5\_1 shows the differences between the optimisation shells and the pit designs.

In the optimisation process, the Tres Perlas Pit assumed a spiral ramp, but in the design the ramp is a switchback in the western wall, making the slope significantly shallower and the amount of waste mined in the design significantly larger than the waste in the optimisation. The design for the pit should be reviewed in order to reduce the amount of waste mined. Despite the additional waste, the cashflow assessment in Section 18.7 of this report shows the Tres Perlas pit makes a significant positive cashflow, and can therefore be considered to be a Mineral Reserve. There is however, potential to improve the design to increase the value of the Tres Perlas Pit.

The west wall of the Chisperos Pit also contains two ramps in the design, whereas the optimisation assumed a single ramp. Again, the cashflow assessment of the design indicates the Chisperos pit makes a positive cashflow. The Chisperos pit design should be reviewed to further improve the economics.

Table 15.5.1_1 CMD Gold Mine 01 April 2011 Indicated Mineral Resource only Pit Optimisation versus Pit Design Comparison				
Deposit	Unit	Optimisation	Design	Variance
		Indicated Mineral Resource Only	Indicated Mineral Resource Only	Indicated Mineral Resource Only
Chisperos	Shell	13		
	Ore t	733,692	754,704	103%
	Au g/t	1.20	1.19	99%
	Cont. Au oz	28,275	28,761	102%
	Waste t	4,670,513	5,729,108	123%
	Total t	5,404,205	6,483,812	120%
	Strip Ratio	6.4	7.6	119%
Las Loas	Shell	13		
	Ore t	879,955	1,045,446	119%
	Au g/t	0.85	0.75	89%
	Cont. Au oz	23,923	25,322	106%
	Waste t	2,668,456	3,187,261	119%
	Total t	3,548,411	4,232,707	119%
	Strip Ratio	3.0	3.0	101%
Churrumata	Shell	12		
	Ore t	290,615	256,712	88%
	Au g/t	0.93	0.94	101%
	Cont. Au oz	8,715	7,793	89%
	Waste t	2,102,215	2,683,735	128%
	Total t	2,392,830	2,940,447	123%
	Strip Ratio	7.2	10.5	145%
Tres Perlas	Shell	16		
	Ore t	3,087,252	2,984,385	97%
	Au g/t	0.74	0.72	98%
	Cont. Au oz	73,399	69,378	95%
	Waste t	5,058,996	8,556,401	169%
	Total t	8,146,248	11,540,786	142%
	Strip Ratio	1.6	2.9	175%
Toro/Socorro	Shell	12		
	Ore t	942,293	971,709	103%
	Au g/t	0.94	0.83	88%
	Cont. Au oz	28,567	25,797	90%
	Waste t	4,664,157	5,293,680	113%
	Total t	5,606,450	6,265,389	112%
	Strip Ratio	4.9	5.4	110%
Total	Ore t	5,933,807	6,012,956	101%
	Au g/t	0.85	0.81	95%
	Cont. Au oz	162,879	157,051	96%
	Waste t	19,164,337	25,450,185	133%
	Total t	25,098,144	31,463,141	125%
	Strip Ratio	3.2	4.2	131%

## 15.6 Mineral Reserve Discussion

Coffey Mining considers there to be no material impediments to the potential economic extraction of the mineral reserves, and hence classification of the mineral reserves, by any other known environmental, permitting, legal, title, taxation, socio-economic, marketing or political factors other than issues noted and discussed in the relevant sections of this report. It is noted that the majority of the mineral reserves described in this report are the extensions of previously and currently mined open pits at the CMD Gold Mine and the CMD Gold Mine is currently operational. The Mineral Reserve estimate has not been updated since the 1<sup>st</sup> August, 2011 Technical Report. The Mineral Reserve will be re-estimated once mine planning and economic evaluation has been completed on the updated mineral resources described in this report.

## 16 MINING METHODS

### 16.1 Mining Operations

The mining method is a conventional open cut drill, blast, load and haul operation. Mining involves pushbacks or deepening of existing open pits. Local mining contractors perform all mining operations, apart from some of the production drilling, which is carried out by Lachlan Star, generally in the Churrumata West and Toro Pits. Ore is drilled, blasted and loaded on 5m benches, whilst waste is drilled and blasted on 10m benches and loaded in 5m flitches.

The mining fleet comprises around 15 x 30t to 80t class hydraulic, backhoe configured excavators, 7 x Cat996 front end loaders, 54 x 20t to 40t payload rear tipping, rigid and articulated dump trucks and associated ancillary equipment. The size of the mining fleet will be modified during the mine life to meet the material movement requirements and is taken into consideration in the costing by the contractor.

A large part of the mining takes place as relatively narrow pushbacks on existing pit walls, which is suited to smaller mining equipment accessing via relatively narrow, 15m ramps.

The mining method and equipment selected is appropriate for the geotechnical and hydrogeological conditions expected over the remainder of the mine life as these conditions are expected to be similar to those encountered historically.

A mining dilution of 5% and mining recovery of 98% were applied to the Churrumata, Chisperos, Toro/Socorro and Tres Perlas Pits, taking into consideration the Manto style of mineralization that is encountered. A mining dilution of 15% and mining recovery of 95% were applied to the Las Loas Pit, taking into consideration the mineralization is hosted in vein and shear structures.

### 16.2 Production Schedules

#### 16.2.1 Introduction

One production schedule has been produced, namely:

- Based on the Mineral Reserves as stated in Table 15.1\_1.

The following constraints were targeted for the production schedule:

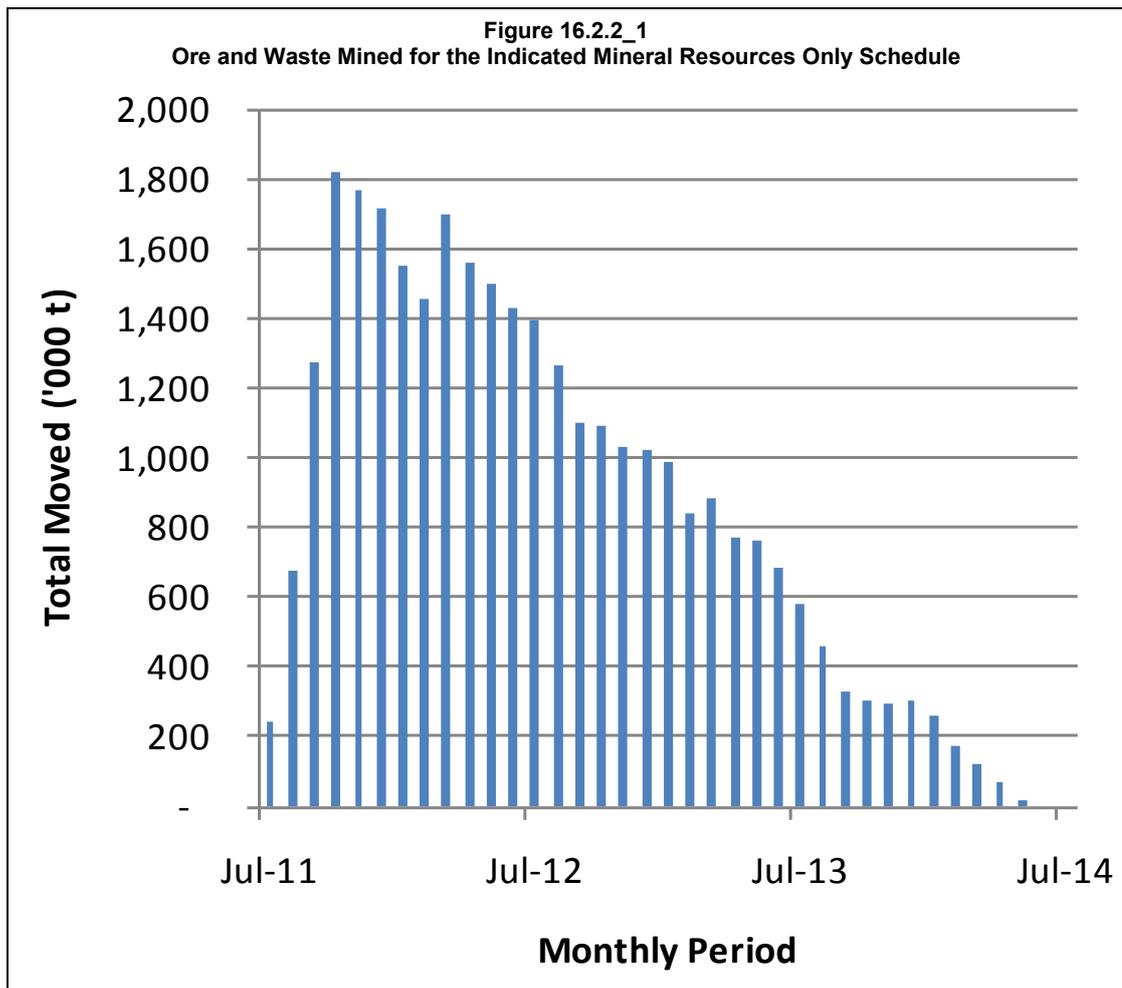
- Maximize grade in the first few years.
- Target a total material movement rate from the pit of 1.8Mt per month and sustain the rate for as long as possible.
- Vertical rate of advance of mining of 80m per annum or less.
- Target a crushing rate of around 10,000tpd for the Mineral Reserve schedule.

### 16.2.2 Based on 1 April 2011 Indicated Mineral Resources

The Indicated Mineral Resources Only (Mineral Reserve) schedule includes the Chisperos, Las Loas, Churrumata, Tres Perlas and Toro/Socorro Pits.

Mining commences in the Las Loas and Toro Pits and then extends to the Chisperos and Tres Perlas Pits. Mining in Churrumata and Socorro commences in February 2012. Mining is scheduled to be completed in May 2014. The timing of mining of each pit is shown in Table 16.2.2\_1.

Figure 16.2.2\_1 shows the total material moved from all the pits combined.



Whilst mining ceases in May 2014, the heap leach operation continues to operate until March 2017.

Approximately 14,000 ounces of gold were contained in mineralized material that was stacked on the heap leach, but unrecovered at the commencement of the schedule in July 2011. These ounces are recovered progressively over the following 36 months.

**Table 16.2.2\_1**  
**CMD Gold Mine**  
**Pit Mining Sequence for Indicated Mineral Resource Only Schedule**

Pit	2011						2012						2013						2014																		
	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
Chisperos																																					
Las Loas																																					
Churumata																																					
Tres Perlas																																					
Toro/Socorro																																					

## 17 RECOVERY METHODS

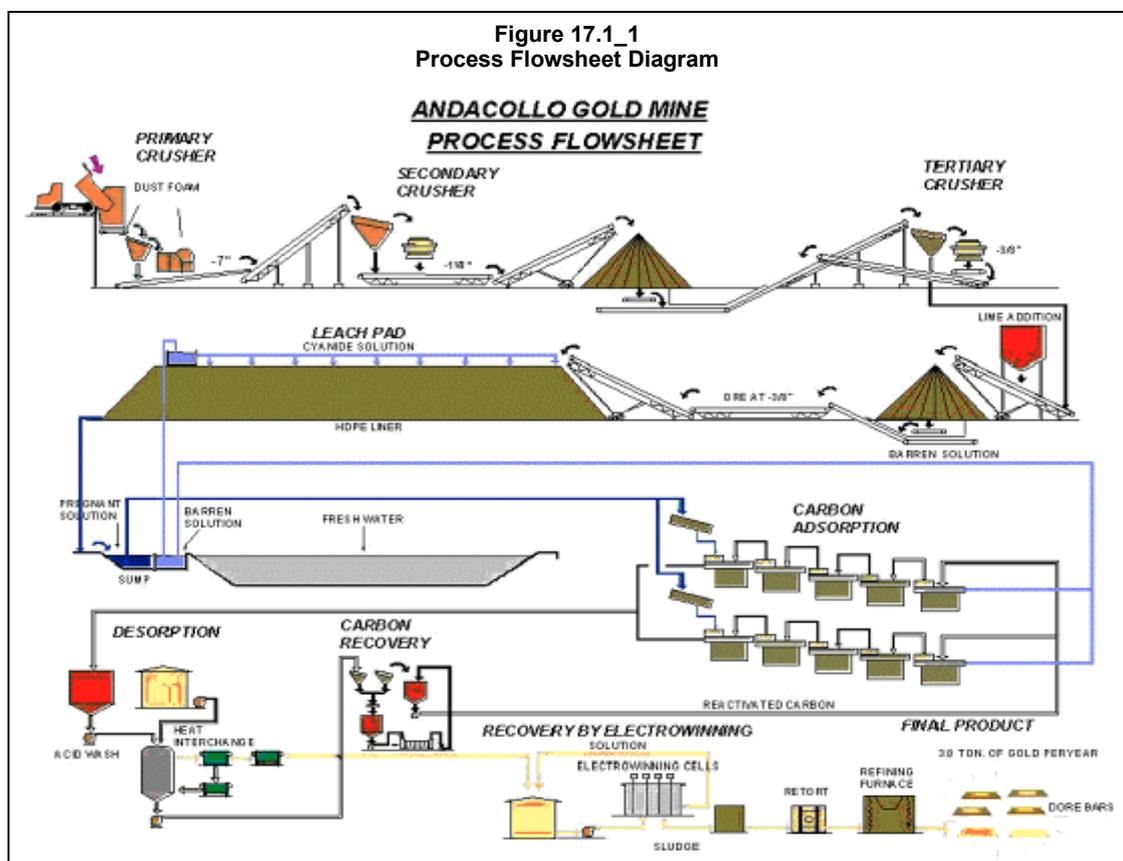
### 17.1 Processing Description

The CMD Gold Mine processing facility consists of a typical heap leach operation and consists of three stage crushing and carbon absorption and desorption facilities.

The original plant was built with a capacity of 10,850tpd that was upgraded in 2000 to 18,000tpd, or approximately 6Mtpa. The adsorption, desorption and recovery (ADR) plant is capable of processing 200,000oz pa of gold doré.

The processing plant is currently under-utilized in terms of capacity due to the reduced mining tonnages.

A simplified flowsheet is presented in Figure 17.1\_1 below.



#### Primary/Secondary Crushing

The primary crusher is a jaw crusher that reduces the run of mine (ROM) ore from a size less than approximately 50cm to 10cm-15cm, followed by a standard 7-foot cone crusher, which reduces the product to 3.5cm. Three shorthead 7foot cone crushers that are operating in parallel reduce the material further to 9mm in a closed circuit with a classification section. To monitor the crushed head grade belt cuts are taken automatically every 30 seconds from which is immediately taken another cut to reduce the amount to a few hundred grams.

From every shift some 40 to 60kg is collected for analysis for gold in the chemical laboratory.

ROM ore is normally delivered in haul trucks to the dump hopper situated ahead of the primary jaw crusher. A front end loader (FEL) may be used to provide feed to the hopper from a ROM stockpile when there are delivery problems from the mine. Ore is reclaimed from the hopper by a Nico apron feeder (48in x 24ft) that discharges onto a vibrating grizzly that removes undersized material (-150mm) from the jaw crusher feed. The jaw crusher is a Nordberg C160B unit (1200mm by 1600mm; 450 hp), which has a nameplate capacity of 520tph at a closed side setting (CSS) of 150mm.

Discharge from the jaw crusher is collected on an inclined conveyor (CV-01) along with the grizzly undersize material. A stationary magnet is installed at the first transfer point to remove tramp metal from the feed going to the secondary crusher.

The primary crushed material is directly conveyed to the secondary crushing station. The ore from the primary is screened (Nordberg 8ft x 20ft; double deck) ahead of the secondary cone crusher (Symons; 7ft standard). The cone crusher discharge and screen undersize are recombined on a conveyor (CV-03) heading out to the coarse crushed ore stockpile that is fed by a radial stacker (CV-05; 36in x 128ft). Dust control is provided by a baghouse.

The primary/secondary crushing circuits operate in open circuit. The reported historic combined utilisation/availability is 73%, with a stated production rate of approximately 1,000tph. The throughput rate was adversely impacted at times by a high percentage of coarse material in the ROM feed.

### Tertiary Crushing

Ore is recovered from the coarse crushed stockpile through any of three reclaim systems that feed different tertiary crushing stations. Each system is for all practical purposes identical to the others with the exception of conveyor length and dust collection system ductwork.

The reclaim belt feeders (48in x 15ft) are variable speed and discharge onto a conveyor that in turn discharges onto the crusher feed screen. Each of the three tertiary cone crushers (Symons; 7ft shorthead) operate in closed circuit with its own "banana" screen (Nordberg; 10ft x 24ft) fitted with a combination of square and slotted synthetic decking.

Crusher discharge is recycled to the feed belt and the screen undersize is combined onto a conveyor where lime is added (from a 150t silo) and a sample is cut at a transfer point. After lime addition and sampling, the fine crushed ore (nominal 100% minus 13mm; 80% passing 9.5mm) is stockpiled using a radial stacker (36in x 125ft) ahead of the overland conveying and heap stacking system. Dust control is provided by extraction fans and baghouses.

The reported historic combined utilisation/availability of the tertiary crushing circuit was 82%. The plant reportedly operated at the design rate of 18,000tpd with minimal difficulties and under ideal conditions achieved a stated production rate of nominally 25,000tpd or an annualized rate of over 8Mtpa. The throughput rate was adversely impacted at times by higher hardness materials (defined as a Bond Work Index in excess of 19kWh/t).

The tertiary crushers feed a stockpile from where the material is transported by sets of conveyors and a grasshopper to provide flexibility (see Figure 17.1\_2).

#### Overland Conveying and Heap Stacking

The overland conveying and heap stacking system was designed and constructed by Laurel Engineering to place the tertiary crushed ore in 8m lifts on a leach pad measuring 1,600m in length, 400m in width and 56m in height.

The final crushed product is reclaimed from the fine ore stockpile and conveyed to the heap loading system. A hopper/feeder arrangement fed by a FEL is installed on the overland conveyor as a back-up to the fine ore stockpile reclaim system. The tripper, grasshopper conveyors, crawler and radial stacker all appeared visually to be in good condition.

Crushed ore is reclaimed from the tertiary stockpile by a variable speed belt feeder (48in x 15ft) that discharges onto a small conveyor feeding the first overland conveyor (CV-18; 36in x 972ft; 200hp). Conveyor CV-18 discharges onto an overland cable-supported conveyor (CV-19; 36in x 2,597ft) which is driven by three motors totalling 400hp. From CV-19, the crushed ore passes to a rubber-tire mounted, self-propelled, cross-over tripper conveyor that is capable of "walking" the entire length of CV-19.

From the tripper conveyor, material passes to a series of rubber-tire mounted, portable grasshopper conveyors described as follows:

- Three 36in x 125ft conveyors with 8ft of lift and 75hp electric motors.
- Four 36in x 125ft conveyors with 8ft of lift and 50hp electric motors.
- One 36in x 125ft conveyor with 26ft of lift (adjustable with crane) and a 60hp electric motor.
- One 36in x 80ft conveyor with 26ft of lift (adjustable with hydraulics) and a 60hp electric motor.

The last portable conveyor (high-lift conveyor) discharges onto a 36in x 120ft crawler-mounted horizontal conveyor. The horizontal conveyor feeds a 36in x 120ft rubber-tire mounted, self-propelled radial stacking conveyor that is equipped with a 36in x 20ft extendable conveyor.

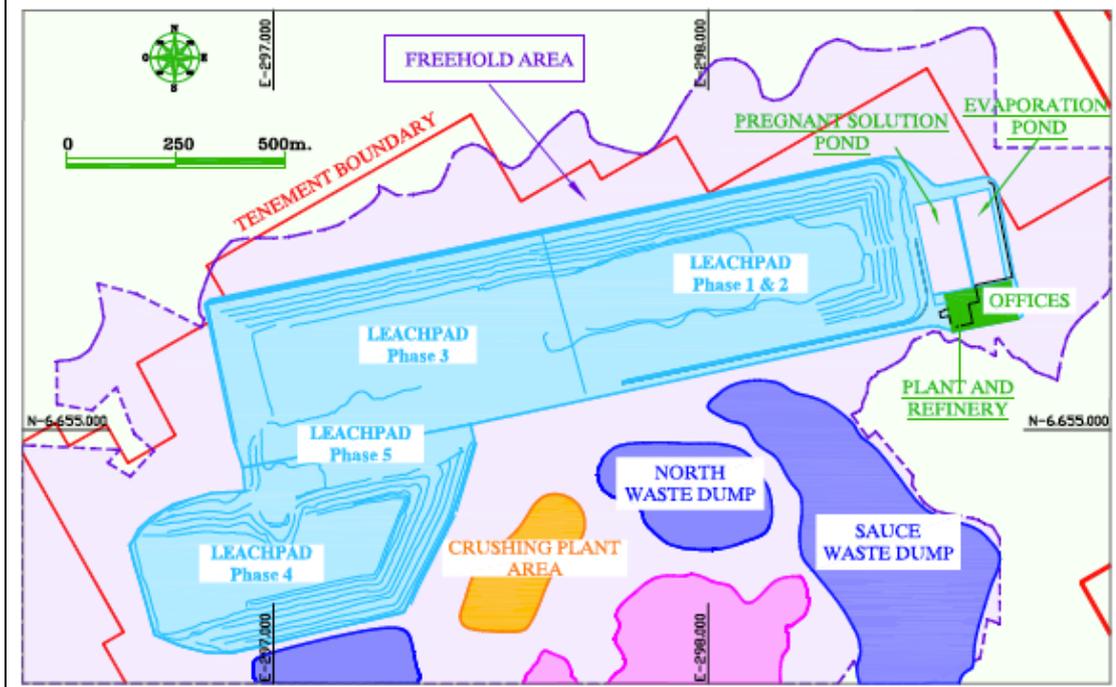
Figure 17.1\_3 shows the various phases of heap leach stacking.

Historically the ore was stacked first on Phase I, which is a pad 400m long by 400m wide. Each phase was prepared by a 2mm HDPE liner to provide an impermeable layer on which a base of 2m ore is laid to protect the liner from damage during the stacking process. Each heap is subdivided in cells with a length of 80m along the strike of the heap and extending over the full width of the heap. Along the sides of the cells perforated HDPE pipes are positioned to collect the leachate which drains to the main collector pipes along the sides of the heaps.

Figure 17.1\_2  
 Conveyor System at CMD Gold Mine (August 2010)



Figure 17.1\_3  
 Heap Leach Phases



Ore is stacked in 6 lifts of 8m height for a maximum elevation of 50m (for stability purposes). Phase I was followed by Phase II again 400m by 400m placed such that it extended the pad towards the west. Phase III was 800m long by 400m wide resulting in a pad with a total length of 1,600m. Phase IV was placed separate from Phases I – III. Currently the area between Phases I - III and Phase IV is being filled (see Figure 17.1\_4) as Phase V and is now at Lift 4. The maximum slope has been set at 1V:2H for stability reasons.

**Figure 17.1\_4**  
**Stacking of Lift 2 of Phase V (August 2010)**



Figure 17.1\_5 provides an overview picture of Phase V and Figure 17.1\_6 provides an overview of a collection point at the bottom of Phase IV. Phase V covers two pregnant solution pipes along its borders, which are used to transfer the captured solution from the older phases. Samples at the various collection points show that Phase IV still yield 3oz per day.

#### Change to leaching practices in 2011

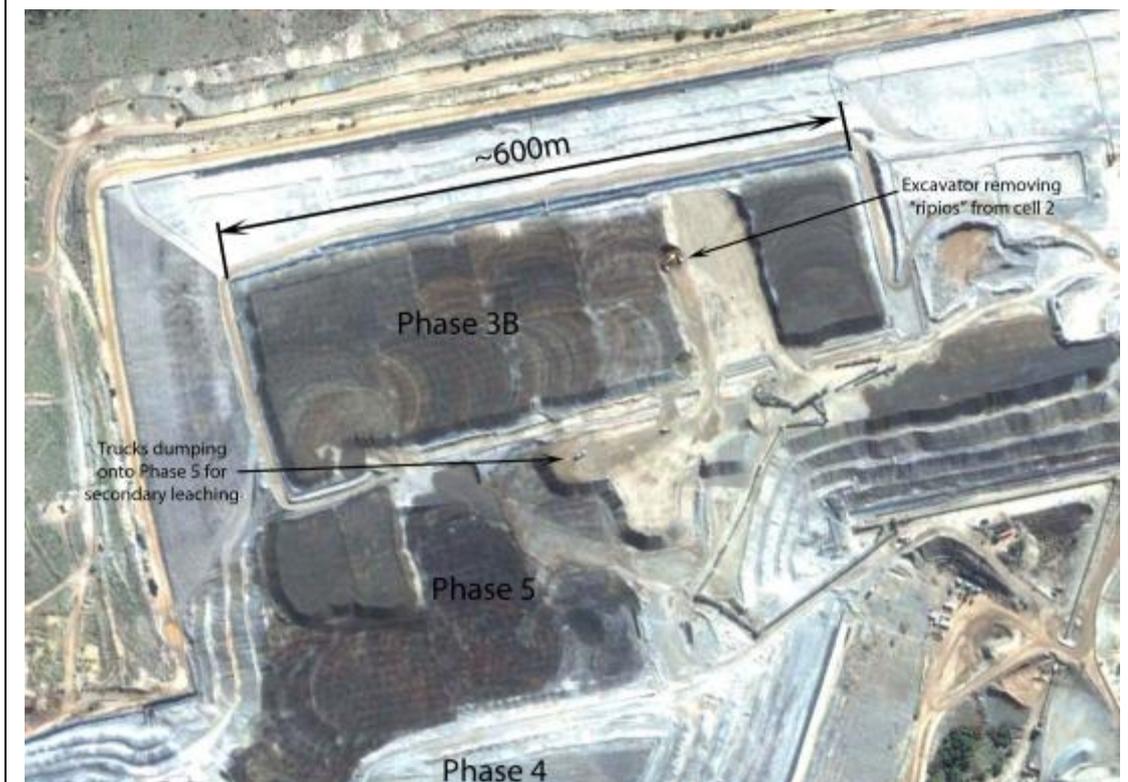
During January 2011, an operational refinement was implemented with the inclusion of an inter-lift liner on top of the Phase 3 pad. The aim of this installation was to improve leach kinetics, increasing the speed of recovery, whilst reducing cyanide consumption. Figure 17.1\_5 shows the construction of a new cell on what is now called Leach Pad 3B.

**Figure 17.1\_5**  
**Construction of Pad3B (November 2011)**



The concept was to leach ore on one 8m high pad for around 4 months, known as the “Primary Leach”. The aim of the primary leach was to rapidly leach a large amount of gold. The “ripios” (or leached ore) is then moved to a secondary leach pad at Phase 5 where the ultimate gold recovery is achieved at a slower rate. This is illustrated in Figure 17.1\_6. The system is known as dynamic pad leaching.

**Figure 17.1\_6**  
**Operation of Dynamic Pad (April 2011)**



The original permanent pad system, with lifts up to 50 metres in height, resulted in a large solution inventory and quite slow recoveries due to the fact that the solution from the top lift had to percolate down all the lifts before it could flow to the PLS pond for further processing. The large solution inventory contained a large quantity of gold and resulted in delayed gold recovery. Additionally, high cyanide consumption was possible due to the very long leach period for the material in the lower lifts.

In the dynamic pad system the crushed ore is stacked on the primary pad by the same system of conveyors, grasshopper conveyors and the radial stacker traditionally used at the CMD Gold Mine. Ore is leached for around 4 months to recover around 65% of the contained gold.

On completion of the primary leach, the ripios are reclaimed by a backhoe and loaded onto trucks for transport to the Phase V pad, where leaching is continued by spray irrigation. Fresh crushed ore is then placed onto the primary pad area recently reclaimed.

The barren and pregnant cyanide solutions are managed in the following manner. Barren solution from the sump is split 70%:30%, between the primary and secondary pads (Phase V). The rich solution from the secondary pad is generally split 50%:50% between the pregnant leach solution (PLS) from the primary leach pad and the sump, although this is dependent on the concentration of gold in solution.

CMD Gold Mine personnel have carried out estimates of recovery from the first dynamic pad cells and the ripios areas; and these are shown in the Figure 17.1\_7.

Typically, gold recovery on the primary pad is in the order of 65%, with an additional 10% recovery expected during the secondary leaching process. These recoveries are largely based on assays of ripios samples taken from the secondary leach pads at the end of irrigation. It is anticipated that a small increase in recovery over the historic average will be achieved due to the transportation of the ripios from the primary to secondary pads. This movement results in the addition of oxygen to the secondary pad and improved solution flow through the breakup of solution flow paths in the primary pad.

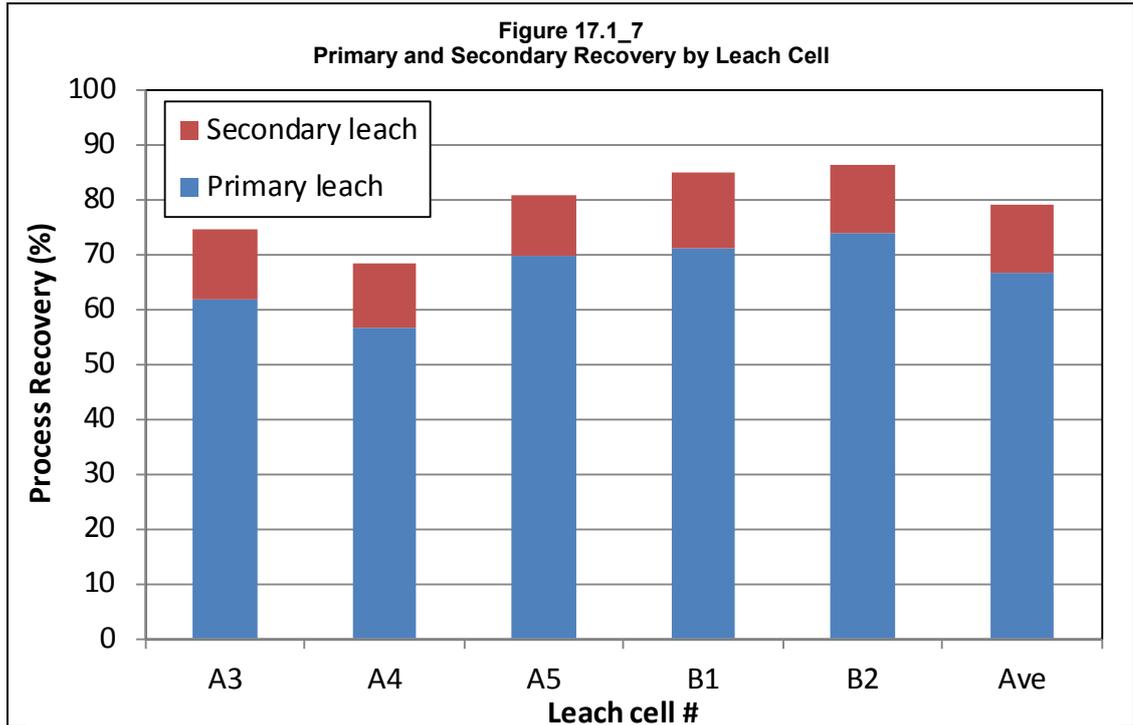


Figure 17.1\_8 is a picture taken from the eastern extremity of Phase I presenting an overview from the plant where the gold is captured by carbon in column in five tanks using counter flow, stripped and poured (see process flow diagram in Figure 17.1\_1). The carbon is regenerated and a section of the plant treats 10% of the solution to remove the copper and recover and recycle free cyanide.

**Figure 17.1\_8**  
**Overview of Phase V (August 2010)**



**Figure 17.1\_9**  
**Collection Point at Bottom of Phase V (August 2010)**



Figure 17.1\_10  
Overview of Plant (August 2010)



#### Adsorption, Desorption and Recovery Plant and Refinery

The process plant has a capacity to treat 1,200m<sup>3</sup>/h of solution. The leach solution from the pregnant solution pond is treated with cyanide to promote the formation of heavy molecular copper complexes to minimize its adsorption on carbon.

The ADR plant consists of two parallel lines of five carbon adsorption tanks through which the carbon passes in a counter-current fashion to the gold containing solution. The carbon adsorbs the free gold and some of the positive ions in the solution, principally copper and calcium. Once per day the loaded carbon from the first tank is moved to the acid wash column where it is washed with hydrochloric acid to remove the carbonates and sulphates that have been formed at the high pH and because of the dissolved salts in the PLS. After acid washing the loaded carbon is moved to the elution column where the gold and silver are stripped at high temperature and pressure in a caustic cyanide solution.

Once the metal has been stripped by the carbon a portion of the stripped carbon is transferred to a regeneration kiln with the balance fed to the last tank in the line to be part of the carbon in counter-current flow. In the regeneration kiln the carbon is exposed to a reducing atmosphere at temperatures between 600 °C and 700 °C to burn the organic components off and bring back the porosity of the carbon, thereby restoring the adsorption capacity of the carbon.

The pregnant solution derived from the elution process is recycled for approximately 12 hours via electrowinning cells that operate in series. The barren solution is fed through a carbon column to ensure all gold has been removed before returning to a tank from where it is pumped to the heap leach process.

The electrowinning cell cathodes on which the gold and silver have been deposited are periodically removed, dried and placed in an induction furnace together with a mixture of fluxes (borates, silica, potassium nitrate and sodium carbonate) to melt the flux-gold cathode mix and is then finally poured into moulds to yield doré bars which is the saleable product of the operation.

Historically the ADR plant has produced up to 200,000 ounces per annum, or approximately 16,500oz per month. The current maximum gold production outlined in the Life of Mine (LOM) is approximately 11,000oz of gold in a single month.

Silver is also recovered along with the gold and based on operational data the total Ag recovered is typically 20% to 30% of the gold ounces. Silver is not routinely analysed in the head grade and hence the LOM model uses a fixed assumption for silver production of 25% of Au ounces. At maximum production of 11,000oz of gold, this would suggest that total Au plus Ag metal ounces recovered in the ADR would be in the order of 13,750oz.

#### Copper Cyanide Recovery Circuit

Ten percent (10%) of the barren solution from the ADR plant is routed to the copper recovery circuit (CRC) for recovery of copper in solution and cyanide. The solution from the CRC joins the rest of the barren solution flowing down to the sump.

After the gold has been recovered in the absorption columns approximately 10% of the barren solution is treated in a modified SART circuit or “CRC plant” as it is called to remove copper and recover the cyanide otherwise attached to the copper.

The principle of the copper removal process is to first raise the acidity to such an extent that CuCN precipitates, which is filtered off after which the pH of the solution is raised by addition of NaOH prior to returning to the leach pad. To capture any hydrogen cyanide gas that escapes, the plant includes a packed column. However with overpressure in the system (pressure kept in excess of partial pressure of cyanide gas in solution), such an escape has never happened.

A product of approximately 50% copper is produced.

The capacity is determined by the target copper concentration in solution and the copper grade of the ore. Experience has shown that the copper concentration can be controlled to between 300ppm and 400ppm by treating approximately 10% of the barren solution through the CRC circuit. When operating the plant produces 28 tonnes of copper concentrate per month at approximately 50% Cu, totalling 14 tonnes of contained copper.

Data from Lachlan Star indicates that the copper concentrate is sold in bags to nearby copper mines that use it to enhance the grade of their copper concentrate. Sales prices are typically in the order of 65% to 70% of the spot copper price for the contained copper.

## **17.2 Heap Leach Capacity**

CMD technical staff provided an estimate of the remaining capacity of the current heap leach pads as of 30 March 2012. In the current active leach pad areas of Phase 4 and Phase 5 there is capacity for an additional 6.04 million tonnes of ore. There also remains the potential to stack another 1.2 million tonnes in the Phase 1 and Phase 2 area of the pad should this be required.

## **18 PROJECT INFRASTRUCTURE**

The CMD Gold mine is an operating entity and as such current infrastructure has been described in detail in Section 4.3, Section 4.4, Section 5.2 and Section 5.4 and, the reader is referred to these sections.

## **19 MARKET STUDIES AND CONTRACTS**

### **19.1.1 Contracts**

Coffey Mining have reviewed the contracts for mining, drilling and blasting and found them to be within industry norms. Mining contracts have been concluded after a competitive tender process. Rates include drilling, blasting, haulage and all other services associated with mining. There is allowance in the contract rates for varying haulage distances, from waste dumps and the ROM pad.

The doré is sold to Johnson Matthey Au with refining costs of US\$0.61/oz, with most costs associated with various shipment costs expressed in US Dollars per shipment. With shipments of approximately 1,000 ounces each, 75% of which is Au, the overall cost per ounce gold including interest on advance payments is approximately US\$8/oz Au refined. These terms are considered to be within industry norms.

Lachlan Star has considered current trends in the gold price to determine the Mineral Reserve but has not completed any detailed study or analysis of the gold price.

## 20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

### 20.1 Environmental

In accordance with the findings of the Coffey Environments, Environmental Review (Appendix B), it is recommended that the CMD Gold Mine devise the following management plans:

- protected species management plan
- biodiversity management plan
- waste stream plan

#### 20.1.1 Current Environmental Permits

In terms of Chilean legislation, specifically, Law No. 19,300, public and private investment projects or activities are subject to an Environmental Impact Assessment Statement (EIAS) and may only be "executed" or "modified" after receiving an Environmental Assessment Resolution ("EAR").

CMD has submitted EIAS for the following stages of the CMD Gold Mine:

- Environmental Impact Declaration ("EID") "Proyecto Desarrollo Fase IV-Andacollo Oro", approved by EAR No 155/05, dated 21 December 2005. The project consists of the modification of the CMD Gold Mine original project through the construction of a leaching pile Phase IV and to restart the operation. This permit has no specific time limit.
- EID "Plan Minero 2007-2010", approved by EAR No. 074/07, dated 17 April 2007. The project consists of the extension of the mining exploitation areas.
- Environmental Impact Statement ("EIS") "Modificación Plan Minero 2007-2010", approved by EAR No. 360/08, dated 14 November 2008. The project consists of the extension of its lifespan through the exploitation of a new open pit at Las Loas and the construction of the Phase V leach pad.

In terms of EAR No. 360/08 the permit is valid for operation until 2011 with extensions subject to notification to the environmental authority if there is not a considerable change to the scope of operation, or by submission of an EID (simpler) or EIS (more complex) depending on the magnitude of the environmental impacts. In a letter dated 13 April 2011 the authorities granted an extension until 2013.

Coffey Mining is not aware of any permitting requirements that will materially limit Lachlan Star's ability to extract the current Mineral Reserves.

### 20.1.2 Permits Required for Mine Plan and Time Frame

Should Lachlan Star want to start operations in a new tenement area or construct a new heap leach platform it will have to submit an EIS. This comprises a base line study, an impact statement and mitigation plan, which needs to be presented to the community through a consultation process and the comments need to be considered in the mitigation plan. The approval process takes a maximum of 18 months, excluding the period to prepare the study. Should the approval exceed 18 months, it is automatically approved. Given the readily available base line study data, the study preparation would be approximately 3 months.

An EID can refer to the original base line study, must include an impact statement and associated proposed mitigations, which need not to be presented to the community and does not involve a consultation process. The typical approval period for an EID is 12 months excluding the study preparation.

Lachlan Star management is in the process of applying for required environmental permits in two stage process. The first step is the submission of an EID for the next two years of production over areas already affected by previous mining activity. As these areas have been disturbed by mining and processing activities, the simpler EID methodology is applicable, and the application will be submitted in the near future.

The second step of the permitting process will be the completion of an EIS for areas outside the footprint of the current operation. The EIS and application is likely to be submitted during the second half of 2012.

### 20.1.3 Environmental Liabilities

Upon final closure of the operations Lachlan Star is required in terms of its approved closure plan to rehabilitate the project area by removing or covering (if deeper than 0.5m) structures and services, stabilise and shape waste dumps, flush the heap leach dumps to reduce cyanide levels such that water draining from the dumps have a cyanide content acceptable to the authorities and certain post closure monitoring activities.

Table 20.1.3\_1 summarizes the activities committed to in terms of the approved closure plans.

<b>Table 20.1.3_1</b> <b>CMD Gold Mine</b> <b>Closure Activities Per Work Area</b>	
<b>Area Rehabilitated</b>	<b>Activity</b>
Mine	Removal of equipment and machinery by mining contractors Construction of security berms around each pit Ripping of road surfaces, shaping according to topography Warning signs every 50m around pit Shaping of waste dumps and placement of a cap of soil. Construction of diversion channels along dumps where bordering higher ground
Plant	Rinsing of all components and equipment before sale Treatment of rinse solution and storage in evaporation pond Placement of dangerous residues in designated approved areas
Buildings	All walls and foundations down to 0.5m deep will be demolished and buried
Leach Heaps	Removal, cleaning and sale of conveyors and stackers Flushing of heaps by sprinkling water without cyanide Upon reaching a sufficiently concentrated level removal of Cu in CRC plant Removal of precious metals in plant from the extracted solutions Continuation of process until the concentration has dropped to below 0.2ppm CN and 1.0ppm Cu. Maintain drainage channels around the heaps for water seepage and rain run off Diversion of such water to evaporation pond Profiling of the heaps to a shape that ensures long term stability
Post Closure Monitoring	Ground water monitoring from three sites Vegetation that proves most suitable for revegetation Slope stability of pit walls and waste dumps Surface water draining from leach pile and ADR plant area

The most important liabilities are associated with the stabilisation and shaping of the dumps and the reduction of the cyanide and copper content of the water contained in heap leach dumps as well its neutralisation.

The Section 21.5\_1 gives details on the extent of the cost of the liabilities.

Coffey Mining is not aware of any environmental liabilities that will materially limit Lachlan Star's ability to extract the current Mineral Reserves.

#### **20.1.4 Rehabilitation Provision**

Table 20.1.4\_1 summarizes the rehabilitation provisions and scope of work associated with the various mitigation activities estimated for closure at current date and includes contingency built into the estimates.

<b>Table 20.1.4_1</b>			
<b>CMD Gold Mine</b>			
<b>Rehabilitation Provisions</b>			
<b>Area Rehabilitated</b>	<b>Activity</b>	<b>Scope</b>	<b>Provision (US\$'000)</b>
Mine	Safety Berm Around Pits	18,570m	65
	Shaping and Profiling of Waste Dumps	16,220,000m <sup>2</sup>	385
	Signage	371	31
	Road Ripping	23,560m	65
	Profiling of Heap Leach	930,400m <sup>2</sup>	220
	<b>Total Mine</b>		<b>766</b>
Plant	Cleaning and Disposal of Equipment		14
	Burying Walls and Foundations	8,530m <sup>3</sup>	16
	Removal Electrical Installations		34
	<b>Total Plant</b>		<b>66</b>
Leach Heaps	Flushing of Heaps to Remove Cyanide	400,000m <sup>3</sup>	
	- Power		330
	- Make-up Water		1,200
	- Reagents		590
	- Neutralisation of Remaining Solution		240
	- Staffing for 4 years	14 persons	385
	<b>Total Leach Heaps</b>		<b>2,745</b>
Monitoring	Monitoring of ground water, heap seepage water quality, dust	3 years	<b>360</b>
<b>Grand Total</b>			<b>3,937</b>

By far the most important provisions are linked to the removal of cyanide from the leach heaps and neutralisation of the remaining solution. During the flushing process another 1,680ozs gold is expected to be recovered from the currently stacked material, which will be a credit towards the closure cost.

Only once the cyanide content has been brought down below the legal limit will the ADR plant be demolished and its components sold. A three-year monitoring period is envisaged.

### 20.1.5 Salvage Value

The salvage value of the various assets will be realized in various phases. When the mining operations close, the crusher plant and conveyor belts and stackers become available for sale. Once the leaching process ends and the heaps have been flushed sufficiently to reduce the cyanide content below legal limits, the ADR plant and refinery can be sold.

Table 20.1.5\_1 gives a summary of the estimated salvage value of the major fixed assets.

<b>Table 20.1.5_1</b>	
<b>CMD Gold Mine</b>	
<b>Estimated Salvage Value of Main Assets</b>	
<b>Asset</b>	<b>Estimated Value (US\$'million)</b>
Crusher Plant, Conveyor Belts and Stackers	7.0
ADR plant and Refinery	1.0
Generators	0.5
<b>Total</b>	<b>8.5</b>

The values have been based on an actual bid of US\$6.0 million made for the assets in reply to the tender process in 2006. Since then, mining equipment prices have risen substantially and the value of the US Dollar has declined against all major currencies (except for the British Pound) by between 11% (Euro) and 45% (Australian Dollar).

## 21 CAPITAL AND OPERATING COSTS

### 21.1 Capital Cost Estimate

Table 21.1\_1 shows the estimated capital expenditure over the LOM for the Indicated Mineral Resource Only case and is sourced from estimates by Lachlan Star in June 2011.

<b>Table 21.1_1</b>		
<b>CMD Gold Mine</b>		
<b>Life of Mine Capital Expenditure Breakdown (US\$)</b>		
<b>Area</b>	<b>Indicated Mineral Resource Only</b>	
<b>Exploration</b>	<b>2,750,000</b>	
Mining	Mining General	25,000
	Geotech Review, Other Consulting	50,000
	Other (software/hardware etc)	16,948
	<b>Total Mining</b>	<b>91,948</b>
Plant	Heap Leach Extension	-
	Primary crusher	46,190
	Stacking	87,683
	Leaching	111,691
	ADR	241,697
	Refinery	624,979
	Laboratory	35,500
	Interlift Liner	1,297,674
	Other	220,042
	<b>Total Plant</b>	<b>2,665,455</b>
<b>Total Capex</b>	<b>5,507,403</b>	

Exploration capital expenditure covers ongoing drilling to upgrade the confidence in the resources and assist in the mine planning process.

A waste stripping component of the total mining cost is capitalized in the economic evaluation, however, the total mining cost estimate is covered under the operating cost estimate in Section 21.2 below.

The capital expenditure for mining is mostly related to the purchase of modelling software and studies.

Most of the processing capital expenditure for the Indicated Mineral Resource Only case is related to addition of a liner on the upper lifts of the existing heap leach to aid recovery, the refurbishment of the electrowinning circuit for the refinery, the addition of an impermeable liner on the heap leach for additional cells and refurbishment costs in the ADR plant.

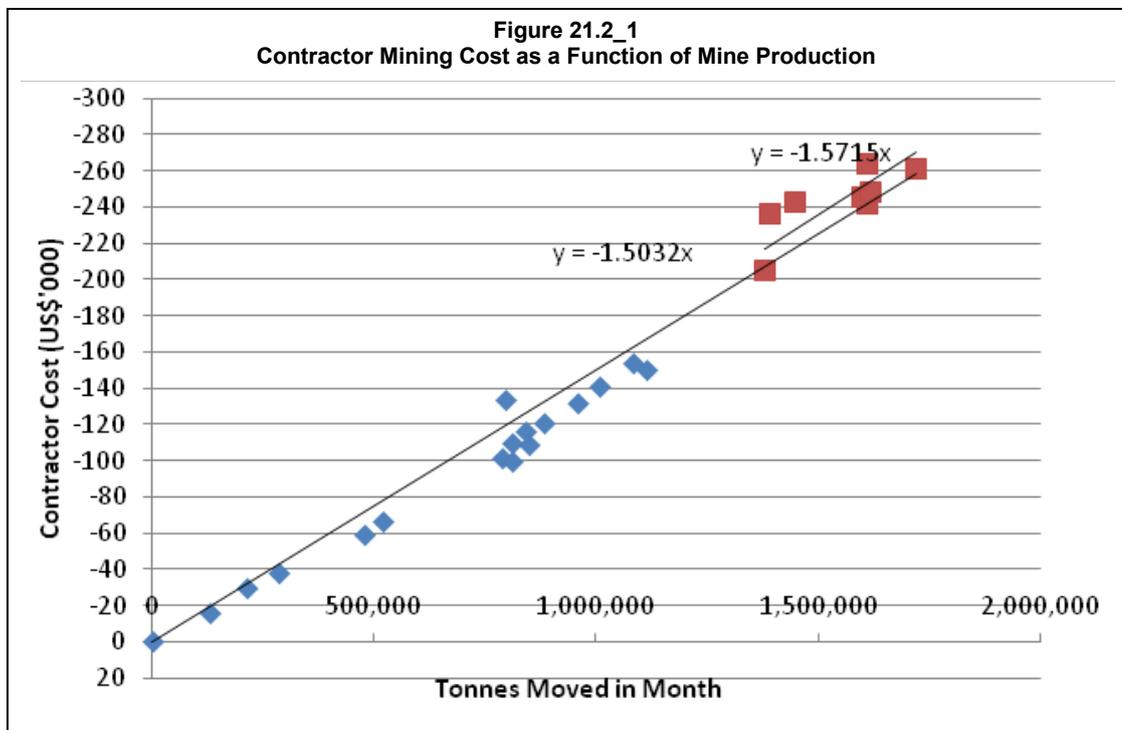
### 21.2 Operating Cost Estimates

The economic analysis presented in this section was based on the Indicated Mineral Reserve at 1<sup>st</sup> August 2011. It has not been updated at this time.

The CMD Gold Mine heap leach operation will have two distinct phases, one when ore is mined, crushed, stacked and leached and a second phase with leaching only. The calculated cost structure takes this change into consideration by applying a fixed and variable cost structure.

The monthly operating cost of the CMD Gold Mine for the period January 2009 until March 2011 was reviewed. For the first three months of 2009, no ore was mined or crushed. The expenses have been analysed for various categories to determine the degree with which these vary with production level. The most important findings are discussed below.

Figure 21.2\_1 shows the degree by which contractor's mining cost vary with production together with the regression equation for the best fit. To avoid an inflationary bias and because of start of mining at the older Pits since August 2010, the relationship for the period since August 2010 is shown separately in red. It shows that the implied unit cost is \$1.57/t.



CMD took responsibility of drilling operations at some of the pits, after these pits were brought back into production in October 2010. The cost of staff involved is US\$36,000 per month with additional unit cost (expressed as cost per tonne moved) of US\$0.037.

Other mining related costs such as General and Engineering & Geology, are mostly fixed. Laboratory costs, which relate to assays of production samples, are dominantly variable as shown in Figure 21.2\_2.

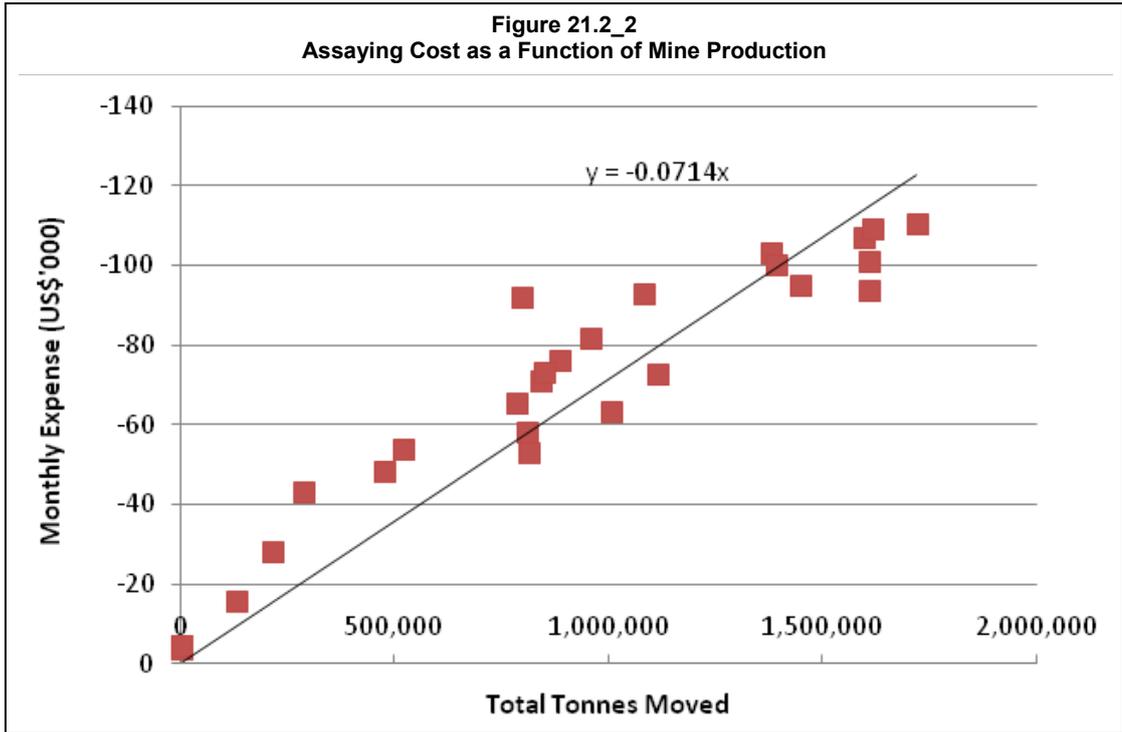


Figure 21.2\_3 shows the degree by which total crushing and stacking cost varies with the amount of material crushed. A fixed cost of US\$100,000 per month is used in the cost model, which is the approximate average cost for the four months when there was no production. The unit crushing cost implied by the regression line is US\$2.13/t treated.

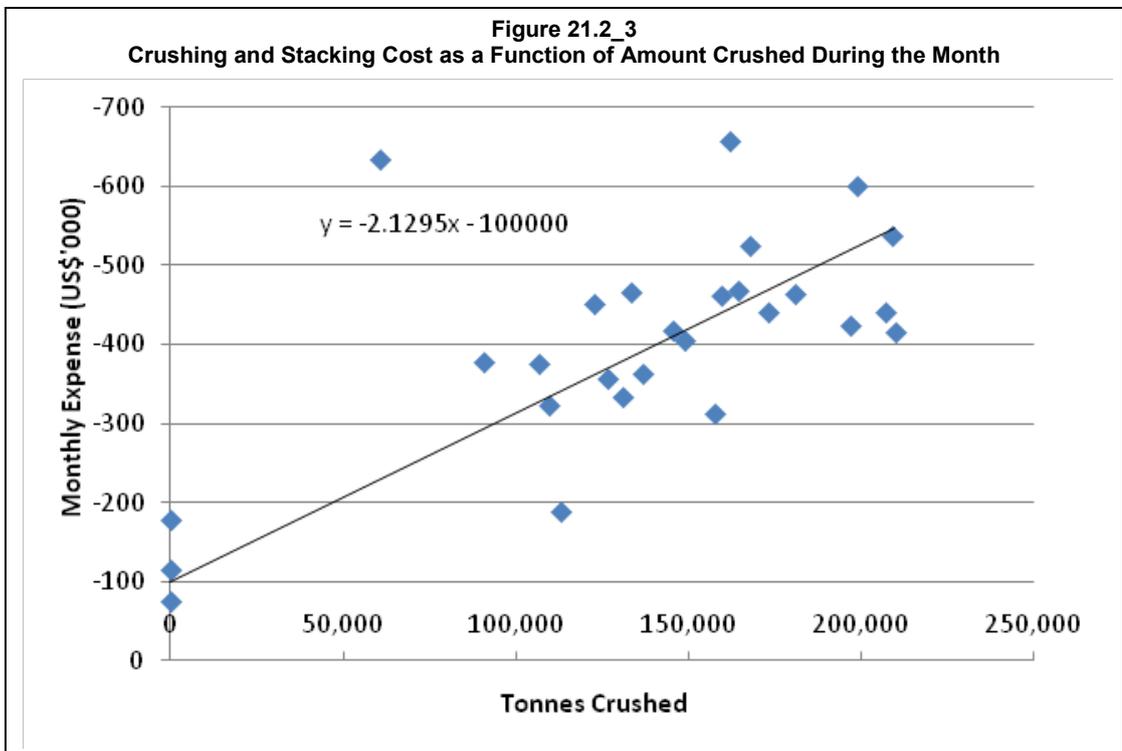
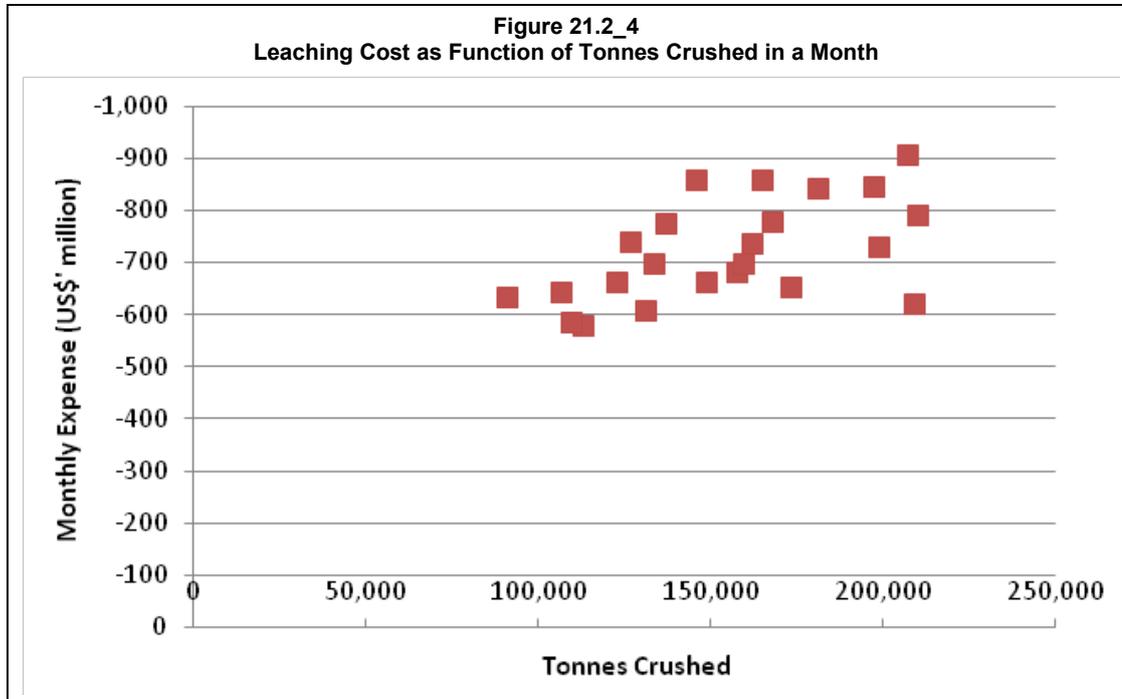


Figure 21.2\_4 shows the degree by which the leaching expenses vary with tonnes crushed in a month. However, because cyanide consumption is a function of both ounces of gold produced and tonnes of ore stacked, no simple relationship can be used and a more fundamental approach to estimating its cost was made.



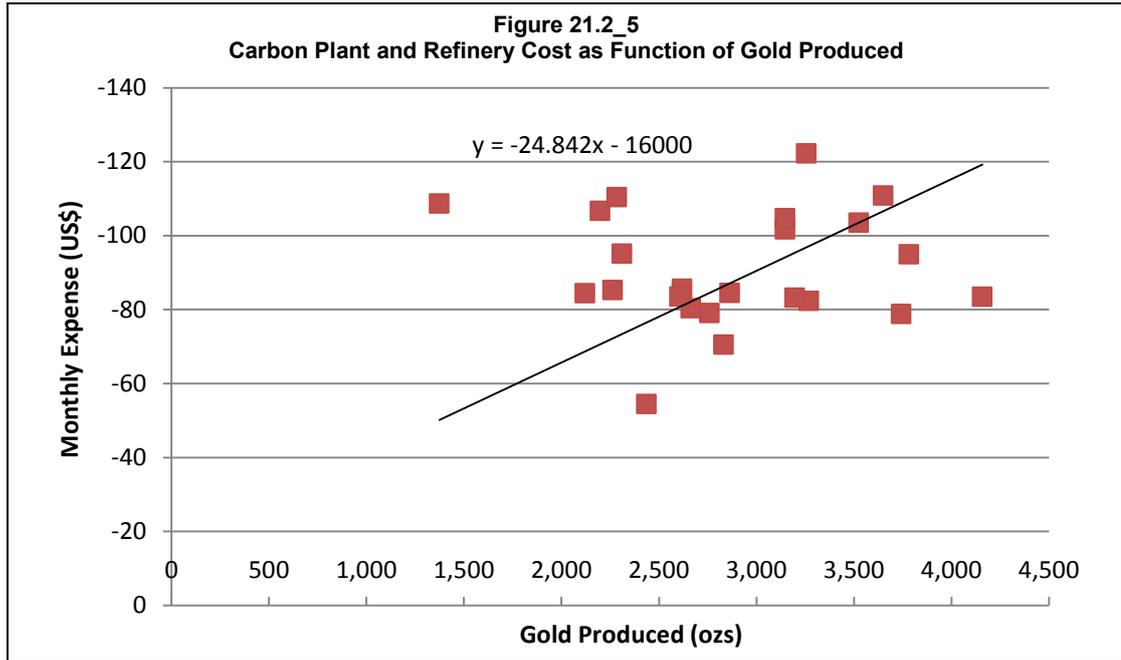
Cyanide is the major processing cost, comprising 17% of the total operating costs over the life of mine and 50% of the total cost on cessation of mining and stacking. CMD has secured NaCN through to the end of 2012, and are in discussions with Orica for 2013.

The other consumables used and the cost estimates are listed below:

Consumables	Cost Estimate	
	Units	Value
▪ Nalco	US\$/oz	4.7
▪ Gas and Lubricants	US\$/oz	4.1
▪ Materials and Supplies	US\$/oz	1.4
▪ Utilities: Power and Water	US\$/month	100,000

Cost for the carbon plant and refinery are determined by the amount of gold produced with Figure 21.2\_5 presenting the relationship. The intercept of the regression line has been set to US\$16,000 as this is the known monthly staffing cost.

The operating cost after cessation of mining would include the cyanide consumption cost, other consumables used, carbon plant and refinery cost. Laboratory cost should also be maintained at a fixed cost per month.



The CRC Plant generates a net profit through the production of copper, and this has been taken into consideration in the cashflow as “Net Cu Revenue”.

Table 21.2\_1 summarizes the cost factors and consumption rates for the CRC plant.

<b>Table 21.2_1</b>				
<b>CMD Gold Mine</b>				
<b>CRC Plant Cost Structure</b>				
<b>Cost Item</b>	<b>Units</b>	<b>Unit Price</b>	<b>Consumption (m<sup>3</sup> solution)</b>	<b>Monthly Cost (US\$'000)</b>
Electrical Power	kWh	0.22	156 <sup>#</sup>	21
Sulphuric Acid	tonne	200	1.680	15
Caustic Soda	tonne	620	1.105	31
Diatomaceous Earth	tonne	730	0.081	3
Anti scallant	tonne	2,260	0.028	3
Maxibags	unit	13.6	0.002	1
Fixed Cost	US\$/month			11
<b>Total Monthly Cost</b>				<b>84</b>

<sup>#</sup> kWh

Given that monthly production is approximately 30,000 pounds of Cu and assuming a price of US\$4.1/lb with a Cu payable percentage of 72.2%, the plant makes a small profit. If Cu prices fall materially and the CRC operation is not profitable, then the CRC plant will be put on care and maintenance.

The General and Maintenance cost for the plant are essentially fixed.

General and Administration costs are generally fixed in nature, but when plotted over time (see Figure 21.2\_6), it is evident that the latest nine months shows a clear upward trend in US Dollar terms, which is a combination of small inflationary increases, but more importantly a weakening of the US Dollar versus the Chilean Peso. The March cost of US\$220,000 is therefore a reasonable reflection of General and Administration Cost going forward, assuming no further change in the exchange rate. As from the cessation of mining and crushing/stacking activities, this cost item has been estimated to drop by 40%.

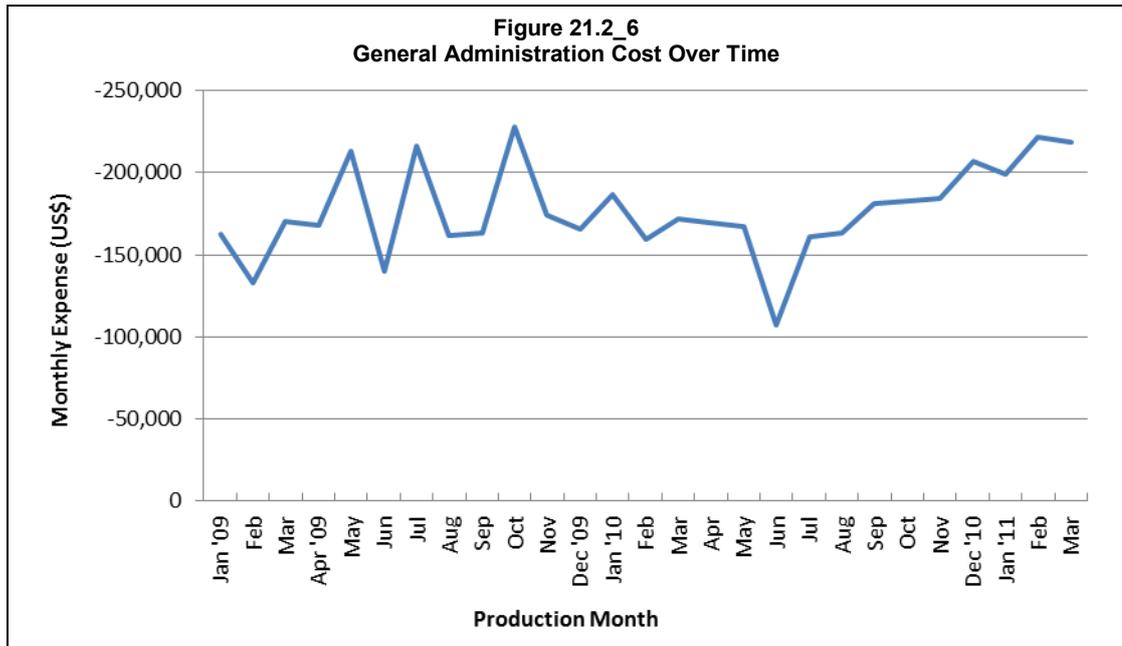


Table 21.2\_2 summarizes the fixed and variable components for the cost structure.

Cost Item		Fixed Costs	Variable Costs	
		US\$/month	Unit \$/Tonne	Rate
Mining Cost	General	30,000	US\$/t moved	0.0109
	Drilling	36,000	US\$/t moved	0.0037
	Contracting		US\$/t moved	1.5715
	<b>Subtotal</b>	<b>66,000</b>	<b>US\$/t moved</b>	<b>1.5861</b>
Mining Costs Applied to Mineralized Material	Engineering and Geology	21,120	US\$/t moved	0.0155
	Laboratory		US\$/t moved	0.0726
	<b>Subtotal</b>	<b>21,120</b>	<b>US\$/t moved</b>	<b>0.0881</b>
Processing Cost	General	57,000		
	Crushing and Stacking	100,000	US\$/t crushed	2.1295
	Maintenance	57,600		
	Carbon Plant and Refinery	16,000	US\$/oz Au produced	24.8420
	Leaching <sup>#</sup>			
	General and Administration	220,000		
<b>Subtotal</b>	<b>450,600</b>			

<sup>#</sup> Function of ounces produced and tonnes stacked

The values in Table 21.2\_2 were applied to actual tonnes mined and processed in the period January 2010 to March 2011 as a check. The results are summarized in Table 21.2\_3.

Table 21.2_3 CMD Gold Mine Cost Reconciliation Between Historical Production and Inputs to the Cashflow Model		
Cost	Period Jan 10 to Mar 11	
	Actual Cost (US\$/t)	Predicted From Cost Model (US\$/t)
Mining Cost	1.58	1.64 (+4%)
Processing Cost	11.20	10.49 (-6%)

The differences in the costs are considered to be acceptable by Coffey Mining for generation of a Mineral Reserve estimate.

### 21.3 Other Costs

Other charges relating to process inventory changes and depreciation/amortisation are non-cash items, and not considered relevant to the cashflow model.

The interest expense has been drawn from the repayment schedule for all loans secured at the various financial institutions, amounting at 1 July 2011 to US\$1.85 million from Banco Santander, US\$1.77 million from Banco Security and US\$0.14 million from CorpBanca.

Table 21.3\_1 sets out the terms of the loans outstanding at 31 December 2011.

Table 21.3_1 CMD Gold Mine Terms of Loans Outstanding at 31 December 2011 (all Monetary Figures in '000)						
Financial Institution	Currency	Principal at 31 Dec '11	Monthly Instalment	Annualized Interest Rate (%)	Instalment incl. Interest	Repaid By
CorpBanca	US\$	1,605	94.4	6.67	No	May'13
Banco Security	US\$	1,053	119	7.00	No	Aug'12
	US\$	99.50	5.1	10.62	No	Sep'12
Banco Santander	US\$#	424	87.7	10.00	No	Jun'12
	US\$#	200	55.0	9.70	No	Apr'12
	US\$#	255	25.6	7.00	No	Nov'12
	US\$	1,000	83.3	8.00	No	Nov'12

# Loan actually expressed in "Unidad de Fomento", which is an inflation indexed unit of account

### 21.4 Reconciliation of Cashflow Model to Optimisation

In Table 21.4\_1, the costs derived for the optimisations and summarized in Table 15.2.1\_1 have been compared to the costs generated from the cashflow model.

A new mining contract commenced in August 2011. The rates in the new contract are higher than the historical costs in Table 21.2\_3. In order to take the new mining costs into consideration, an average variable contract mining cost of \$1.80/t is used in the cost models. Table 21.4\_1 reflects both the variable and fixed components of the contract mining cost and are therefore higher than the \$1.80/t.

<b>Table 21.4_1</b>		
<b>CMD Gold Mine</b>		
<b>Optimisation Cost Comparison to Cashflow Model</b>		
<b>Cost</b>	<b>Optimisation</b>	<b>Cashflow Model</b>
	<b>Indicated Mineral Resource Only</b>	<b>Indicated Mineral Resource Only</b>
Mining Cost	\$1.60/t	\$1.89/t
Processing Cost	\$9.67/t	\$9.75/t

The average mining and processing costs used in the optimisations are lower than those for both the case with Indicated Mineral Resources only derived from the final cashflow model due to the change in contract mining cost. Processing costs are similar for both optimisation and cashflow modelling.

## 21.5 Environmental Considerations

The expenses related to the rehabilitation as discussed under Section 20.1 and reflected in Table 21.5\_1.

<b>Table 21.5_1</b>		
<b>CMD Gold Mine</b>		
<b>Environmental, Closure and Other Administration Costs</b>		
<b>Capital Item</b>		<b>Indicated Mineral Resource Only (\$,000s)</b>
Closure Costs	Mine Closure	(546)
	Plant Closure	(4,151)
	Monitoring	(360)
Retrenchment	Mine, Crusher/Stacking Plant	(2,707)
Salvage Value	Crusher, Conveyors	7,000
	Generators	500
	ADR Plant, Refinery	1,000
	Gold Produced	3,501

The overall cost has increased from the current estimate as reflected in Table 20.1.4\_1 to account for flushing, neutralisation and shaping of additional stacked material, compensated for by gold produced from the expanded leach heaps.

The cost for flushing, which is expected to take four years, followed by three years of monitoring has been accrued in the cashflow model on closure date, as has the benefit from the production of gold during this period.

Table 21.5\_1 illustrates that upon mine closure there will be a net inflow of funds, whereas total closure will involve an outflow of approximately US\$1.1 million, including retrenchment benefits. No bonds or deposits in trust funds are required in Chile.

## 22 ECONOMIC ANALYSIS

### 22.1 Introduction

The economic analysis presented in this section was based on the Indicated Mineral Reserve at 1 August 2011. It has not been updated at this time.

The economic viability of the project has been evaluated using discounted cash flow analysis of the net free cash flow on a monthly basis without accounting for inflation. Given that the company has a large tax credit and its debt facilities have a very short remaining term, ignoring inflation has a negligible effect on the results.

### 22.2 Input Parameters

The macro-economic assumptions for the cashflow model are summarized in Table 22.2\_1

<b>Table 22.2_1</b>			
<b>CMD Gold Mine</b>			
<b>Macro-Economical Assumptions for the Base Case</b>			
<b>Parameter</b>		<b>Unit</b>	<b>Value</b>
Metal Price	Au – 2011	US\$/oz	1,500
	Long Term	US\$/oz	1,400
	Ag	US\$/oz	30
	Cu	US\$/lb	4.10
Exchange Rate		CHP/US\$	478

### 22.3 Economic Analysis Based on Indicated Mineral Resources

The cashflow model has been generated on a pre-tax basis. The CMD Gold Mine has available tax losses of approximately US\$76 million and a capital repatriation credit of a further US\$85 million. The tax loss available as a deduction against future profits means that the issue of tax is immaterial unless the life of mine can be extended for a very long period or the gold price increases significantly.

The financial performance over the life of mine for the Probable Mineral Reserve Case shows production of 126K ozs of gold over the mine life and a NPV of \$35 million at a discount rate of 10%. (Table 22.3\_1).

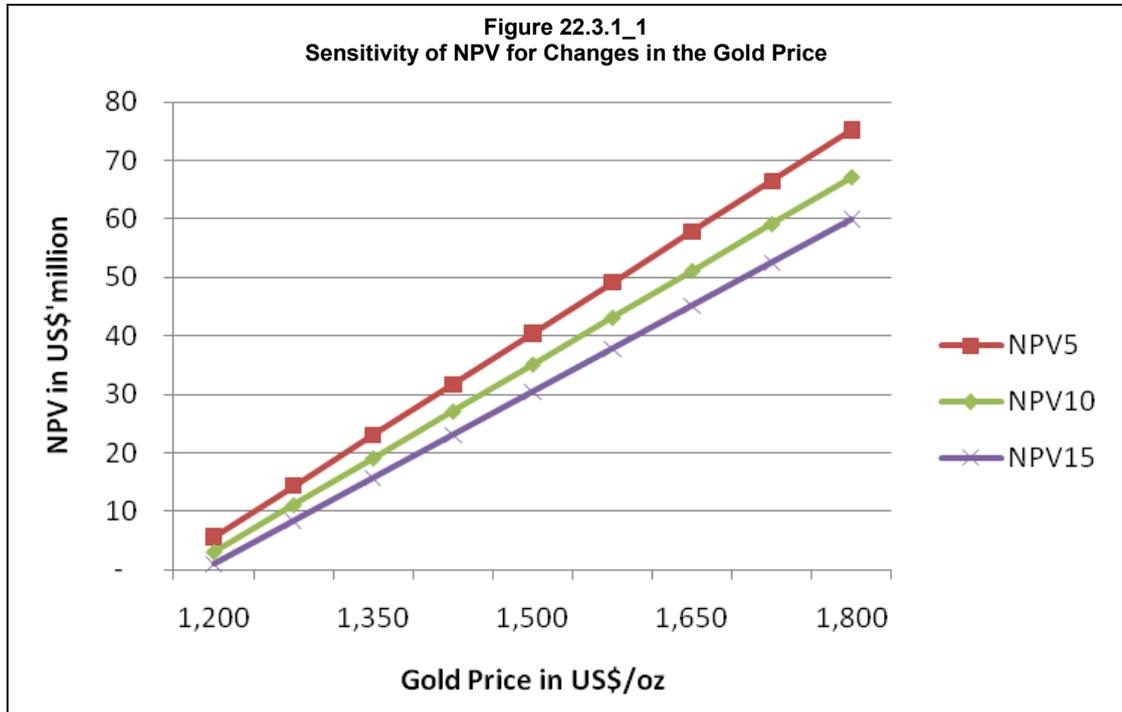
For the Probable Mineral Reserve Case, the payback period for undiscounted net free cash flow is 17 months, whereas at a discount rate of 10% and 15% this is respectively 18 months and 19 months, reflecting the low capital impost on the Project.

The Internal Rate of Return (IRR) is 125%, which is reflective of the low capital component and rapid payback

Table 22.3_1 CMD Gold Mine Financial Forecast for the Mineral Reserve (Indicated Mineral Resource Only) Case (US\$'000)									
	Units	H2-2011	2012	2013	2014	2015	2016	Total	
Mined Ore	'000 t	821	2,506	2,353	334			6,013	
Au Grade	g/t	0.77	0.87	0.78	0.71			0.81	
Contained Au	oz	20,214	70,279	58,951	7,607			157,051	
Waste Mined	'000 t	6,685	13,613	4,840	312			25,450	
Total Moved	'000 t	7,506	16,118	7,193	646			31,463	
Strip Ratio (W:O)	t/t	8.15	5.43	2.06	0.93			4.23	
Gold Produced	oz	15,251	45,083	42,896	17,186	6,039	305	126,760	
All Financial Figures in US\$									
Gold Price	US\$/oz	1,500	1,500	1,500	1,500	1,500	1,500	1,500	
Revenue		22,877	67,656	64,344	25,778	9,059	458	190,140	
Cu Revenue (net)		11	32	32	32	32	5	143	
Total Revenue		22,888	67,656	64,376	25,810	9,091	463	190,284	
Operating Cost	Dore Refining (net)		8					64	
	Mining		1,529					11,534	
	Leasing	Caterpillar	532	1,596	532			2,660	
		Volvo	-	960				960	
	Processing		6,771	13,707	13,134	4,683	2,056	138	40,490
	Technical Services		788					3,511	
	Administration		1,320					10,340	
<b>Total Cash Cost</b>			<b>11,123</b>	<b>25,614</b>	<b>22,020</b>	<b>7,672</b>	<b>3,643</b>	<b>271</b>	<b>70,342</b>
<b>Operating Cashflow</b>			<b>11,765</b>	<b>42,042</b>	<b>42,357</b>	<b>18,138</b>	<b>5,448</b>	<b>192</b>	<b>119,941</b>
Debt Servicing and Repayments			1,969	1,950				3,919	
Aged Creditors Repayment			5,809	926				6,735	
Royalty Paid			801	1,808	1,194	95		3,898	
Capital Expenditure	Exploration		1,100	1,650				2,750	
	Other Mining		12,544	25,371	9,323	708		47,946	
	Processing		1,329	1,197	60	40	40	2,665	
	Administration				1,587		1,120	2,707	
	Mine Closure				546		4,511	5,057	
<b>Total Capital Expenditure</b>			<b>14,973</b>	<b>28,218</b>	<b>9,382</b>	<b>2,881</b>	<b>40</b>	<b>5,631</b>	<b>61,124</b>
Salvage Value					(300)	2,461		2,161	
Net Cashflow			-11,787	9,140	31,781	14,862	5,408	-2,978	46,427
Discounted at:	10%		-11,505	7,862	25,909	11,073	3,655	-1,870	35,123
	15%		-11,369	7,292	23,412	9,570	3,010	1,484	30,432

### 22.3.1 Sensitivities

The sensitivity of the financial return and payback periods have been tested for changes in long term gold price, plant feed grade, cash operating cost and capital expenditure plus closure cost. Figure 22.3.1\_1 shows the change of the Net Present Value at discount rates of 5% (“NPV<sub>5</sub>”), 10% (“NPV<sub>10</sub>”) and 15% (“NPV<sub>15</sub>”) for changes in the gold price.



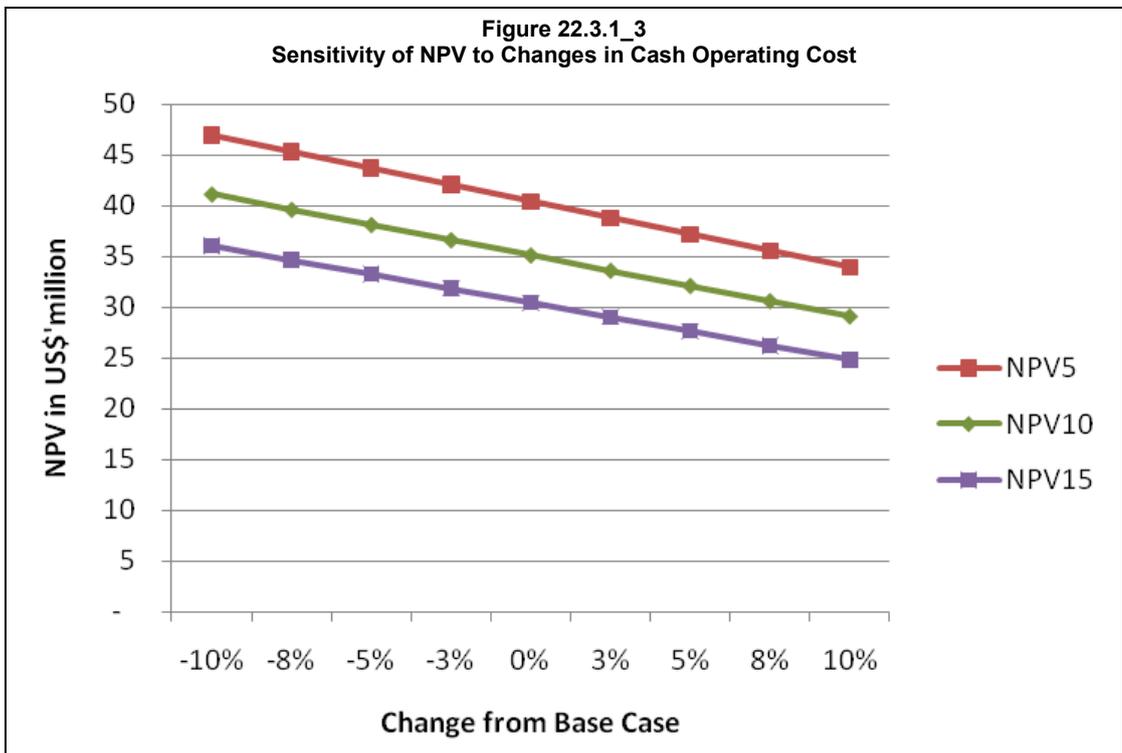
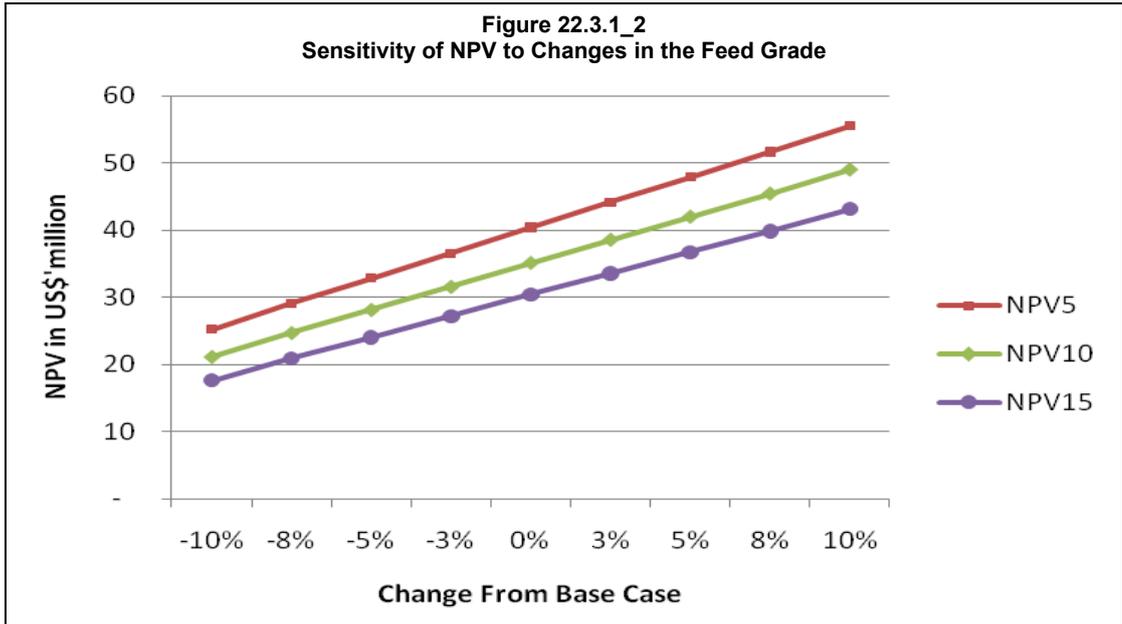
The diagram shows that the gold price has to drop to less than US\$1,200/oz for the NPV to turn negative.

Figure 22.3.1\_2 gives the sensitivity of the NPV as a function of the feed grade, showing that for a drop of 10% in the contained gold in the plant feed the NPV<sub>10</sub> drops to approximately US\$15 million to US\$25 million.

Figure 22.3.1\_3 gives the sensitivity of the NPV as a function of the cash operating cost.

The diagram illustrates that for a change of 10% from the base cash operating cost, the NPV<sub>10</sub> remains strongly positive at US\$29 million. Coffey Mining considers that any increase in cyanide price would be less than the overall cash cost increase of 10% and is therefore accounted for in the sensitivity analysis.

Figure 22.3.1\_4, which shows the sensitivity of the NPV for changes in the capital expenditure and closure cost, illustrates that the project is relatively insensitive to capital outlays. This is because the project requires relatively low capital expenditure over the remaining life of mine.



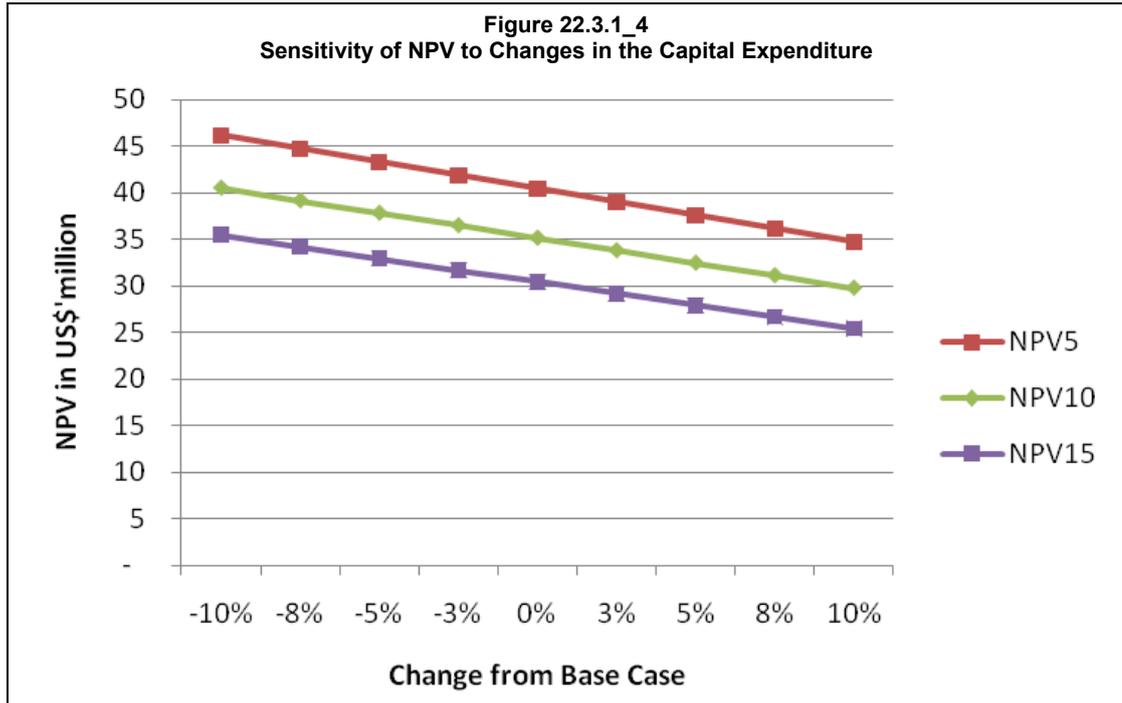


Table 22.3.1\_1 summarizes the sensitivities by giving the change in NPV (in US\$'000) per percentage point change for the key parameters. For example, the table shows that should the gold price change by one percent the NPV<sub>10</sub> would change by US\$1.5 million.

<b>Table 22.3.1_1</b> <b>CMD Gold Mine</b> <b>Change in NPV (in US\$'000) per Percentage Point Change in Key Parameters</b>			
<b>Parameter</b>	<b>NPV5</b>	<b>NPV<sub>10</sub></b>	<b>NPV<sub>15</sub></b>
Gold Price	1,579	1,454	1,342
Feed Grade	1,510	1,383	1,270
Cash Operating Cost	-642	-596	-555
Capital and Closure Expenditure	-571	-536	-504

Table 22.3.1\_2 gives the sensitivity of the payback period to an unfavourable change of 10% in the various key parameters.

<b>Table 22.3.1_2</b> <b>CMD Gold Mine</b> <b>Payback Period (in months) After 10% Percentage Unfavourable Change in Key Parameter</b>			
<b>Parameter</b>	<b>Net Free Cash Flow</b>		
	<b>Undiscounted</b>	<b>Discounted 10%</b>	<b>Discounted 15%</b>
Gold Price	24	24	24
Feed Grade	23	23	24
Cash Operating Cost	22	22	22
Capital and Closure Expenditure	22	22	22

From Table 22.3.1\_2 it is evident that the payback period is relatively insensitive to changes in the key parameters and that payback remains at two years or less even if any of the main factors changes by 10%, irrespective of the discount rate applied. Again, this is a function of the low capital expenditure.

## **22.4 Taxes**

Chilean income tax is levied in two ways. Income tax on profits to be left in Chile are taxed at 17%, with a further 18% tax levied on profits to be repatriated outside of Chile.

The carry forward tax losses allowed against future taxable profits was the equivalent of US\$76 million at 31 March 2011. In addition, approximately US\$85 million was available to be repatriated in addition to the US\$76 million with only 17% tax payable.

## 23 ADJACENT PROPERTIES

### 23.1 Carmen de Andacollo

The Carmen de Andacollo Copper Mine is located adjacent to the CMD Gold Mine tenements to the southeast. This project comprises an open pit copper mining operation owned and operated by Teck.

The Carmen de Andacollo orebody is a porphyry copper deposit consisting of disseminated and fracture- controlled copper mineralization contained within a gently dipping sequence of andesitic to trachytic volcanic rocks and sub-volcanic intrusions. The mineralization is spatially related to a feldspar porphyry intrusion and a series of deeply rooted fault structures. A primary copper-gold sulfide deposit (the "Hypogene Deposit") containing principally disseminated and quartz vein- hosted chalcopyrite mineralization lies beneath the supergene deposit. The Hypogene Deposit was subjected to surface weathering processes resulting in the formation of a barren leached zone from 10m to 60m thick. The original copper sulfides leached from this zone were re- deposited below the barren leached zone as a copper-rich zone comprised of copper silicates (chrysocolla) and supergene copper sulfides (chalcocite with lesser covellite).

The Carmen de Andacollo Copper Mine was acquired by Aur in 1994, and has been operating since 1996, first as a open pit agglomeration heap leach operation on the oxide cap of the porphyry deposit producing more than 270,000 tonnes of copper until 2009, which has subsequently been converted into an operation generating predominantly a copper sulfide flotation concentrate.

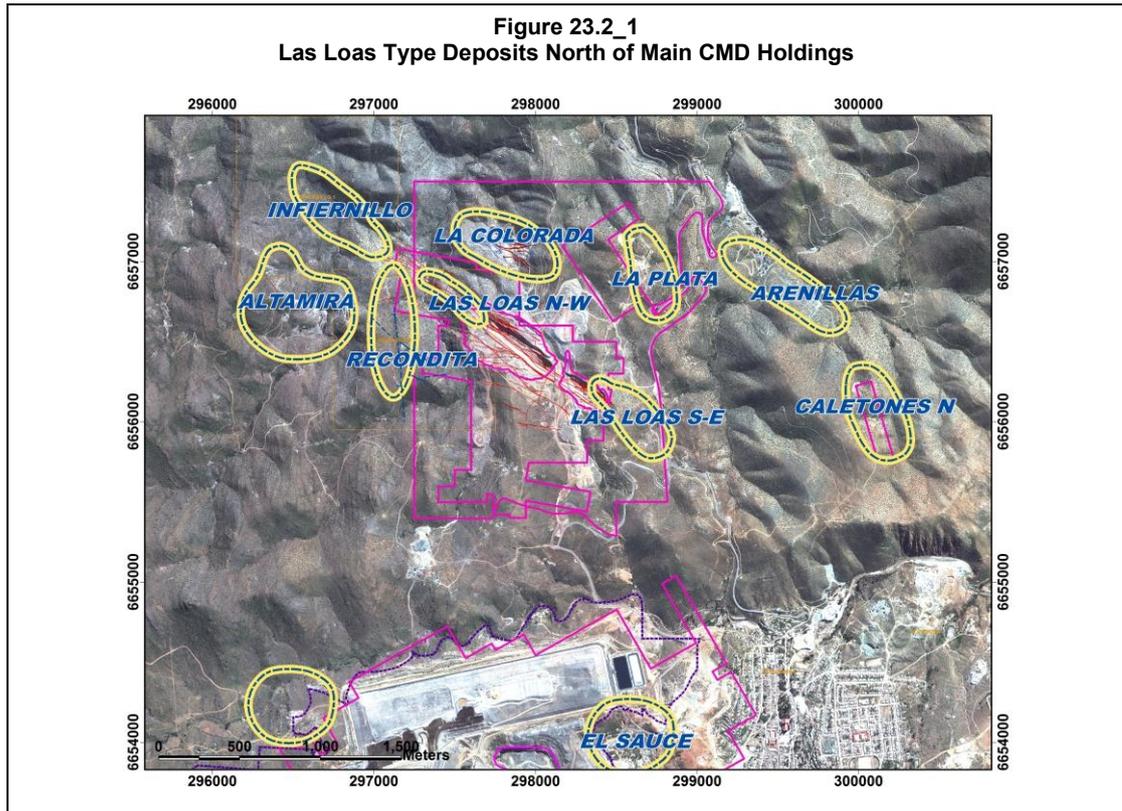
There is evidence in the pit walls of the Tres Perlas West and Tres Perlas pits of the supergene enriched copper deposit extending into the CMD Gold Mine property. This economic potential of the extension is currently being tested by Lachlan Star with the results reported in Appendix D confirming continuation into CMD property for a considerable distance and present in structural zones that appear to strike broadly north-south.

Teck reported in its quarterly statements for Q4 2010 that Carmen de Andacollo achieved commercial production from its new copper concentrate plant on October 1 and for the year contributed a total of 34,800 tonnes of copper, consisting of 20,700 tonnes produced in the pre-commercial start-up phase and 14,100 tonnes of new copper production in the fourth quarter from treating 3.7 million tonnes of ore at a grade of 0.45% Cu and 0.1g/t Au.

Proven and Probable Ore Reserves for the Hypogene Deposit, declared at 31 December 2010, is a total of 399.7 million tonnes at 0.38% Cu and 0.12g/t Au. The Teck interest in the deposit is 90% of the reserves. (Source: Teck website- <http://www.teck.com/Generic.aspx>). The authors of this technical report have been unable to verify this information, which is not necessarily indicative of the mineralization of the CMD Gold Mine.

## 23.2 Gold Operations North of the CMD Gold Mine

Figure 23.2\_1 shows the location of a number of old mine workings to the north of the CMD Gold Mine plant area, which surrounds the Las Loas pit. The deposits are NW-SE striking veins and hydrothermal breccias similar to the Las Loas deposits and which have been worked on a small scale, mainly by underground mining with operations focused on the higher grade sections. No accurate information is available for historical production. Lachlan Star intends to explore selected projects to determine whether they are amenable to bulk mining and as feed to the heap leach process.



## **24 OTHER RELEVANT DATA AND INFORMATION**

No additional relevant data is discussed.

## 25 INTERPRETATION AND CONCLUSIONS

See also Section 26.

The geological understanding of the CMD Gold Mine has evolved greatly since the commencement of the Lachlan Star exploration program. The knowledge acquired to date and exploration success over the last six months confirms the potential of the CMD Gold Mine and surrounding areas. Coffey Mining considers that the proposed exploration and development strategy is appropriate and reflects the potential of the CMD Gold Mine.

The Mineral Reserve, based on 1 April 2011 Indicated Mineral Resources, followed a thorough optimisation, design and scheduling process. Appropriate costs and other modifying parameters were used to generate optimisation shells and the highest cash flow shell at a gold price of \$1,250/oz was generally used to guide designs of practical pits in each of the five mining areas. Each of the five pit designs were then scheduled on a monthly basis to generate a practical, achievable mine schedule. Mining, processing and other costs were then applied to the schedule on a variable and fixed basis to generate a cashflow model. The cashflow for each of the five pits was determined to be positive in all cases when considering the mineralized material generated from the diluted Indicated Mineral Resources as Probable Reserves, and regarding all other mineralized material as waste. A Mineral Reserve can therefore be reported for each of the five mining areas as detailed in Table 25\_1.

<b>Table 25_1</b>			
<b>CMD Gold Mine</b>			
<b>Summary of Mineral Reserves Estimated as at 1 August 2011</b>			
<b>Deposit</b>	<b>Probable Mineral Reserves</b>		
	<b>Tonnes (Mt)</b>	<b>Au Grade (g/t)</b>	<b>Ounces (koz)</b>
Tres Perlas	3.0	0.7	69
Chisperos	0.8	1.2	29
Churumata	0.3	0.9	8
Las Loas	1.0	0.8	25
Toro/Socorro	0.9	0.8	25
<b>Total</b>	<b>6.0</b>	<b>0.8</b>	<b>157</b>

## **26 RECOMMENDATIONS**

### **26.1 Mining**

Where final pit walls will extend deeper than existing pits or be located in different rock types than the existing pits, further geotechnical evaluation is recommended.

There is a significant difference between the optimisation and design for the west wall of the Tres Perlas Pit for the Indicated Mineral Resource Only case. The design and optimisation input parameters should be reviewed.

The new mining contract has a higher cost (\$1.80/t) than that used in the optimisation process (\$1.60/t). The optimisation process should be re-run at the higher mining cost to determine the impact on the optimum pit shell selected for design.

Mine planning based on the new Mineral Resource has commenced, and this will include all metallurgical test work available to date. Once the mine planning process has been completed, an updated Mineral Reserve and associated Technical Report will be published.

A scoping study is recommended to establish the best economic outcome for expanding the production profile with the inclusion of large scale dump leaching and the potential of optimisation of the crushing circuit to maximise the profitability of leaching crushed ores.

### **26.2 Resources**

Resource estimates for the CMD Gold Mine have been generated by Coffey Mining on the basis of exploration data analytical results available up to 16<sup>th</sup> March 2011 for Chisperos and LasLoas and 14<sup>th</sup> December 2011 for Toro and 28<sup>th</sup> March 2012 for Tres Perlas. The resource model was derived via geological interpretation and modelling of the mineralized zones. Various mineralized bodies have been estimated via Ordinary Kriging (OK). Coffey Mining recommends the update of resources, based on the results of the current drill programs. Continued review of available QAQC data is recommended on a batch by batch basis.

#### **26.2.1 Resource Definition Drilling**

A total of A\$3.08 million has been budgeted over the period January to December 2012 for mineral resource definition drilling at the CMD Gold Mine. The aim of this program is to upgrade the Inferred category mineral resources to a higher confidence level which would enable it to be included in the economic assessment of the project and to fill the gaps at the Tres Perlas Area between resources. The drilling will be targeted initially at the Tres Perlas Area and include holes partially incorporated in the updated resource estimate reported in this document. Inferred mineral resources contained within the pit designs that contain the Mineral Reserve (and which is currently classed as waste) would convert to Mineral Reserves following the upgrade of the resource category of that material.

Drilling will thereafter target Inferred mineral resources and known mineralisation that is currently being mined at the Toro pits.

The drill program will be a combination of Reverse Circulation (RC) drilling and Diamond core drilling (DDH) and will typically be testing the upper 200m of the mineralisation. Table 26.2.1\_1 below shows the breakdown of the drilling by type, with approximately 9,500m of RC and 7,000m of DDH drilling expected to be completed.

<b>Table 26.2.1_1</b>							
<b>CMD Gold Mine</b>							
<b>Resource Definition Drilling Budget for 2012 Calendar Year</b>							
Targets	Holes Planned			Budget (US\$'000)			
	No. Holes	RCH (metres)	DDH (metres)	Drilling	Analysis	Admin	Total
Tres Perlas H/W	50	4,500	3,500	1,035	180	289	1,504
Natalia-El Sauce	20	2,000	500	270	56	75	402
Toro	50	3,000	3,000	810	135	226	1,171
<b>Total Delineation<sup>#</sup></b>	<b>120</b>	<b>9,500</b>	<b>7,000</b>	<b>2,115</b>	<b>372</b>	<b>591</b>	<b>3,077</b>

<sup>#</sup> Any difference in total from sum is due to rounding

## 26.2.2 Exploration Drilling

A total of A\$2.79 million has been budgeted over the period January 2012 to October 2012 for exploration drilling at the CMD Gold Mine. The aim of this program is to locate and define additional mineralisation not currently included in the mineral resources. The CMD Gold Mine has had a lack of exploration over the past decade, and there are numerous near mine targets that require follow up for both gold and copper–gold styles of mineralisation. Recent drilling at the Veneros, Mariposa and La Laja returned encouraging results and follow up drilling of these areas is planned. At Abejas and the area Southwest of Chisperos drilling is required to establish whether there is mineralisation or not.

The drill program will be a combination of Reverse Circulation (RC) drilling and Diamond core drilling (DDH). Table 26.2.2\_2 below shows the breakdown of the drilling by type, with approximately 9,800m of RC and 5,700m of DDH drilling expected to be completed. The program will be results driven and will be amended as results are received.

<b>Table 26.2.2_1</b>							
<b>CMD Gold Mine</b>							
<b>Exploration Drilling Budget for 2012 Calendar Year</b>							
Targets	Holes Planned			Budget (US\$'000)			
	No. Holes	RCH (metres)	DDH (metres)	Drilling	Analysis	Admin	Total
Veneros	30	1,200	1,200	324	54	120	498
Abejas	40	2,000	1,000	360	68	133	561
Churumata- Mariposa	30	1,600	1,500	414	70	153	637
Tres Perlas NE	10	1,500	1,000	315	56	88	459
La Laja	10	1,500	-	135	34	50	219
Chisperos SW	20	2,000	1,000	360	68	133	561
<b>Total Delineation<sup>#</sup></b>	<b>140</b>	<b>9,800</b>	<b>5,700</b>	<b>1,908</b>	<b>349</b>	<b>533</b>	<b>2,790</b>

<sup>#</sup> Any difference in total from sum is due to rounding

Coffey Mining considers that the proposed exploration and resource definition development strategy is entirely appropriate and reflects the potential of the CMD Gold Mine.

### 26.3 Metallurgy

Metallurgical test work should continue for the run of mine and coarse crushed leaching of the CMD Gold Mine ores. Two trials of around 7,000 tonnes each are currently underway, and Lachlan Star plans to include a 100,000 tonne test to replicate a large scale gold leaching environment.

### 26.4 Environmental Management Plans

In accordance with the findings of the environmental review, it is recommended that the CMD Gold Mine devise the following management plans:

- protected species management plan
- biodiversity management plan
- waste stream plan

The estimated cost of developing and implementing these plans is A\$150,000.

### 26.5 Summary

The cost breakdown of the recommendations described in Section 26 is described in Table 26.5\_1. None of the budgeted items are phased or contingent on success.

Table 26.5_1 CMD Gold Mine Cost Breakdown (US\$)			
Type of Cost	Cost (A\$)	Timing	Notes
Resource Definition Drilling	3.08	Jan 12 to Dec 12	Drill out Inferred within the pit designs
Exploration Drilling	2.79	Jan 12 to Dec 12	Drill out near mine targets and Cu mineralisation
Environmental Management	0.15	April 12 to Dec 12	Complete Environmental Studies
<b>Total</b>	<b>6.02</b>		

## 27 REFERENCES

An Independent Technical Report generated by Coffey Mining Pty Ltd for the CMD Gold Mine- Effective date 1<sup>st</sup> August 2011.

An Independent Technical Report generated by RSG Global Consulting Pty Ltd (June 2004).  
This report was not lodged.

A report by Bechtel Corporation titled, "Andacollo Gold Project - Update of Feasibility Study Feasibility Study" completed in May 1993.

# Appendix A

**Coffey Mining Geotechnical Review**



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## Memorandum

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**Date:** 17 May 2011  
**Company:** Coffey Mining  
**Attention:** Lachlan Star/ David Slater/ Paul Thompson  
**From:** Sanjive Narendranathan  
**Subject:** **Review of Geotechnical Parameters for the Andacolla Project**

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### 1 INTRODUCTION

Coffey Mining Pty Ltd (Coffey) has undertaken a high level geotechnical review of six open pits within the Andacolla gold project, the findings of which are presented in this document. Specifically the following items were covered as part of the review:

- A high level review of the proposed mining plan for the future development of six open pit cutbacks;
- A high level data review covering such aspects as:
  - i. Geology, Major Structures;
  - ii. Hydrological and Hydrogeological conditions;
  - iii. Review of any pertinent history and displacement monitoring / visual observations;
  - iv. Provision of a summary of the overall stability and operational implications including geotechnical risks and future considerations for the proposed cutbacks; and
  - v. Recommending achievable pit slope angles within the respective pit areas.

### 1.1.1 Data Sources

Coffey utilised the information from the following data sources to undertake this assessment:

- i. Discussions held with Mr David Slater of Coffey, who undertook a site visit and made field observations on the existing pit wall exposures.
- ii. Digital photographs obtained during the site visit.

## 1.2 Proposed Mine Plan

It is understood that in general the proposed mine plan involves the deepening of six existing pits as well as a cutback to the hanging walls. Specifically the following is to be achieved:

- **Churumata** - The current pit is approximately 80m deep, and it proposed to be deepened by approximately 130m and cutback to the west.
- **Chisperos** – The current pit is approximately 45m below surface, and it is proposed to be deepened a further 80m. There does not appear to be any lateral cutbacks of the existing pit outline.
- **Las Loas** - The current pit is approximately 60m to 70mm below surface, and it is proposed to be deepened by a further 75m. There does not appear to be any lateral cutbacks of the existing pit outline.
- **Socorro** - The current pit has not been developed extensively and is therefore currently at surface level, it proposed to be deepened by approximately 135m and cutback to the east.
- **Toro** :
  - i. **Pit 3** – The current pit has not been developed extensively and is therefore currently at surface level, it proposed to be deepened by approximately 40m.
  - ii. **Pits 5 and 6** - The current pit has not been developed extensively and is therefore currently at surface level, it proposed to be deepened by approximately 60m.
- **Tres Perlas** – It is understood that this pit is considered 'low priority' and if mined will involve a minor west wall cutback.

## 1.3 Geology and Structures

### 1.3.1 Project Geology (Applicable to Proposed Pit Cutbacks)

The Andacollo Project area is underlain by volcanic stratigraphy associated with the Quebrada Formation, comprised of a sequence of andesites, dacites, trachytes and rhyolites, with epiclastic intercalations. The sequence forms tabular bodies that exhibit a north-south

strike direction and generally dip gently to the east. The volcanic sequence is intruded by a number of dykes of andesitic, basaltic or monzonitic affinity. Coffey (2008)

#### **1.4 Major Geological Structures**

Structural features at Andacollo include a number of major north trending normal faults such as the Andacollo, Mariposa and Runco Faults. These faults are downthrown on their western sides, with up to 350m of local displacement. Northwest trending shear zones and faults are also common, and were most likely formed as tension gashes as a response to movement along the north trending normal faults. Quartz vein swarms, hydrothermal brecciation and gold mineralisation are often associated with these structures. Coffey (2008)

#### **1.5 Hydrological and Hydrogeological Conditions**

The pits typically encounter groundwater on the bottom benches, but slopes appear to not be adversely affected and the recharge rate is slow. No mine dewatering was carried out in advance of mining.

#### **1.6 Review of Existing Geotechnical Parameters**

##### **1.6.1 Rock Mass Quality and Strengths**

Coffey has not been able to cite any qualitative or quantitative description of rock mass quality or strengths. Typically this is assessed from core logging data in the form of Rock Quality Designation (RQD) measurements or in the laboratory using Unconfined Compressive Strength (UCS) assessments.

Due to the lack of the above, rock mass quality assessments has to be made visually from existing photographs of pit exposures. These visual assessments are based on a parameter referred to as the Geological Strength Index (GSI), this is an empirical estimate of rock mass quality based on the visual appearance of a rock mass. The following comments apply:

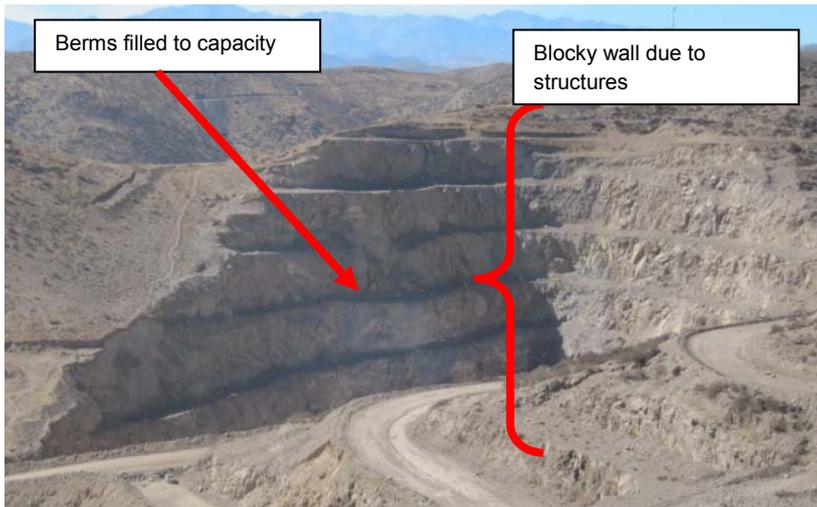
- **Churrumata:**
  - i. Surface to 70m GSI ~ 40 (poor to fair rock mass), though the rock mass appears to be of poor quality, it should be noted that on the overall slope scale it appears to be mechanically well interlocked, i.e. no large scale stability issues;



- ii. 70m to pit bottom GSI ~ 50 (fair to good rock mass), the rock mass here was able to sustain a number of small workings created by illegal miners. No sloughing or degradation proximate to these workings were visually noted.



- **Chisperos** – Currently a starter pit has not been developed to the extent where noteworthy observations could be made.
- **Las Loas** - GSI ~ 40 (poor to fair rock mass). The poor quality of the rock mass is poor primarily due to the presence of closely spaced sub vertical structures and some intense jointing. The rock mass here is not well interlocked and is susceptible to ongoing sloughing type instabilities. A number of berms have been filled to capacity.



- **Socorro** - Currently a starter pit has not been developed to the extent where noteworthy observations could be made.
- **Toro** – Currently a starter pit has not been developed to the extent where noteworthy observations could be made.
- **Tres Perlas** – The GSI values appear to be fairly constant throughout the pit confines and ranges from about 40 to 45, indicative of a poor to fair rock mass. The poor quality of the rock mass is primarily due to the presence of closely spaced sub vertical structures and some intense jointing.



### 1.6.2 Defect plane orientations and shear strengths

To date Coffey has not been able to cite any, data with respect to defect plane orientations or defect plane shear strengths. Typically this information is amassed thus:

- Defect plane orientations – From orientated core logging or in pit wall mapping.
- Defect plane shear strengths – Empirically from observations made during core logging i.e. Joint Roughness Coefficients (JRC) or analytically from laboratory direct shear testing.

Due to the lack of this information, these observations had to be made from visual observations using photos. The following comments apply:

Defect plane orientations – Based on observations within the respective pit areas, it would appear that majority of the major structures (faults and shear zones) are trending north to north-west and typically dip sub vertically. There are a number of splay structures and joints noted as well. The splay structures are typically orientated orthogonal to the major faults i.e. east west, the joints are randomly orientated. There are also a number of dykes that intrude the pit areas, these features are typically sub vertical.

Defect plane shear strengths – Based on observations within the respective pit areas, it would appear that majority of the major structures i.e. faults etc, generally exhibit a planar rough to stepped rough profile. There appears to be a degree of undulation on the large scale as well, this is probably assisting in the multi-bench stability.

There are however some bench scale features, particularly noted in Las Loas possibly splay structures, to the larger scale faults, that appear to exhibit a more planar profile, it was difficult to gauge the presence of any low strength / friction infill. However It can be surmised that where these features occur, instabilities are likely to occur.

There is also mention of brecciated shear zones and dykes, these features are likely to exhibit different properties; depending on the degree of weathering the dykes may lead to localised instabilities. However these have not been visually noted in any of the pit walls.

### 1.7 Overview of Site Geotechnical Model

A typical geotechnical model is made of three crucial components:

- Rock mass shear strengths, assessed from laboratory tests (triaxial testing);
- Defect plane orientation, assessed from orientated drill core or exposure mapping; and
- Defect plane shear strengths, can be assessed empirically from core logging and exposure mapping or analytically from laboratory testing (direct shear testing).

As the site lacks a formally compiled geotechnical model, the way forward would be to compile one via the espousal of a heuristic approach. The following sub section details the various pertinent aspects of pit wall stability for the respective pit areas.

## 1.8 Overview of Stability History

### Churrumata

The weathered zone, approximately 70m below surface, has been subject to a number of sloughing failures, this indicates that the material may be somewhat slake sensitive. The fresh zone appears to be competent, apart from some minor rock mass exfoliation, caused by blasting there does not appear to be any noteworthy stability issues.

In some areas within the fresh zone, due to the presence of intense but low persistence jointing, small blocks have been geometrically formed and have become unstable due to blasting & exfoliation; these blocks have however been contained by the berms. There is a possibility that during periods of intense rain, wind or seismicity, these blocks may become a rock fall hazard.



### Chisperos

Currently a starter pit has not been developed to the extent where noteworthy observations could be made.

### Las Loas

The figure below shows a multi-bench structurally controlled instability. It appears to be a planar sliding instability which has occurred just above an active access ramp. In some areas within the fresh zone, refer to second figure, due to the presence of intense but low persistence jointing, small blocks have been geometrically formed and have become unstable due to blasting; these blocks have however been contained by the berms. There is a possibility that during periods of intense rain, wind or seismicity, these blocks may become a rock fall hazard.



**Socorro**

Currently a starter pit has not been developed to the extent where noteworthy observations could be made.

**Toro**

Currently a starter pit has not been developed to the extent where noteworthy observations could be made.

**Tres Perlas**

There are a number of batter scale instabilities noted in this pit. The figure below shows a multi-bench structurally controlled instability. It appears to be a planar sliding instability exacerbated by the lack on lateral confinement in the pit wall due to a convex profile i.e. a 'bull nose'.

In some areas within the fresh zone, as shown in the next figure, due to the presence of intense but low persistence jointing, small blocks have been geometrically formed and have become unstable due to blasting; these blocks have however been contained by the berms. There is a possibility that during periods of intense rain or wind, these blocks may become a rock fall hazard.



## 1.9 Potential Stability Issues and Operational Risk

Due to the lack of detailed geotechnical data, specifically assessments of:

- Rock mass strengths for the respective lithological units;
- Defect plane orientations, mechanical properties and persistence;
- Slope geometry as calculated analytically from the above mentioned parameters; and
- Hydromechanical coupling and its effects on slope stability.

It is difficult to identify pit specific stability issues or operational risks. However based on the visual observations made in the above sections, the following items have been identified:

- Sloughing type instabilities, within the weathered horizon, particularly crucial for the Churrumata pit, as it appears to have a deeper zone of weathering.
- Two pits (Las Loas and Tres Perlas) have demonstrated that structurally controlled instabilities have the potential to affect the up to multiple benches (up to two). In general terms this can be managed via close monitoring to determine signs of impending failure, however if these failures develop over or under an active access ramp, there is a possibility that access and personnel safety could be compromised. This phenomenon is exacerbated where pit walls have a convex profile i.e. bull noses.
- Though not noted to date in current exposures, it is feasible for the proposed cutbacks within the respective pit areas to host large scale geological structures i.e. the north-south trending faults / shears. This would be particularly crucial for final pit walls and those that host critical infrastructure or permit pit access i.e. ramps.
- The site lies in an area of high seismic risk, peak ground accelerations of up to 0.48g can be expected. Pit wall vibrations produced from these events can lead to rock falls from berms that have reached capacity.
- Pit hydrogeological conditions need to be quantified, as majority of the pit exposures viewed are above the water table. It is uncertain how pit walls would behave below the water table. Hence it should be noted that the slope geometry recommended in the next section is based on drained slopes.

## 2 CONCLUSIONS AND RECOMMENDATIONS

Based on the information reviewed, the subsequent conclusions and recommendations can be made, as detailed below.

### 2.1 Proposed Pit Designs

In general there are no specific identifiable issues that might cause any significant (overall slope scale) instabilities within the confines of the proposed cutbacks. The currently proposed design geometry is probably achievable providing that strict rigour is applied to drilling, blasting and excavation techniques. This is discussed further in sections 2.2 and 2.3.

The design geometry recommended below is based on a heuristic approach from the limited observations made from available pit wall exposures. Slight reductions in batter face angles are being recommended for Churrumata, Las Loas and Tres Perlas. The main reason for these reductions was to reduce the effect of structural undercutting of the batter scale.

There are a number of pits, i.e. Chisperos, Socorro and Toro that do not have any visible exposures, hence there is no basis to recommend or alter the currently proposed design. However it is likely that they may suffer similar issues as Churrumata, Las Loas and Tres Perlas, thus requiring a slight reduction in batter face angles.

Pit	Current Design				Proposed Design				Reason for Change
	Batter Angle	Batter Ht	Berm Width	Inter-Berm Angle	Batter Angle	Batter Ht	Berm Width	Inter-Berm Angle	
Churrumata	70°	20m	7m	54.5°	65°	20m	7m	50.1°	Reduce rockfall hazards, due to undercutting batter walls thereby reducing the possibility of berms reaching capacity.
Chisperos	70°	20m	7m	54.5°	70°	20m	7m	54.5°	N/A
Las Loas	70°	15m	7m	50.3°	65°	20m	8m	49.1°	Minimise the possibility of undercutting geological structures on the batter scale.
Socorro	70°	15m	7m	50.3°	70°	15m	7m	50.3°	N/A
Toro	70°	15m	7m	50.3°	70°	15m	7m	50.3°	N/A
Tres Perlas	70°	15m	7m	50.3°	65°	15m	7m	47°	Minimise the possibility of undercutting geological structures on the batter scale.

## 2.2 Design Implementation and Operational Management of Pit Wall Stability

In general terms the following items need to be considered during the operational phase of the project:

- i. Detailed pit wall mapping needs to be undertaken to assess the orientation and implication of geological structures on pit wall stability. As a minimum the following aspects should be collected:
  - Dip and Dip Direction of geological features
  - Infill and roughness characteristics
  - Persistence and termination characteristics of observed geological features.
- ii. Install pit wall monitoring systems to assess slope deformation, typically this would consist of prisms on accessible berms, extensometers on any noted cracks or inclinometers behind final pit walls. As there is very little geotechnical information available at the moment, the requirements for slope monitoring should be assessed in conjunction with ongoing data collected from pit wall mapping.
- iii. Regular pit slope reconciliation exercises should be undertaken. The purpose of these ongoing exercises would be to assess the achievability of currently proposed designs in the light of operational practises i.e. blasting excavation and geological unknowns i.e. unmapped structures. Typically slope reconciliation is undertaken in the following manner:
  - Review available pit slope monitoring data to identify any potentially adverse displacement trends that might presage developing instabilities.
  - Undertake photogrammetry to quantitatively assess the achievability of designed batter face angles and berms widths.
  - Review slope design parameters in conjunction with the outcomes from the above to points to assess whether or not slope designs should be altered to facilitate better achievability.

## 2.3 General Recommendations

- To date there has not been any drilling done behind final pit walls to assess the presence of major structures. It is recommended that a detailed structural interpretation of the deposit is undertaken to assess the likely presence of these features, if they are likely to intersect final pit walls a more detailed investigation would be required. This may require further drilling.

- There are no quantitative (laboratory) assessments of rock mass strengths, where possible some information should be gathered so as to definitively confirm rock mass quality and strengths.
- To date no quantitative assessments of slope stability have been undertaken. Coffey recommends that once more data is gathered with regard to insitu structures and rock strengths, an assessment of slope stability is undertaken, using the modelling package Slide. This is particularly crucial for assessing the effects of groundwater and seismicity which are likely to impact on the proposed cutback areas.
- It is also noted that in some of the pit designs, a number of bull noses i.e. convex slope profiles have been designed, these areas tend to exacerbate or initiate potential planar sliding type instabilities, if possible consideration should be given to forming more concave profiles.

### 3 **CLOSURE**

If there are any further queries please do not hesitate to contact Sanjive Narendranathan from the Coffey Mining office in West Perth on (08) 9324 8800.

For and on behalf of Coffey Mining Pty Ltd

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Sanjive Narendranathan  
Associate Geotechnical Engineer

# Appendix B

**Coffey Environments Environmental Review**



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## Memorandum

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<b>To</b>	Lachlan Star, David Slater	<b>Company</b>	Coffey Mining
<b>From</b>	David Blair/Nanette Hattingh	<b>Date</b>	31 May 2011
<b>Project</b>	Social and Environmental Review of Andacollo project, Chile		
<b>Subject</b>	Findings summary		

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## 1. INTRODUCTION

Coffey Environments was appointed by Coffey Mining to undertake a desktop review of information regarding the Andacollo project in Chile. The objective was to provide an overview of the social and environmental impacts and risks associated with the addition of new mining infrastructure and the extension of the life of mine. The data review will form part of the compilation of a Canadian National Instrument (CNI) 43-101 Independent Technical Report (ITR) for initial filing on the TSX.

The project is located outside the town of Andacollo in the Region of Coquimbo, Elqui Province, and approximately 55 km southeast of the city of La Serena.

This short report details the findings of the desktop review of the Andacollo Gold project Environmental Impact Assessment and associated management plans.

It should be noted that no site visit was undertaken to verify any of the information contained in the documentation. Furthermore, reliance was placed on reports compiled by external parties and which have been translated from Spanish to English through the use of online translation tools, as no formal technical translation was made available. It should also be noted that Coffey's assessment framework is our understanding of 'good' practice concerning environmental and social matters in the mining industry.

The environmental liabilities related to this project will be related to those impacts identified in the various environmental studies that have been undertaken. These impacts relate to the key expansion components to the project:

- Exploitation of the Laos ore body
- Extension of the leach pad area

It is important to note that the area is an existing mine operation, with associated historical impacts and related issues.

The inherent environmental liabilities will fall into the following groupings:

- Air quality
- Biodiversity

- Groundwater contamination
- Surface water contamination
- Waste management
- Social impact

## 1.1 Limitations and Assumptions

Coffey Environments have prepared this review of the environmental factors with the following limitations and assumptions:

- No site visit.
- Use of existing environmental reports provided in Spanish, and translated into English with the use of Google Translator.
- It appeared that appendices and other reference documents were missing from the information provided to Coffey Environments.

The review did not include consideration of the following:

- Land tenure.
- Matters concerning occupational health and safety, labour and working conditions, and human rights.
- The Equator Principles and supporting documents.
- Stakeholder perspectives.

## 2 Environmental Permitting

### 2.1 Current Environmental Permits

Article 11 of Law 19,300, Law on the Environment, states that projects or activities that have at least one of the following impacts require development of an Environmental Impact Study:

- Risk to the health of the population, due to the amount and quality of effluent, emissions or waste.
- Significant adverse effects on the quantity and quality of natural renewable resources, including soil, water and air.
- Resettlement of communities, or significant alteration of the livelihoods and customs of communities.
- Location close to population, resources and protected areas that could be impacted.
- Significant changes in scenic or tourist areas.
- Alteration of monuments, sites with anthropological, archaeological, historical and in general, of cultural heritage.

Compania Minera Dayton (CMD) has submitted Environmental Impact Studies and received the relevant permits for the following projects:

- Environmental Impact Declaration (“EID”) “Proyecto Desarrollo Fase IV-Andacollo Oro”, approved by EAR No 155/05, dated 21 December 2005. This declaration was to enable the modification of the Andacollo Oro original project through the construction of a new leach pad and to recommence the mine. This permit has no specific time limit.

- EID “Plan Minero 2007-2010”, approved by EAR No. 074/07, dated 17 April 2007. The project consists of the extension of the mining areas through the addition of new open pits and dumps.
- Environmental Impact Statement (“EIS”) “Modificación Plan Minero 2007-2010”, approved by EAR No. 360/08, dated 14 November 2008. The project consists of the extension of its lifespan through the addition of a new open pit at Las Loas and the construction of the Phase V leach pad. The permit has been extended on 13 April 2011 until 2013.

## 2.2 Permits Required for Mine Plan and Time Frame

Should CMD want to start operations in a new tenement area or construct a new heap leach platform it will have to submit an EIS. This comprises a base line study, an impact statement and mitigation plan, which needs to be presented to the community through a consultation process and the comments need to be considered in the mitigation plan. The approval process takes a maximum of 18 months, excluding the period to prepare the study. Should the approval exceed 18 months, it is automatically approved. Given the readily available base line study data, the study preparation would be approximately 3 months.

An EIS can refer to the original base line study, must include an impact statement and associated proposed mitigations, which need not to be presented to the community and does not involve a consultation process. The typical approval period for an EIS is 12 months excluding the study preparation.

# 3 OVERVIEW OF ENVIRONMENTAL AND SOCIAL SETTING

## 3.1 Environmental Setting

The project area is situated in the Andacollo basin on the eastern slopes of the coastal mountain range. The basin has a circular form of approximately 7km in diameter and varies between 1,000 and 1,100 metres above sea level. It is surrounded by mountains with an average altitude of 1,500 metres above sea level. The region is a semi-arid domain that marks the transition between the desert climate to the north and Mediterranean climate to the south. The local climate is characterised by high temperatures during the day and low temperatures night, with average daily temperatures around 18 ° to 20° C and mostly clear skies.

Average annual rainfall for the region is 139.2 mm. Between 75% and 85% of the regions annual precipitation falls in winter while the months of November to March receive only 3% of the total annual rainfall. The low levels of precipitation is one of the key parameters in the soil development, surface runoff and groundwater availability.

The vegetation of the area is dominated by low shrubs and herbaceous plants, with some succulents and low trees. Three flora species of conservation value were identified, namely *Erioseye aurata*, *Erioseye curvispina* and *Porlieria chilensis*. These species are listed as vulnerable on the IUCN Red List of Threatened Species ([www.iucnredlist.org](http://www.iucnredlist.org)). Insufficient data exists regarding a fourth specie, *Carex setifolia*, and was also classified as vulnerable.

A faunal survey identified 33 species of vertebrates on the project site, of which seven species are in some state of conservation, 4 species are in a state of vulnerability and 1 species is regarded as rare as per the Red Book of Terrestrial Vertebrates of Chile (Glade, 1993).

## 3.2 Socio-economic Setting

The Andacollo mine is located directly west of the town of Andacollo at a distance of approximately 500 m away. According to the 2002 census, Andacollo had 10,288 inhabitants (5,148 men and 5,140 women). Of these, 9,444 (91.8%) lived in urban areas and 844 (8.2%) in rural areas. The population fell by 16% (1,958 persons) between the 1992 and 2002 censuses.

## 4. DISCUSSION

### 4.1 Air Quality

Air quality related impacts appear to have been assessed in some detail. The findings emphasise the PM10 as a major pollutant as a result of the proposed activities. It is concluded that PM10 levels could exceed the allowable standards if mitigation measures are not applied.

Sources of PM-10 more significant than previously will occur during operation of the project and the activities generating correspond as follows:

- Blasting.
- Excavations.
- Loading and unloading trucks.
- Resuspended dust associated with transit on unpaved roads transit inside the project area.
- Crushing, transfer belt systems and management of stockpiles.
- Transit by truck through unpaved streets of the town of Andacollo.

Other sources of air pollution are listed as below:

- Aerosol emissions from cyanide solution being applied via the irrigation system
- Exhaust emissions from vehicles.

There are five air quality monitoring points in the vicinity of Andacollo to measure PM10. These stations appear to be adequate to measure PM10 across the site and at its boundaries.

Detailed mitigation measures have been developed for all identified air quality issues. No mitigation measures appear to be in place with regard to the controlling of the cyanide aerosol emissions, in particular the pH control of the cyanide solution.

### 4.2 Flora

The mining activity will have negative impacts on existing flora through the clearing of new areas for the pit extension and the new leach pad.

The identification of a number of IUCN protected species places considerable emphasis on floral conservation for this project.

It is necessary to develop a management plan for these species. Coffey Environments did not have sight of any management plan for these species, but guidelines for the development of a management plan were outlined in the documents reviewed.

A biodiversity management plan will need to be developed.

### **4.3 Fauna**

This mining activity involves exploitation of new pit and dump areas and this will result in negative impacts on existing fauna, predominantly as a result of loss of habitat.

A study of the vertebrate fauna recorded a total of 33 species in the 56 ha project area (6 reptile species, 21 bird species and 6 mammal species).

Future activity in new areas of operation may result in the loss of habitat, and it is necessary to submit an environmental management plan of wildlife species found in any category of conservation.

No research or assessment of other faunal groupings (such as insects) appears to have been undertaken. Coffey Environments did not have sight of a biodiversity management plan.

While guidelines appear to exist in the documents reviewed, and in the license documentation, a biodiversity management plan will need to be prepared to address the requirements of the authorisations and to ensure best environmental practice.

### **4.4 Groundwater**

Groundwater monitoring appears to be undertaken on a regular basis at the mine. This monitoring is undertaken at three points. One monitoring point is regarded as “non-representative” and permission was gained from the environmental authority to eliminate this point as a monitoring requirement. New monitoring points have been added, bringing the total to six. The borehole locations appear to be adequately spaced and located in suitable positions.

Readings taken from April 2007 to April 2011 were undertaken on a variety of parameters as determined in the relevant licences.

The borehole readings are summarised below show that at some point in time, each of the monitoring boreholes show short term, but regular exceedences of for manganese, copper, electrical conductivity, sulphates and total dissolved solids.

To date, no cyanide exceedences have been detected, which would indicate that no groundwater is being contaminated by the cyanide being utilised on the heaps. However, the exceedences in the other parameters appears to be somewhat consistent, and should be dealt with through the development of a groundwater management plan.

It is assumed that surface water readings have not been taken at any time, as Coffey Environments did not have sight of any surface water readings.

### **4.5 Waste management**

Waste streams have not been adequately identified. The fate of the waste streams appears to not have been analysed. The EIA mentions that the Waste Management Plan should be updated once the new project starts. Coffey Environments did not have sight of a waste management plan.

Broad references to the waste collection by municipal or private contractors are made, but the waste streams do not appear to have the rigour relating to recycling, reduction and final disposal.

Hazardous waste streams are mentioned, but not identified, and the identification and fate of these streams is not dealt with adequately.

## **4.6 Surface/Process Water**

Mitigation and management measures are proposed for the process water on site, but the fate of this process water does not seem to be adequately addressed.

## **4.7 Heritage**

Coffey did not have sight of any heritage section in the reviewed documents. However, “archaeological assessments” are referred to in the licences, but Coffey Environments did not have sight of these documents. A heritage management plan should be prepared.

## **4.8 Closure Plan and costs**

The rehabilitation provision for the Andacollo project allows for the following rehabilitation activities upon closure and has been estimated at US\$ 3.937 million:

- Construction of a safety berm around the pits
- Shaping and profiling of waste dumps
- Erection of signage around the pits
- Ripping of internal roads
- Profiling of heap leach pads
- Cleaning and disposal of equipment
- Burying walls and foundations
- Removal of electrical installations
- Flushing of heaps to remove cyanide
- Monitoring of ground water, heap seepage water quality and dust for a period of three years post-closure

While the activities described includes the construction of diversion channels along dumps where bordering higher ground, this has not been allowed for in the closure cost estimate and no explanation for this has been provided. No allowance has been made for the revegetation/rehabilitation of any disturbed areas, as well as no allowance for ongoing monitoring of rehabilitation efforts.

The salvage value of the crusher plant, conveyor belts, stackers, leach plant, refinery and generators is estimated at US\$ 8.5 million. Values provided in the Closure and Retrenchment Cost and Salvage Income Schedule regarding the plant closure does not seem to correlate with values provided as part of the closure cost calculations.

It is stated that upon mine closure there will be a net inflow of funds, whereas total closure will involve an outflow of approximately US\$ 1.1 million, including retrenchment benefits. However this could not be verified to the discrepancy noted and the lack of detail provided in the calculation method.

No bonds or deposits in trust funds are required for closure in Chile.

## 5. SUMMARY AND CONCLUSION

The relevant environmental legislative processes appear to have been followed, resulting in authorisation of the extension of the mining works. There are a number of issues that have been identified, both in the documentation reviewed, and through analysis of the gaps in information reviewed. These issues are summarised below.

- Air Quality
  - No mitigation measures appear to be in place with regard to the controlling of the cyanide aerosol emissions, in particular the pH control of the cyanide solution.
- Flora and Fauna
  - A detailed biodiversity management plan needs to be developed.
- Groundwater
  - A groundwater management plan needs to be developed
- Waste Management
  - A detailed waste management plan needs to be developed which identifies all waste streams, and their fates. Analysis of options to reduce waste volumes and waste recycling also needs to be explored. In particular hazardous waste needs to be addressed.
- Surface water and process water
  - A surface and process water management plan needs to be developed.
- Heritage
  - A heritage management plan needs to be developed to ensure preservation of the heritage issues on site and surrounds.
- Social
  - Public participation needs to be an ongoing process bearing in mind the close proximity of the town of Andacollo to the site.
  - There appeared to be no socio-economic impact assessment undertaken for the project, this would need to be undertaken.
- Closure Plan and costs
  - The closure plan shows inconsistency between the recommended works and the costs.

## 6. Environmental Liabilities

The mine appears to have the relevant environmental authorisations for the construction/operation of the next phase of the mine development.

The liabilities identified relate to the non-compliance of mitigation recommendations outlined in the various documents and licences. Non-adherence to the mitigation measures and management plans are adhered to would constitute non-compliance to the licences issued for the mine operation.

# Appendix C

**Tenement Status of Lachlan Star CMD Mine**

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**TENEMENT STATUS  
OF  
CMD GOLD MINE  
CHILE**



March 28<sup>th</sup>, 2012



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## DEFINITIONS

In this Tenement Report, each of the following words or phrases shall have the following meanings:

<b>"Agents"</b>	: Macquarie Capital Markets Canada Ltd; Dundee Securities Ltd.; Raymond James Ltd.; and GMP Securities L.P.
<b>"Art.(s)"</b>	: Article(s).
<b>"Carey"</b>	: Carey y Cía. Ltda. Abogados.
<b>"CBR"</b>	: Custodian of Real Estate.
<b>"CBM"</b>	: Custodian of Mines.
<b>"CEA"</b>	: Environmental Evaluation Commission
<b>"CMD"</b>	: Compañía Minera Dayton.
<b>"CMD Gold Mine" or "Companies"</b>	: Compañía Minera Dayton and Dayton Chile Exploraciones Limitada.
<b>"CONAMA"</b>	: National Environmental Commission.
<b>"COREMA"</b>	: Regional Environmental Commission.
<b>"DCEL"</b>	: Dayton Chile Exploraciones Limitada.
<b>"CReg"</b>	: Commerce Registry of the relevant Custodian of Real Estate.
<b>"DFL"</b>	: Executive Law Decree.
<b>"DGA"</b>	: General Water Bureau.
<b>"DL"</b>	: Decree Law.
<b>"EAR"</b>	: Environmental Approval Resolution.
<b>"EIAS"</b>	: Environmental Impact Assessment System.
<b>"EID"</b>	: Environmental Impact Declaration.
<b>"EIS"</b>	: Environmental Impact Study.
<b>"Health Authority"</b>	: Regional Office of the Ministry of Health.
<b>"l/s"</b>	: Litres per second.
<b>"Lachlan"</b>	: Lachlan Star Limited.
<b>"Mining Code of 1932"</b>	: The Mining Code of the Republic of Chile established by DL No. 488 of 1932, currently abolished.

- "Mining Code of 1983"** : The Mining Code of the Republic of Chile established by Law No.18,248 of 1983, as amended from time to time.
- "Mining Gazette"** : The official mining gazette of the Republic of Chile.
- "MReg"** : Mortgages and Encumbrances Registry.
- "N/A"** : Not Applicable.
- "No."** : Number.
- "Official Gazette"** : The official gazette of the Republic of Chile.
- "PReg"** : Property Registry or Mining Property Registry, when applicable.
- "SERNAGEOMIN"** : National Geology and Mining Service.
- "Tenement Report"** : This tenement report.
- "Water Code"** : The Water Code of the Republic of Chile established by DFL No. 1,122 of 1981, as amended from time to time.

## **INTRODUCTION**

### **1. Scope of work.**

Carey has conducted a limited legal tenement review of certain documents and information of CMD Gold Mine (comprising the assets owned by Compañía Minera Dayton (CMD) and Dayton Chile Exploraciones Mineras Limitada (DCEM)). The original scope of this report includes, and our review has been limited to, the following matters:

- i. Mining Concessions ownership confirmation
- ii. Water Rights ownership confirmation
- iii. Real Estates ownership confirmation
- iv. Environmental Matters status.
- v. Corporate good-standing of CMD and DCEM.

In performing the report, we have limited our review only to the relevant information and documentation regarding CMD Gold Mine made available to us by CMD Gold Mine up until 12:00 pm, March 28<sup>th</sup>, 2012, Chile time, mails and phone conversations held with executives, and limited information obtained from certain public sources related to mining concessions, water rights, real estate, environmental and corporate matters.

### **2. Purpose and Reliance.**

#### **i. Purpose:**

Carey has prepared this Tenement Report for Lachlan and the Agents, as required for Lachlan's financing requirements.

#### **ii. Reliance by Lachlan:**

This Tenement Report may be relied only by Lachlan and the Agents, subject to the terms set forth in the same.

#### **iii. Disclosure and Reliance by third parties:**

This Tenement Report may not be disclosed or relied upon by third parties without the prior written consent of Carey.

### **3. Materiality Threshold.**

According to the instructions received by Lachlan we have only reviewed the current ownership status of mining concessions, water rights and real estate registered under the name of CMD Gold Mine; the environmental matters regarding CMD Gold Mine project; the incorporation and subsistence of CMD and DCEM and the registered ownership of such Companies' issued and outstanding securities, if any.

### **4. Qualifications.**

This Tenement Report is based on and qualified by the following:

- i. We have relied exclusively on the information that has been made available to us by CMD Gold Mine or by the certificates obtained from the Custodians of mining concessions, real estate or water rights, for this process or before, therefore, there may be additional information or materials (of which we are unaware) which contradict or materially qualify those which we have reviewed;
- ii. Our review is limited to confirm registered ownership status of mining concessions, water rights, real estate, corporate good-standing and environmental matters;

- iii. We have conducted independent investigations and reviews in matters that we have considered relevant. In this context, it is necessary to point out that the feasibility to independently access information in Chile with respect to any company or person in relation to its legal affairs is limited. This limitation implies that these reviews in Chile are mainly focused on the verification and legal analysis of the information that is provided by the person or company subject to review and are very limited in terms of independently investigating new facts that have not been disclosed by such person or company. With the sole exception of certain minor matters, it is entirely impossible to access legal information without the cooperation of the person or company subject to analysis;
- iv. This Tenement Report relates only to the laws of Chile in force as of the date of this Tenement Report;
- v. This Tenement Report is strictly limited to the matters stated in it, and does not extend by implication to any other matter.
- vi. This Tenement Report takes into consideration the observations and comments made regarding the mining concessions, water rights, real estate, corporate and environmental matters in our previous due diligence reports delivered to Lachlan on October 15<sup>th</sup>, 2010; the complementary report dated October 18<sup>th</sup>, 2010; and the Tenement Status Reports dated August 22<sup>nd</sup> and October 20<sup>th</sup>, 2011 and, therefore, does not purport to:
  - a) Contain commentaries of the relevant regulatory regimes, legislation, legal instruments, agreements or other documentation; or
  - b) Provide a summary of the commercial terms of the business arrangements.
- vii. The statements made and opinions in this Tenement Report are given only to the extent that a law firm, having the role described above and elsewhere in this Tenement Report, could reasonably be expected to have become aware of relevant facts and to have identified the implications of those facts; and
- viii. The investigations, enquiries and opinions set out in this Tenement Report and the results of those investigations and enquiries are the only we have undertaken up to and including the date of the Tenement Report.

## **5. Assumptions.**

Except as expressly stated in this Tenement Report, this Report assumes:

- i. Authenticity of all documents submitted to us as originals;
- ii. Genuineness of all signatures and the conformity to the originals of all documents submitted to us as copies;
- iii. Accuracy as to factual matters of each document we have reviewed;
- iv. Due and proper authorization and execution of all instruments;
- v. Agreements and documents reviewed by us have not been modified, amended or terminated by subsequent actions or agreements of which we are not aware;
- vi. That the executed documents examined by us are within the capacity and powers of, and have been validly authorized, executed and delivered by and are binding on the signatories to them, unless otherwise noted;
- vii. All executed instruments are complete, legally binding on and enforceable (in accordance with their terms in the form reviewed) against the parties to them, and the performance of those documents by each of the parties complies with all applicable laws;
- viii. All execution and delivery of any instrument was in compliance with all laws applicable to such instruments in all jurisdictions;
- ix. That insofar as any obligation under any document examined by us is to be performed in any jurisdiction outside Chile, its performance will not be illegal or ineffective by virtue of the law of that jurisdiction;

- x. Where documents are executed under a power of attorney, that those attorneys had no notice of revocation of such powers and such powers had not been revoked;
- xi. That there are no defaults or contraventions under any agreement or instrument which have led or will lead to litigation or have other adverse consequences;
- xii. No term of any law, contract, agreement or arrangement we have reviewed has been or is currently in breach; and
- xiii. All laws of Chile and any regulations, directions and certificates given or made (or able to be given or made) are valid, binding, accurate and enforceable in accordance with their terms (or would be, if given and made).

## 6. Re-examination of issues.

If any of the above qualifications or assumptions, or advice that we have relied on, is inaccurate or incorrect, the opinions expressed in this Tenement Report will need to be re-examined and may need to be changed.

We are qualified to practice law in Chile and we do not purport to be experts in, or to express any opinion herein concerning any laws other than the laws of Chile as in effect on the date hereof.

All questions, inquiries and/or requests in connection with this Tenement Report should be directed to the following contact persons:



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## I. PROPERTY DESCRIPTION AND LOCATION.

### 1. Mining Concessions.

#### 1.1 Mineral Tenure in Chile.

The Chilean Constitution provides for the absolute and exclusive ownership by the State of Chile (the "State") of all mines and mineral substances notwithstanding any ownership rights by third parties over the surface land, which surface land is subject to the obligations and limitations that the law create to facilitate mining exploration, exploitation and related facilities. Notwithstanding such domain or eminent ownership of the State, the Constitution provides that an "organic constitutional law" will establish which minerals, other than oil and gas deposits, may be subject to mining concessions granted to private individuals or companies for them to explore or exploit. Such mining concessions are to be established by means of a judicial award and shall have the duration, grant the rights and impose the obligations that the abovementioned organic constitutional law indicates. The concession has such a character that the Constitution indicates that the domain of the holder of a concession is protected by the constitutional provisions relating to property rights.

Exploitation mining concessions are immovable property of perpetual duration, different from the property of the owner of surface land (even if one same person owns both properties), subject only to the timely payment of the annual mining licenses payable to the Treasury. Such ownership right can be enforced against the State or any other third party; can be freely assigned, mortgaged and, in general, subject to any legal contract as in the case of any other immovable property under the Chilean Civil Code.

#### 1.2 Project Location.

CMD Gold Mine is located in the borough of Andacollo and the borough of Coquimbo, Province of Elqui, both part of the IV Region of Coquimbo, Chile.

#### 1.3 Identification of Mining Concessions.

According to the information made available to us by CMD Gold Mine, and our direct review at the Andacollo CBM, CMD Gold Mine is the registered owner of 133 constituted exploitation mining concessions, and 2 constituted exploration mining concessions, all of them constituted according to both the Mining Code of 1932 and the Mining Code of 1983.

Additionally, CMD Gold Mine appears to be the registered owner of 2 exploitation mining concessions in process of being constituted.

A list of the abovementioned legally registered mining properties is attached hereto as **Annex 1.3**.

#### 1.4 Title review.

##### 1.4.1. Ownership registration.

Based on the information provided by CMD, the certificates provided by Andacollo and Coquimbo's CBM, and our direct review performed at the Andacollo CBM, we can inform the following, subject to the observations and exceptions referred to in **Annex 1.4.1**:

- i. The mining concessions owned by the Companies (the "**Mining Concessions**") appear to be duly constituted as per Chilean Mining law;
- ii. The Mining Concessions appear to be duly registered in the corresponding registry of the relevant CBM;

- iii. The Mining Concessions are currently registered in the name of, and therefore are under the legal possession of the Companies; and
- iv. The Mining Concessions appear to be unaffected by mortgages, prohibitions, and other types of encumbrances, except for the ones described in **Annex 1.4.1**.

#### **1.4.2. Cadastral situation.**

We have reviewed a Technical Report and maps prepared by mining expert Mr. Jaime Iván Molina S.<sup>1</sup> attached hereto as **Annex 1.4.4**, (the "**Technical Report**"), which evidences the consideration in space of the mining claims located in the area of CMD Gold Mine. According to the Technical Report, there are certain overlapping situations amongst the Mining Concessions and third parties' mining rights in the area which are precisely described in the Technical Report. However, almost all cases are about third parties' rights overlapped to the Mining Concessions where the period of four years within CMD or DCEL could suit the annulment of those rights has elapsed. Therefore, theoretically those third parties are now able to suit the cancellation of these Mining Concessions, with respect to all the overlapped area. We haven't been provided with any information about the occurrence of a suit in relation with the overlapping situations described on the Technical Report. However, based on our review of the PReg of the Andacollo CBM, none of the Mining Concessions appears to be cancelled by this reason.

#### **1.4.3. Annual Mining licences.**

We have not reviewed the payment situation of the mining licenses corresponding to year 2011 and past years. Such review was not required since it was performed during the preparation of the Tenement Report dated as of October 20<sup>th</sup>, 2011. Regarding the payment of mining licenses corresponding to current period 2012, we have been informed by CMD mining property staff that such payment is scheduled for Friday, March 30<sup>th</sup>, 2012.

According to the Technical Report, there's a group a Mining Concessions, whose mining licenses were not paid during specific years, as informed in **Annex 1.4.2**. Therefore, it is not possible to confirm that all payments for all those years have been duly and timely made and that, theoretically, some of the Mining Concessions were not subject to a judicial auction due to lack of payment. However, based on the certificates issued by the CBM of Coquimbo and our personal review of the PReg of the Andacollo CBM, these mining concessions ownership registrations appear not to have been cancelled or transferred by this reason.

## **2. Water Rights.**

### **2.1. Water Rights according Chilean law.**

According to Chilean law, water is a national asset of public use and private entities and individuals may obtain water rights granted by the public authority to use it. These are special rights that entitle the holders to perpetually extract and use a certain flow of water from natural sources such as rivers, streams, or aquifers, and use it for any purpose, as established in the resolution granting the right, which must contain, among other elements, the flow granted (expressed in metric units and time), the watercourse of extraction, the intake point and the essential characteristics of the water right. Water rights are subject to a registered ownership system separated from real estate.

The DGA is the administrative authority in charge of granting water rights, conceding the authorizations related to their use or changes in their titles, supervising works or other intervention of riverbeds and other watercourses and providing special authorizations needed to intervene them, whether minor

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<sup>1</sup> Mr. Molina is a mining engineer with more than 25 years of experience in the field of constitution of mining concessions and he bases his reports on public and private available information on this matter.

intake and restitution civil works or major hydraulic works such as dams, reservoirs, aqueducts, siphons, etc. Additionally, the DGA is responsible for gathering information regarding the use of water, the investigation and measurement of the water resources and the Public Water Cadastre.

## **2.2. Identification of water rights.**

### **2.2.1. Underground water rights.**

CMD Gold Mine appears to be the registered owner of the underground water rights for a total flow of **205 l/s**, consumptive, permanent and continuously exercisable, which are specified in **Annex 2.2** and they are subject to a mortgage and prohibition in favour of Banco Security, while they appear to be unaffected by interdictions or litigations. These water rights are located in the Borough of Coquimbo, IV Region, and were duly acquired by CMD Gold Mine in 1993.

### **2.2.2. Superficial water rights.**

CMD Gold Mine appears to be the registered owner of superficial water rights for a total of **10,27 shares** corresponding to the Bellavista Channel, which are specified in **Annex 2.2**. and they appear to be unaffected by mortgages, interdictions or litigations. These water rights are located in the borough of Vicuña, IV Region, and were duly acquired by CMD Gold Mine in 1992.

## **2.3. Title review.**

### **2.3.1. Ownership registration.**

Based on the certificates provided by Vicuña and Coquimbo's CBRs, we can inform the following subject to the observations referred to in **Annex 2.2.1**.

- i. The water rights appear to be duly constituted as per Chilean Water law;
- ii. CMD Gold Mine appears to be the registered owner of the water rights;
- iii. The water rights reviewed, are affected by some mortgages and/or encumbrances, and prohibitions in favour of Banco Security, while they appear to be unaffected by interdictions or litigations; and
- iv. Considering that the statute of limitations to file claims affecting the ownership of water rights is 10 years as of the date of the relevant registration in the CBR, at this date, it is possible to ensure the immunity in relation to actions seeking the voidance of the creation or acquisition of the water rights, with respect to all water rights reviewed.

## **3. Real estate.**

### **3.1. Identification of real estate.**

CMD Gold Mine is the owner of 69 properties, registered on the CBR of Andacollo. A list of the legally registered real estate is shown in **Annex 3.1**.

### **3.2. Title Review.**

#### **3.2.1. Ownership registration.**

- i. According to our direct review of the PReg at the Andacollo CBR, the real estates appear to be currently registered under the name, and therefore under the legal possession of CMD Gold Mine;
- ii. Most of the registered properties appear to be unaffected by mortgages, prohibitions, and other types of encumbrances<sup>2</sup>, except for the ones described in **Annex 3.2**.; and

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<sup>2</sup> Please be aware, however, that according to Chilean Law, easements (i.e. rights of way) do not require the registration of the title in the relevant Custodian of Mines or Real Estate (depending if the easement affects a mining concession, real estate) to be valid. Registration in these cases is

- iii. Almost all the properties are registered since 10 years or more from the date of this report. This means, as well, that in these cases, all the annulment actions and others to claim the validity and property of these titles should be elapsed.

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normally made for publicity purposes only but, it possible that certain easements are not registered.

## II. ENVIRONMENTAL MATTERS

### 1. Description of the Project and its facilities.

CMD Gold Mine holds one mining operation named Andacollo Oro Project (hereinafter the **"Project"**), located in the Andacollo borough, Elqui Province, IV Region. The Project consists of the exploitation of an open pit ore deposit, and their subsequent processing and benefits plants. Currently, the Project is composed of the following facilities<sup>3</sup>:

- i. Open pits Toro, Churrumata, Tres Perlas, Chisperos, which collectively represent 10% of the exploitation, and Las Loas, which represents the remaining 90%.
- ii. A three-stage crushing plant.
- iii. A lixiviation pile where the mineral is irrigated with sodium cyanide through a system composed by pipes, pumps and sprinklers.
- iv. A processing plant where the mineral is recovered.
- v. Mining waste dumps Socorro Sur, Carmen, Tres Perlas West, , Sur-Oeste and Rajo 2.
- vi. A pool which stores the lixiviation solution resulting of the processing plant and an emergency pool.

### 2. Environmental Approvals<sup>4</sup>.

According to publicly available information, CMD Gold Mine has submitted to the EIAS the following projects:

- i. EID "Proyecto Desarrollo Fase IV-Andacollo Oro", approved by EAR No. 155, dated December 21<sup>st</sup>, 2005, issued by COREMA,<sup>5</sup> ("EAR 155/05"). The project consists of the modification of the Andacollo Oro original project through the construction of a lixiviation pile.
- ii. EID "Plan Minero 2007-2010", approved by EAR No. 074, dated April 17<sup>th</sup>, 2007, issued by COREMA, ("EAR 074/07"). The project consists of the extension of the mining exploitation areas.
- iii. EIS "Modificación Plan Minero 2007-2010", approved by EAR No. 360, dated November 14<sup>th</sup>, 2008, issued by COREMA, ("EAR 360/08"). The project consists of the extension of its lifespan through the exploitation of a new open pit in Las Loas.

In reviewing such approvals, we have detected the following issues that may be of relevance for CMD's Project.

#### a) The Project lifespan.

Pursuant to EAR No. 360/08 the Project is authorized to operate until 2011. However, CMD Gold Mine has notified to the Environmental Assessment Agency ("SEA")<sup>6</sup> the Project lifespan extension from 2011 until 2013. Through letter dated April 13, 2011, SEA stated that such modification was not a considerable change and consequently was included as part of the Project.

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<sup>3</sup> According to the raw project description provided by CMD.

<sup>4</sup> The EAR operates as a global environmental permit, which certifies that a specific project complies with all applicable environmental requirements and regulations, and entitles the project owner to obtain some environmental sectorial permits related to specific environmental components detailed in the EAR. In order to obtain such EAR, the project holder may submit an Environmental Impact Declaration ("EID") or Environmental Impact Study ("EIS"), depending on the magnitude of the project environmental impacts.

<sup>5</sup> According to the amendments to Law 19,300, the COREMAs were replaced by a Regional Environmental Evaluation Commission.

<sup>6</sup> SEA manages the Environmental Impact Assessment System.

## **b) EAR obligations.**

The Project EARs are valid and enforceable until all obligations therein contemplated are fulfilled according to their terms except as subsequently modified. The EAR 360/08 vests upon CMD Gold Mine several obligations, the non-compliance of which may entail administrative sanctions.

## **c) Inspection and Sanctioning procedures.**

We have detected the following sanctioning procedures:

- i. Resolution No. 48, dated February 06, 2008, by which the COREMA started a sanctioning procedure due to the discharge of liquid waste to superficial waters as a consequence of the crushing process. We have been informed by the Company that this procedure no longer continues since such waste did not qualify as regulated liquid waste and in any case emission standards were not surpassed.
- ii. Resolution No. 105, dated September 22, 2010, by which the COREMA imposed an administrative fine of US\$8,200 due to non-compliance with measures for controlling particulate matter (PM-10) emissions as provided by EAR 360/08. CMD informed us that it was appealed. According to public information available, on January 2<sup>nd</sup>, 2012 the conciliation hearing took place, where no conciliation was reached since CMD was absent to the hearing. At this point, the proof stage is due to start.
- iii. Resolution No. 104, dated September 06<sup>th</sup>, 2011, by which the CEA started a sanctioning procedure due to an incident occurred on June 12<sup>th</sup>, 2011, consisting of a partial collapse of the lixiviation pile that caused the fall of material and solutions with low content of cyanide, duly reported to the CEA by CMD<sup>7</sup>. Please note that according to the Resolution No. 104, CEA considered that there were no breaches regarding the CMD's commitment to report an incident like this, but considered that there were aspects related to the Project's operation that involved a solution spillage, which could have environmental consequences or cause some environmental damage<sup>8</sup>.

CMD submitted its defense on October 12<sup>th</sup>, 2011<sup>9</sup>. According to CMD's defense, the incident was caused because the spillage detection system was not operating due to a voltage change

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<sup>7</sup> This procedure was started at request of the Coquimbo Region Water Bureau.

<sup>8</sup> In case of environmental damage, restoration or damage actions could be filed against CMD, according to the following:

- a) Environmental Liability: the environmental restoration action was created to obtain restoration of the environment that has been negligently or intentionally damaged. CMD could be liable for environmental damages, if the incident causing the damages resulted from a negligent or intentional action or omission by CMD, or its dependants or employees. This liability would be civil in nature and would require proof of CMD's fault or negligence. This action must fulfill the following elements: (i) an action or omission; (ii) intention or negligence (fault); (iii) causation; and (iv) significant damages.
- b) General Tort Liability or Ordinary Civil Claim for Damages: CMD could be liable to third parties for property or personal injury or death, arising out from an environmental damage, under a general tort theory or negligence action, if the incident causing the damages resulted from a negligent or intentional action or omission by CMD, or its dependants or employees. This liability would be civil in nature and would require proof of CMD's fault or negligence. The tort liability is subject to the general principles of tort law established in the Civil Code of Chile and it is basically similar to 'negligence' as a cause of action under common law. There is tort liability when a person, through an action or an omission, willfully or negligently, causes damages to a third person. Therefore a claim of this nature must fulfill the following elements: (i) action or omission; (ii) intention or negligence (fault); (iii) causation; and (iv) significant damages.

Please note that the definition of 'negligent or intentional action' is analyzed on a case-by-case basis and should be proved by the claimant. However, lack of essential permits and authorizations, in addition with the non-compliance of environmental regulations, are legal inferences and/or disputable presumptions of culpability.

In addition, in case of a serious breach of the corresponding EAR, it may result in the imposition of fines of up to approximately US\$40,000 or even the revocation of such approval depending on the seriousness of the infringement. Please be advised that once the Bureau of the Environment's sanctioning faculties start functioning (estimated for the last quarter of 2012), it will be entitled to impose fines of up to approximately US\$9,800,000, temporary or definitive closure, or revocation of the EAR depending on the seriousness of the infringement.

<sup>9</sup> According to Resolution No. 104, CMD had to submit the corresponding defense within 10 business days since the notification. We have been informed by CMD that Resolution No. 104 was notified on September 29, 2011, and consequently, defense submitted on October 12 was in time.

that damaged the system's power source. During an emergency inspection, the spillage was detected, and CMD took immediate measures in order to contain the spillage, remove the polluted ground and clean the area. Consequently, CMD declares that there are no breaches to the corresponding EARs and the incident was an "unexpected event" that was adequately managed and reported to the environmental authority.

On November 29<sup>th</sup>, 2011, through Resolution No. 125, CEA acquitted to CMD, stating that CMD complied with all the commitments and measures related to leaks and spillage control system, set forth by the EARs 155/05, 074/07 and 360/08.

It is important mentioning that it is evidenced by the communications between the authority and CMD that the former is constantly visiting the Project and checking compliance with environmental regulations and the obligations imposed by EARs. Likewise since the Andacollo area has been declared as saturated for particulate matter (PM-10), which means that the air quality standard has been surpassed<sup>10</sup>, a decontamination plan is being prepared and additional abatement and compensation measures such as emission reduction targets and operational restrictions may be implemented<sup>11</sup>.

- iv. Coquimbo Region Water Bureau Resolution No. 1383 Exempt, dated October 13<sup>th</sup>, 2011, by which the Water Bureau ordered CMD to reestablish the natural watercourse of the *Quebrada El Toro*, after an unauthorized modification caused by the construction of an access road and materials deposit in the area<sup>12</sup>. Non-compliance of this administrative requirement after 30 business days may imply economic sanctions between 100 and 1,000 UTA "Unidad Tributaria Anual" (CLP\$ 47,294,400 to CLP\$ 472,944,000 during March 2012). According to the information and documents provided by CMD, the Company reestablished the watercourse sector that was affected, and submitted the corresponding information before the Regional Water Bureau on March 27<sup>th</sup>, 2012.
- v. On February 29<sup>th</sup>, 2012 SERNAGEOMIN requested to CMD a report in connection with a blasting carried out on February 21<sup>st</sup>, 2012 and the construction of 6 excavations within the El Toro sector that were reported by Andacollo's Major. On March 8<sup>th</sup>, CMD submitted its report, declaring that: (i) blasting was carried out according to the CMD Blasting Regulations, approved by SERNAGEOMIN through Resolution No. 21/2011 dated January 12, 2011; and that (ii) excavations correspond to drillings' decantation pools that are part of the drilling plan informed to SERNAGEOMIN on December 6<sup>th</sup>, 2011, and such pools were refilled.

On March 13<sup>th</sup>, 2012, SERNAGEOMIN requested additional information regarding the blasting schedules<sup>13</sup>, that must be submitted through a technical report that has to contain (i) the assessment of the climatic conditions for the exploitation area, (ii) description of the monitoring procedure of weather conditions, (iii) the mechanism of previous notice to the authority and people that could be affected at the moment of blasting, and (iv) procedures performed before, during and after the blasting, in order to reduce the impact in the community. CMD must submit its technical report before April 1<sup>st</sup>, 2012. Additionally, regarding drilling works, SERNAGEOMIN requested the submission of a work procedure for exploration works and closure actions in order to promote mining safety, including compliance with works performed by contractors.

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<sup>10</sup> Supreme Decree No. 008/2009 of the General Secretary of the Presidency, published in the Official Gazette on April 6, 2009, declared the Andacollo and surrounding areas as Saturated Zone for particulate matter PM-10. Resolution No. 7277/2009 of CONAMA, published in the Official Gazette on December 22, 2009, started the elaboration of a Decontamination Plan for Andacollo.

<sup>11</sup> Currently, this plan is in its elaboration stage and it is expected a preliminary project during June, 2012. In addition, we have been noticed by the Ministry of Environment that the decontamination plan would be enacted by the end of 2012.

<sup>12</sup> Please note that this procedure started with the complaint of Andacollo's major.

<sup>13</sup> Please note that according to the last communication of SERNAGEOMIN, there are numerous reports regarding the blasting schedules.

### **3. Mining permits<sup>14</sup>.**

CMD Gold Mine appears to have all relevant mining permits necessary for the operation of the Project as even though in some cases specific approvals of certain open pits, waste dumps or plants were not furnished, SERNAGEOMIN, approved the Project, the Mining Waste Dumps Plan for the Project and the closure plan<sup>15</sup>, of the same. Further, according to the information provided, CMD Gold Mine has not been subject to any sanctioning process related to mining issues so far, although a procedure regarding blasting and excavation is currently in development, according to section 2. c) v) above.

### **4. Sanitary permits<sup>16</sup>.**

CMD Gold Mine appears to have all relevant sanitary permits necessary for the operation of the Project. For this purpose, we have considered as relevant the following permits: sanitary report, industrial qualification, atmospheric emissions declaration, liquid and solid waste disposal authorization, and hazardous waste management plan. Please note however that the lixiviation pile was extended by EAR 360/08 which may imply updating the Sanitary Report; however, no communications from the Health Authority have been identified on that matter.

As the Health Authority qualified the activity as “annoying”, by Sanitary Report No. 13/06, according to EAR 360/08 the industrial qualification should have been updated after obtaining such approval, which is still pending and could be sanctioned as an EAR breach. Finally, according to the information provided, CMD Gold Mine has not been subject to any sanctioning process related to sanitary issues.

### **5. Municipal permits<sup>17</sup>.**

We have been informed by CMD Gold Mine has paid the municipal permit for the first semester of 2012.

Although we have not been furnished with copy of CMD Gold Mine construction permits, and of their final approval, please note that holding a valid municipal license may offer enough grounds to consider that the relevant Municipality has either granted such permits or considered them of no relevance.

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<sup>14</sup> ED 132/04, Mining Safety Regulation, (“ED 132”) established the legal framework for the Extractive Mining Industry and it regulates some mining permits necessary for this activity. Some of the relevant permits are: (i) mining exploitation method, (ii) closure plan authorization, (iii) explosives regulation, (iv) tailing dumps authorization and (v) mining waste dumps, among others. These permits are granted by SERNAGEOMIN. Please note that non-compliance with such regulations may be sanctioned with fines ranging from US\$1,600 to US\$4,100 approximately, and may be doubled up if reiterative behavior.

<sup>15</sup> Closure of mining projects is governed by the ED 132 which provides that a mining company together with a mining exploitation method must submit a Mining Closure Plan for SERNAGEOMIN’s approval. This plan must be updated every 5 years and contain closure measures for the following: tailing dams, mining waste dumps, lixiviation waste, roads, ancillary facilities, and waste management.

<sup>16</sup> Sanitary permits are established in the Sanitary Code (and related regulations) and refer principally to a favorable sanitary report (global permit), industrial qualification, management of industrial, domestic and hazardous wastes, and potable water and sewage systems. The Health Authority may impose a fine of up to approximately US\$82,000 for a breach of health regulations. Additionally, in serious cases, the Health Authority is entitled to revoke permits and order the closure of the facility.

<sup>17</sup> According to Chilean Law all constructions and buildings, including camps, offices, warehouses, machine rooms, etc., require: (i) an authorization prior to construction, and (ii) final approval once the construction is ended, which are granted by the Works Department of the relevant Municipality. The penalty for constructing without the construction permit is a 50% surcharge on municipal fees that are charged at the moment the construction owner requests the regularization of the permit. If the fine is not paid in full, the local municipal court can charge an additional fine, consisting of the municipal fees plus a 100% surcharge. In addition, Chilean legislation requires a municipal tax to conduct any activity (industrial or commercial) within its boundaries. Normally, this tax is charged only if environmental and sanitary conditions of the facility are acceptable. If they are not, the Municipality may grant a provisory authorization for one year to obtain the environmental and sanitary permits. The cost of the license is calculated based on the company’s capital. The penalty for operating without the municipal license is a 50% surcharge on the due amount. Besides, the Municipality is entitled to order the closure of the facility if it does not pay the license or obtains final approval for the construction.

## **6. Land use regulation<sup>18</sup>.**

The Project is duly located since it has obtained the land use change permit granted by the Agriculture Regional Authority through Certificate No. 29, dated April 14, 1994, which changes the rural destination of the area to allow industrial and mining activities. According to EAR 360/08, CMD Gold Mine had to obtain a land use change permit for the exploitation of Las Loas, which was granted by the Regional Authority through Resolution No. 46 dated September 23<sup>rd</sup>, 2009.

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<sup>18</sup> According to General Urbanism and Construction Law, the land use in urban areas is regulated by Zoning Plans. Consequently, all the relevant buildings and facilities must be in compliance with such Zoning Plans. The proper compliance of the land use regulations contained in the Zoning Plan is reviewed as prior requirement in order to obtain the Municipal License. Furthermore, such land use compliance also is checked during the process to obtain the authorizations called Construction Permit and Final Work Reception issued by the Municipal Work Department. In connection with industrial land uses regulated by Zoning Plans, Article 4.14.2 of General Urbanism and Construction Regulations declares that industries must obtain an Industrial Qualification Certificate issued by the Regional Health Authority. Zoning Plans defines the industrial land uses considering the above mentioned types of industries and requiring specific qualifications for each zone. In addition, the General Urbanism and Construction Law states that buildings used for non-agricultural purposes constructed beyond the urban limits must obtain an authorization from the Regional Secretary of the Ministry of Agriculture regarding the land use change. This permit requires a previous report from SAG.

### **III. CORPORATE MATTERS**

#### **1. Dayton Chile Exploraciones Limitada.**

DCEL is a limited liability company, its current partners are: DMC NewCo PTY Limited, with a quota interest of 99.93% (CLP\$ 690,343,489); and José Francisco Sánchez Drouilly, with a quota interest of 0.0709% (CLP\$ 489.841). The current capital of CMCB is \$690,833,330. Former partner DMC Cayman Inc. changed its jurisdiction to Delaware, USA, absorbed The Serene LLC and Andacolla Gold LLC, and was finally absorbed by DMC NewCo PTY Limited. Such amendment was registered on page 9,682, No. 7,386, of the CReg of Santiago corresponding to year 2011 and published in the Official Gazette on February 19<sup>th</sup>, 2011.

According to a Certificate of Good-Standing issued by the CBR of Santiago on March 14<sup>th</sup>, 2012, DCEL is organized according to law and its registration is currently valid.

#### **2. Compañía Minera Dayton.**

CMD is a contractual mining company, its current shareholders are: DMC NewCo PTY Limited, with 53,999,990 shares and José Francisco Sánchez Drouilly, with 10 shares. The current capital of CMD is US\$ 75.000.000.

According to a Certificate of Good-Standing issued by the CBM of Santiago on March 20<sup>th</sup>, 2012, CMD is organized according to law and its registration is currently valid.

### ANNEX 1.3.

### MINING CONCESSIONS

N°	Name	Current Ownership			Registry	Custodian of Mines	CBM Revision / CBM Certificate
		Page	No.	Year			
1	Loa del 1 al 18	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
2	Montosa	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
3	San Juan	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
4	Rinconada	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
5	Tres Vetas	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
6	Luisa	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
7	La Reina	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
8	Tres Marías	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
9	María Teresa Uno	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
10	María Teresa Cuatro al Seis	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
11	María Teresa Siete al Nueve	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
12	María Teresa 10 al 14	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
13	Matías Uno 1 al 7	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
14	Matías Dos 1 al 8	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
15	Anastassia Uno 1 al 2	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
16	Juan Uno 1 al 6	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
17	Juan Dos 1 al 2	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
18	El Sauce dos del Uno al Dos	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
19	El Sauce Dos 3 al 4	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
20	El Sauce Dos 9 al 12	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
21	Arenillas	86	41	2007	Property	Andacollo	Reg. Reviewed at CBM
22	San Carlos	89	42	2007	Property	Andacollo	Reg. Reviewed at CBM
23	Rosario 1 al 89 (1 al 34, 36 al 61 y 68 al 88)	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
		85	45	2010			
24	Rosario 90 al 93	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
25	Rosario 94 al 101	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
26	Rosario 102 al 129 (102 to 105, 113 to 115, 118 to 123, 125 to 129)	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
		89	49	2010			
27	Rosario 139 al 140	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
28	Rosario 141-170	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
		83	43	2010			
29	Rosario 186 al 193 (187, 189-192)	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM

N°	Name	Current Ownership			Registry	Custodian of Mines	CBM Revision / CBM Certificate
		Page	No.	Year			
30	Rosario 195	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
31	Irene	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
32	Don Ramón Ernesto	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
33	Don Santiago y otras	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
34	Gloria 2, 3 y 7	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
35	Don Pedro	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
36	Andacollo 1	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
37	Andacollo 2	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
38	Andacollo 3	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
39	Andacollo 4	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
40	Andacollo 5	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
41	Andacollo 6	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
42	Andacollo 7	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
43	Andacollo 8	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
44	Andacollo 9	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
45	Andacollo 10	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
46	Andacollo 11	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
47	Andacollo 12	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
48	Andacollo 13	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
49	Andacollo 14	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
50	Andacollo 15	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
51	Andacollo 16	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
52	Andacollo 17	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
53	Andacollo 18	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
54	Andacollo 19	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
55	Andacollo 20	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
56	Andacollo 23	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
57	Andacollo 30	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
58	Flor de María	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
59	Churumata	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
60	India 1 al 4	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
61	Indígena	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
62	Rosario	413	94	1994	Property	Andacollo	Reg. Reviewed at CBM
63	Madrid 1 al 7	270	69	1994	Property	Andacollo	Reg. Reviewed at CBM
64	Roma 1 al 6	281	71	1994	Property	Andacollo	Reg. Reviewed at CBM

N°	Name	Current Ownership			Registry	Custodian of Mines	CBM Revision / CBM Certificate
		Page	No.	Year			
65	Londres 1 al 5	276	70	1994	Property	Andacollo	Reg. Reviewed at CBM
66	Berlín 1 al 2	253	66	1994	Property	Andacollo	Reg. Reviewed at CBM
67	Bruselas 1 al 5	242	64	1994	Property	Andacollo	Reg. Reviewed at CBM
68	París 1 al 4	247	65	1994	Property	Andacollo	Reg. Reviewed at CBM
69	Lisboa 1 al 8	258	67	1994	Property	Andacollo	Reg. Reviewed at CBM
70	Abismo 1 al 4	215	59	1994	Property	Andacollo	Reg. Reviewed at CBM
71	Horno 1 al 5	225	61	1994	Property	Andacollo	Reg. Reviewed at CBM
72	Madero 1 al 5	220	60	1994	Property	Andacollo	Reg. Reviewed at CBM
73	Pique 1 al 32	236	63	1994	Property	Andacollo	Reg. Reviewed at CBM
74	Mapa 1 al 7	230	62	1994	Property	Andacollo	Reg. Reviewed at CBM
75	Cascada 1 al 6	210	58	1994	Property	Andacollo	Reg. Reviewed at CBM
76	Arrecife 1 al 10	264	68	1994	Property	Andacollo	Reg. Reviewed at CBM
77	Segovia 1 al 28	13	7	2005	Property	Andacollo	Reg. Reviewed at CBM
78	Guijón 1 al 2	367	86	1994	Property	Andacollo	Reg. Reviewed at CBM
79	Barcelona 1 al 3	326	79	1994	Property	Andacollo	Reg. Reviewed at CBM
80	Castilla 1 al 9, 13 y 18 al 20	331	80	1994	Property	Andacollo	Reg. Reviewed at CBM
81	Baleares 1 al 3	291	73	1994	Property	Andacollo	Reg. Reviewed at CBM
82	Galicia 1 al 2	346	82	1994	Property	Andacollo	Reg. Reviewed at CBM
83	Zaragoza 1 al 14	315	77	1994	Property	Andacollo	Reg. Reviewed at CBM
84	Burgos 1 al 4	451	83	1994	Property	Andacollo	Reg. Reviewed at CBM
85	Jeréz 1 al 5	418	95	1994	Property	Andacollo	Reg. Reviewed at CBM
86	Málaga 1 al 8	402	92	1994	Property	Andacollo	Reg. Reviewed at CBM
87	Sevilla 1 al 5	356	84	1994	Property	Andacollo	Reg. Reviewed at CBM
88	Toledo 1 al 4	297	74	1994	Property	Andacollo	Reg. Reviewed at CBM
89	Murcia 1 al 5	309	76	1994	Property	Andacollo	Reg. Reviewed at CBM
90	Bilbao 1 al 4	286	72	1994	Property	Andacollo	Reg. Reviewed at CBM
91	Oviedo 1 al 13	379	88	1994	Property	Andacollo	Reg. Reviewed at CBM
92	Córdoba 1 al 11	340	81	1994	Property	Andacollo	Reg. Reviewed at CBM
93	Mallorca 1 al 5	361	85	1994	Property	Andacollo	Reg. Reviewed at CBM
94	Valencia 1 al 36	302	75	1994	Property	Andacollo	Reg. Reviewed at CBM
95	Cholita Uno 1	397	91	1994	Property	Andacollo	Reg. Reviewed at CBM
96	Cholita Dos 1 al 2	392	90	1994	Property	Andacollo	Reg. Reviewed at CBM
97	Cholita Tres 1 al 2	387	89	1994	Property	Andacollo	Reg. Reviewed at CBM
98	Patitas 1 al 5	429	97	1994	Property	Andacollo	Reg. Reviewed at CBM
99	Fragua 1 al 10	116	37	1997	Property	Andacollo	Reg. Reviewed at CBM

N°	Name	Current Ownership			Registry	Custodian of Mines	CBM Revision / CBM Certificate
		Page	No.	Year			
100	Mercedes 7	27	11	2007	Property	Andacollo	Reg. Reviewed at CBM
101	Mercedes 1 al 3	23	7	2007	Property	Andacollo	Reg. Reviewed at CBM
102	Nerransula	21	5	2007	Property	Andacollo	Reg. Reviewed at CBM
103	Nueva	25	9	2007	Property	Andacollo	Reg. Reviewed at CBM
104	Rodrigo	24	8	2007	Property	Andacollo	Reg. Reviewed at CBM
105	Toro	28	12	2007	Discovery	Andacollo	Reg. Reviewed at CBM
106	Gabriela	22	6	2007	Property	Andacollo	Reg. Reviewed at CBM
107	María Luz	26	10	2007	Property	Andacollo	Reg. Reviewed at CBM
108	Oropesa 1, 2, 3, 4, 5, 6, 7, 9, 10 y 12	13	6	1998	Property	Andacollo	Reg. Reviewed at CBM
109	Cutana 3 al 7, 9 al 13, 15 al 16.	13	6	1998	Property	Andacollo	Reg. Reviewed at CBM
110	Pachuca	13	6	1998	Property	Andacollo	Reg. Reviewed at CBM
111	San Antonio	13	6	1998	Property	Andacollo	Reg. Reviewed at CBM
112	Urmeneta 1 al 4	13	6	1998	Property	Andacollo	Reg. Reviewed at CBM
113	Esperanza Dos y Tres	13	6	1998	Property	Andacollo	Reg. Reviewed at CBM
114	Diana 1 al 7	13	6	1998	Property	Andacollo	Reg. Reviewed at CBM
115	Atlántida 6	13	6	1998	Property	Andacollo	Reg. Reviewed at CBM
116	Santa Rosa 1 al 4, y Santa Rosa 6 al 10	13	6	1998	Property	Andacollo	Reg. Reviewed at CBM
117	Sierra Maestra 1 al 40	13	6	1998	Property	Andacollo	Reg. Reviewed at CBM
118	Porvenir	13	6	1998	Property	Andacollo	Reg. Reviewed at CBM
119	Río Elqui Uno al Cinco y Ocho	80	40	2010	Property	Andacollo	Reg. Reviewed at CBM
120	Barbara Tercera	81	41	2010	Property	Andacollo	Reg. Reviewed at CBM
121	Jazmin	82	42	2010	Property	Andacollo	Reg. Reviewed at CBM
122	Nanita 1 al 7, 9 al 11, 13 al 23, 28 al 32, 47 al 50	84	44	2010	Property	Andacollo	Reg. Reviewed at CBM
123	Sylvia	86	46	2010	Property	Andacollo	Reg. Reviewed at CBM
124	Claudia Uno y Dos	87	47	2010	Property	Andacollo	Reg. Reviewed at CBM
125	Mercedes 4, 5, y 6	88	48	2010	Property	Andacollo	Reg. Reviewed at CBM
126	Cautín	90	50	2010	Property	Andacollo	Reg. Reviewed at CBM
127	Río Elqui Dos 5 al 7, 14 y 15	91	51	2010	Property	Andacollo	Reg. Reviewed at CBM
128	Río Elqui Tres Uno	92	52	2010	Property	Andacollo	Reg. Reviewed at CBM
129	Vicky Uno y Dos	93	53	2010	Property	Andacollo	Reg. Reviewed at CBM
130	Esperanza (Uno)	1	1	2008	Property	Andacollo	Certificate March 22nd, 2012
131	Estrellita Dos 1	96	27	1995	Property	Coquimbo	Certificate March 19th, 2012
132	Estrellita Uno 1 al 3	91 back	26	1995	Property	Coquimbo	Certificate March 12th, 2012

N°	Name	Current Ownership			Registry	Custodian of Mines	CBM Revision / CBM Certificate
		Page	No.	Year			
133	Primera de Mayo	93	34	2011	Property	Andacollo	Reg. Reviewed at CBM
134	Nueva el Sauce Dos 1 al 19	198	169	2007	Discovery	Andacollo	Reg. Reviewed at CBM
135	Nueva Matías Tres 1 al 9	198	169	2007	Discovery	Andacollo	Reg. Reviewed at CBM
136	Infiernillo 1	3	3	2012	Discovery	Andacollo	Reg. Reviewed at CBM
137	Recóndita 1	1	1	2012	Discovery	Andacollo	Reg. Reviewed at CBM

## ANNEX 1.4.1.

### OBSERVATIONS AND COMMENTS REGARDING MINING CONCESSIONS.

According to the information made available or directly obtained by us, we have no material findings to report as to the Mining Concessions, except for the following:

**1.** Regarding the mining concessions transferred to CMD or DCEL by third parties, we reviewed directly at the CBM of Andacollo the registrations that evidence the change in the ownership of these mining concessions up-to-date. While the registered owner is the legal possessor, in good faith, of the mining concessions, third parties may challenge the right of such registered owner within four years (the applicable statute of limitations, "*prescripción adquisitiva*") as of the date of registration of the assignments by which such registered owner acquired the mining concessions, such challenge may only be based on certain limited grounds, such as invalidity of the relevant assignment deed in the chain of titles of the Companies due to lack of authorization or fraud.

- i. The statute of limitations for ownership regarding the Mining Concessions, acquired by CMD during 2010, has not elapsed yet. Therefore, theoretically, third parties may challenge CMD's ownership over those Mining Concessions. However, based on our independent review made in the CBM of Andacollo and the review of the public deeds containing those transferences, we believe that if a third party actually challenges the ownership of CMD over the Mining Concessions, such claim would have no basis as all necessary transfers have been duly performed and there are no pending obligations arising from such transfers, except for the payment of NR.
- ii. The ownership history of the Mining Concession named "San Carlos" or "San Carlos 2" is not entirely clear. This mining concession was granted in 1933 jointly with other mining concessions, but the measurement minute only relates to one mining concession named "San Carlos". However, in subsequent registrations, we noticed a marginal annotation dated as of 1993 in the original registration of the measurement minute on the PReg of Coquimbo, declaring the cancellation of the registration of the concession named "San Carlos" based on the lack of fulfilment of the legal obligation established in the Transitory art. 6° of the Mining Code of 1983, as to the obligation of including all the mining concessions granted by the Code of 1932 on the "National Registry of Mining Concessions" run by the SERNAGEOMIN. However, Mr. Miguel Nenadovich sold to CMD the mining concession named "San Carlos Dos", and according to the Technical Report partially received as of this date, this concession was duly registered on the abovementioned "National Registry of Mining Concessions". This complicated situation could explain why the former owner, Mr. Miguel Nenadovich, sold this mining concession to CMD in a low price, and why it was not included on the obligation of payment of the NR.
- iii. The Mining Concession named "Toro" was mistakenly registered on the Discovery Registry of the relevant CBM. On the other hand, even when this mining concession was constituted in 1894 and has always been registered on the Discovery Registry, we did not find any third parties' judicial action or reclamation regarding this issue. Finally, as this concession was granted under the Mining Code of 1888, a deeper analysis of this issue is advisable. Also, it is necessary to perform a deeper analysis of some Mining Concessions

granted in the decade of 1930, which appear to be constituted by the Governor instead of the judge<sup>19</sup>.

- iv. Although mining concession "Rosario 195" transference public deed was duly registered on the PReg of Andacollo CBM, the corresponding transference marginal annotation was not made on the previous ownership registration<sup>20</sup>. It is advisable that CMD may request such missing annotation to the CBM of Andacollo, which will help to clarify the ownership history of those mining concessions.
- v. We've been informed by CMD's staff that Mining Concession "Esperanza", included under number 130 of **Annex 1.3.**, was acquired by CMD on March 2008. Although we have been provided with an ownership certificate stating CMD's property of the concession, we have not reviewed the judicial file and measurement minutes regarding the constitution process of the mining concession. According to CMD's staff, a rectificatory marginal annotation is required, since the actual name of the mining concession is "Esperanza Uno".

**2.** Third parties may challenge the mining concessions in the process of being constituted, based on untimely or lack of fulfilment of the legal requirements ("*caducidades*") of the constitution process, but only until the judicial award is granted. Once granted, third parties cannot challenge the mining concessions based on *caducidades* other than some specific causes of annulment, such as overlapping in certain cases and others, or *caducidades*, if the final award is not registered on the relevant registry within 120 days after that final award was granted.

- i. Based on the information reviewed, we found an inconsistency between the measurement minute ("*acta de mensura*") presented on the file and the mining concession which is being constituted by that file with respect to the Mining concessions "Nueva El Sauce Dos 1 to 9" and "Nueva Matías Tres 1 al 9". This inconsistency involves the fact that the measurement minute of "Nueva El Sauce Dos 1 to 9" was presented on the constitution file of "Nueva Matías Tres 1 al 9", and the measurement minute of "Nueva Matías Tres 1 al 9" was presented on the constitution file of "Nueva El Sauce Dos 1 to 9". This situation was duly informed by the SERNAGEOMIN on the mentioned files. Even when the judge resolved to give the applicant a period within which the observations informed by the SERNAGEOMIN could be fixed, it could be considered that the measurement minutes were not presented within the legal period and, consequently, a *caducidad* might be filed based on the lack of fulfilment of the legal requirements of the *mensura*. These concessions cover the Mining Concessions "Sauce Dos 17" and "Matías Tres Uno", which were wrongly registered on the Discovery Register of the CBM, as mentioned below. As of March 18<sup>th</sup>, 2011, there are no marginal annotations cancelling these concessions, and according to CMD's mining property staff, the judicial award for these matters is still pending.

**3.** Third parties may challenge mining concessions constituted under the Mining Code of 1983 within four years as of the date of publication in the Mining Gazette of an abstract of the award granting such concession, on the basis of certain matters which would not be revealed by a search of the applicable mining titles. We have confirmed, however, that this statute of limitations period ("*prescripción extintiva*") has elapsed in the case of all of the Mining Concessions already constituted.

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<sup>19</sup> Rosario 90 to 93.

Page 408 Number 93 PReg 1994.

However, a specific cause of *caducidad* is applicable without a statute of limitations, if the final award and the measurement minute are not registered on the PReg of the relevant CBM within 120 days after that final award was granted.

- i. The Mining Concession "El Sauce Dos 17" and "Matías Tres Uno" were wrongly registered on the Discovery Registry of the relevant CBM. In consequence, as these mining concessions have never been registered on the relevant PReg, a *caducidad* might be filed against them based on the lack of fulfilment of the legal period aforementioned, and CMD would never be the legal possessor of those mining concessions, both without any statute of limitation. This situation could explain why the former owner, Mr. Miguel Nenadovich, sold them to CDM in a lower price, and why they were not included in the obligation of payment of the NR. These mining concessions are protected with the mining concessions in process of being constituted "Nueva El Sauce Dos 1 to 9" and "Nueva Matías Tres 1 al 9". However, please bear in mind that those concessions are also affected with a cause of *caducidad*, in the way informed above.
- ii. The Mining Concession "Mallorca 1 to 5" is also affected with this specific cause of *caducidad*, since the final award and the measurement minute were registered on the relevant PReg after the period of 120 days above described had elapsed. As of March 15<sup>th</sup>, 2012, there is no marginal annotation cancelling the concession.

**4.** A number of CMD's Mining Concessions were affected in the past by a first degree mortgage, which was registered at page 1 number 1 of the MReg of the Andacollo CBR corresponding to year 1994, and a prohibition to transfer, which was registered on the Prohibitions Registry of the Andacollo CBR corresponding to year 1994. Although such mortgage and prohibition are no longer in effect, such encumbrances were not marginally cancelled on the ownership registration of the mining concessions "Valencia 1 al 36", "Gijón 1 al 8" and "Cholita Uno 1". In order to prevent possible misleading interpretations regarding the existence of the mortgage, we suggest CMD to request the CBM of Andacollo to perform the necessary cancellation marginal annotations.

**5.** By public deed of second mortgage, executed on the Notary Public of Santiago Mr. Patricio Raby, dated October 18<sup>th</sup>, 1994, CMD secured to Sociedad de Inversiones Alexim Limitada the payment of the NR<sup>21</sup> with the constitution of a mortgage, which is currently registered on page 19, number 2 of the MReg of the CBM of Andacollo corresponding to year 1994.

- i. According to the public deed mentioned above, the mining concessions affected by this mortgage, are mining concessions "Rosario 1 al 89 (1 al 34, 36 al 53 y 68 al 88)"; "Rosario 90 al 93"; "Rosario 94 al 101"; "Rosario 102 al 129 (102 al 112, 116 al 119, 124 al 126)"; "Rosario 139 al 140"; "Rosario 141 al 170 (141, 144 al 148, 151 al 170)"; "Rosario 186 al 193 (187, 189 al 192)"; "Rosario 195" and those listed in numbers 31-76, 78-98, 130 and 131 of the Annex 1.3. However, the mortgage included in the public deed was imprecisely registered in the relevant MReg, since its structure may lead to a restricted interpretation that the mortgage does not affect mining concessions listed between numbers 58-76, 78-98,

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<sup>21</sup> By public deed of option of purchase dated August 31, 1989, granted before the Public Notary of Santiago Mr. Patricio Raby, and the public deed of acceptance dated January 11, 1990, granted before the Notary Public Mr. Rodríguez (both public deeds, the "Chevron Agreement") 78 mining concessions were transferred by Chevron Minera Corporation of Chile to CMD. The Chevron Agreement included the payment of a "Net Return" or "NR" of the 4% of the product of the mining concessions transferred. It will be considered as net returns any quantity, price or net value received by CMD from the transfer of any minerals or products extracted or provided by the mining concessions, discounting casting, refining and transport expenses. The payment of the NR shall be made for all the term in which those mining concessions are exploited, or a 100-year period, whatever happens first, and is paid on a monthly basis. Also, the Chevron agreement established a minimum payment of US\$10,000,000 for this concept. By public deed executed before the Public Notary of Santiago Mr. Patricio Raby, dated January 15, 1991, Chevron Minera Corporation of Chile sold equally to CMD and Inversiones Alexim Limitada ("Alexim") the NR granted by the Chevron Agreement. As CMD was the debtor of the NR and bought half of this NR, it was halved, and currently Alexim is the creditor of a NR of the 2% of the product of the mining concessions transferred, and the minimum payment aforementioned was reduced to US\$5,000,000.

130 and 131 of the Annex 1.3. In order to prevent possible misleading interpretations regarding the mortgage, we suggest CMD to request the CBM of Andacollo to perform the necessary rectificatory marginal annotations.

- ii. This mortgage was not marginally registered on the ownership registrations of mining concessions "Cholita Uno 1", "Málaga 1 al 8", "Jerez 1 al 5", "Patitas 1 al 5" and those indicated between numbers 29 and 62 of the Annex 1.3. Even though the mortgage information could be collected from the mortgage public deed registration, it is advisable that CMD shall request such missing annotations to the CBM of Andacollo, which will ensure that the mortgage is known and enforceable against third parties.

**6.** By public deed of first mortgage, executed before the Notary Public of Santiago Mr. José Musalem Saffie, dated on January 27th, 2010, CMD secured to Sociedad de Inversiones Alexim Limitada the payment of the 2% NR royalty set in the same public deed with the constitution of a mortgage, which is currently registered on page 28, number 12 of the MReg of the CBM of Andacollo corresponding to year 2010. This mortgage affected the mining concessions Rosario 142-143, 149 and 150", "Rosario 113-115, 120-123, 127-129" and those indicated between numbers 119 and 129 of the Annex 1.3.

The referred mining concessions are also affected by a prohibition to transfer, encumber or enter into any act or contract without the prior authorization of Alexim, which is currently registered on page 25, number 8 of the MReg of the CBM of Andacollo corresponding to year 2010.

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<sup>22</sup> According to articles 2,409 and 2,410 of Civil Code, the mortgage must be granted by public deed and registered at the MReg of the CBM; without this registration the mortgage doesn't have any value as, the same concessions could be mortgaged (or affected by any real right including transfer) to a third party and the first registration made will have preference.

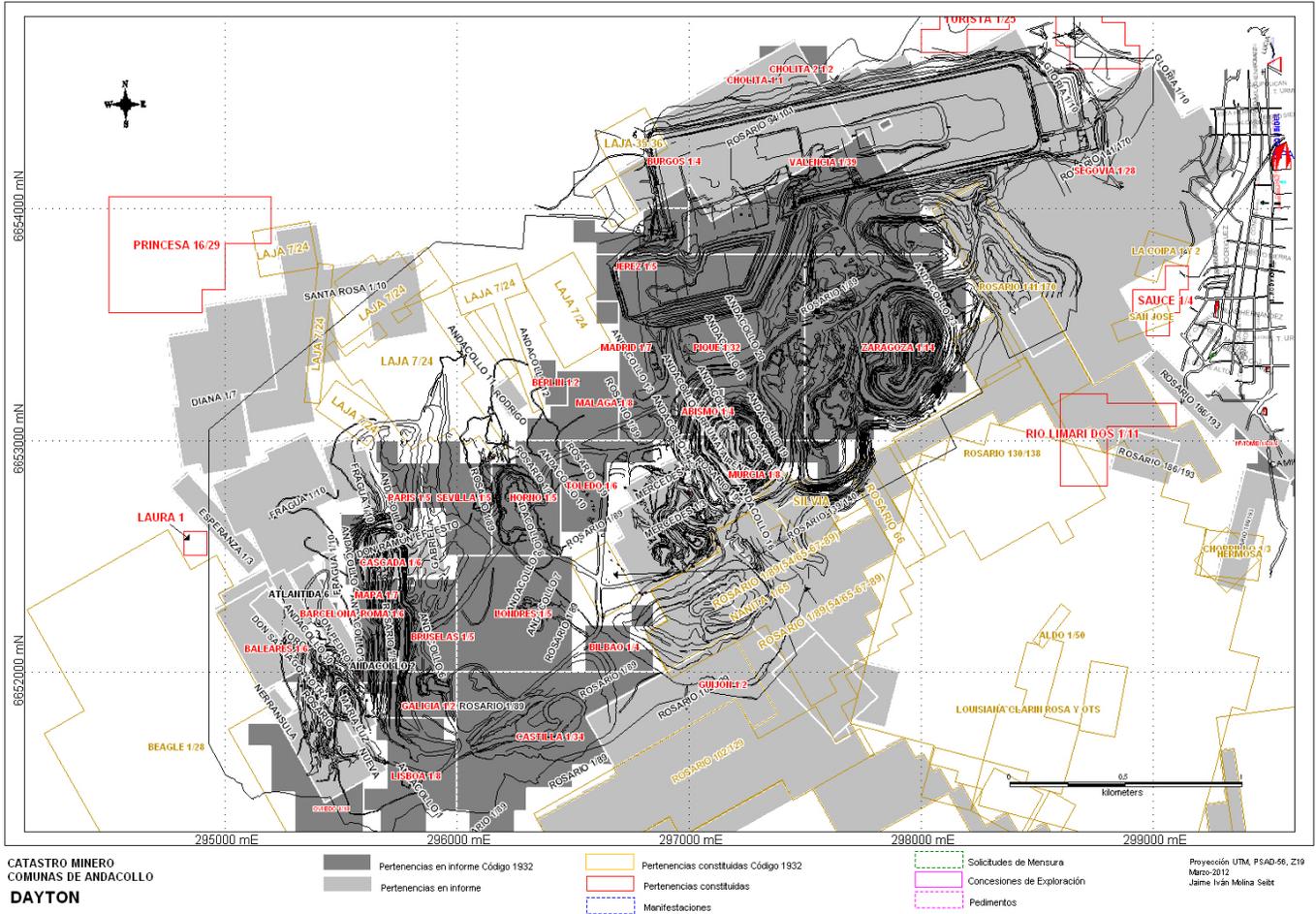
**ANNEX 1.4.2.**  
**UNPAID MINING LICENSES.**

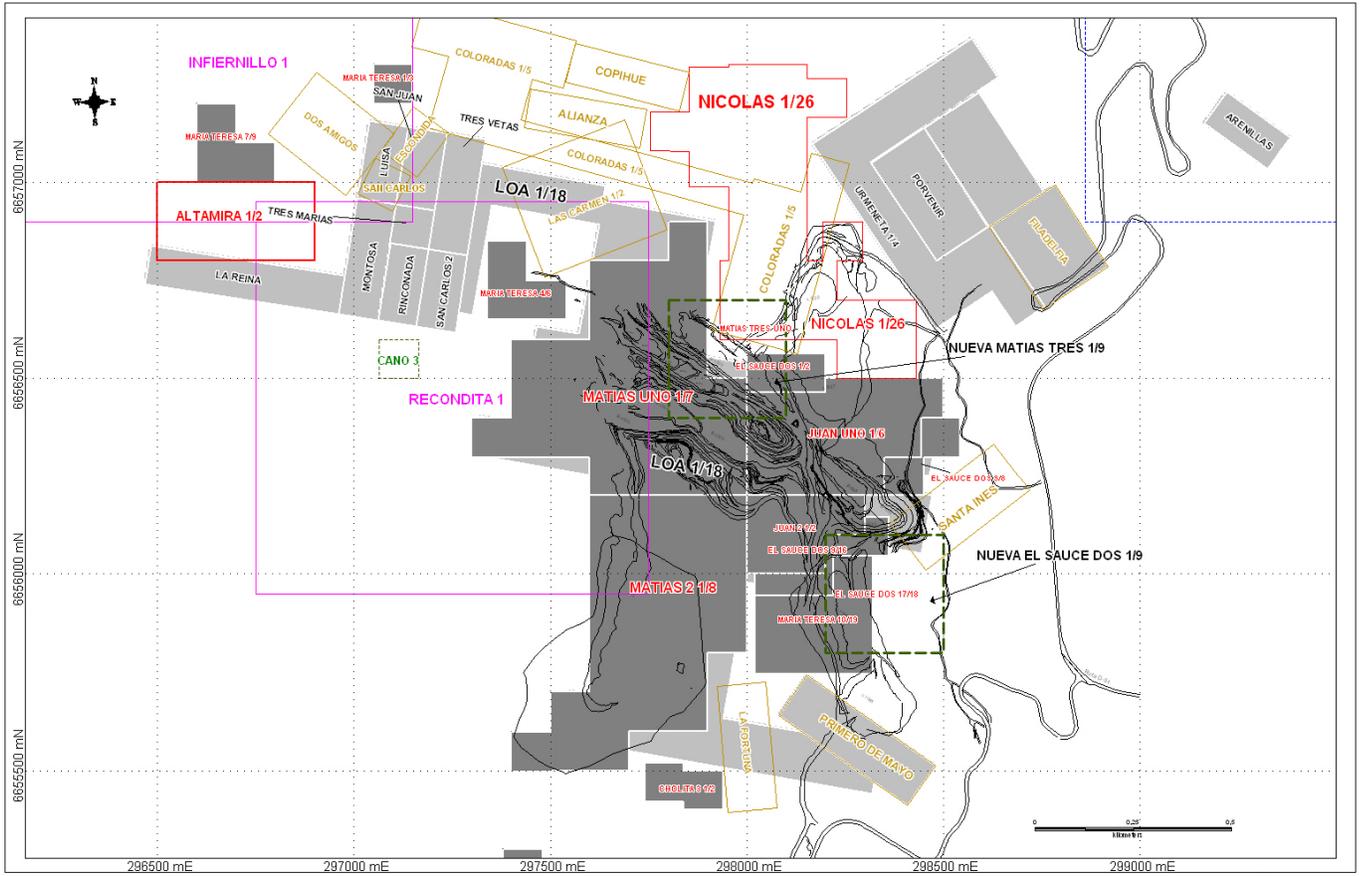
<b>Mining Concession</b>	<b>National Rol</b>	<b>Unpaid period</b>
Andacollo 11	041040658-6	2001
Mercedes 4 al 7	041060564-3	2002 to 2005
Mercedes 1 al 3	041060534-1	2002 to 2005
Nerransula	041060195-8	2002 to 2005
Nueva	041060546-5	2002 to 2005
Rodrigo	041060532-5	2002 to 2005
Gabriela	041060533-3	1999 to 2005
María Luz	041060531-7	1999 to 2005

**MINING CONCESSIONS INCLUDED IN AUCTION LISTS.**

<b>Mining Concession</b>	<b>National rol</b>	<b>Unpaid period</b>	<b>Auction file</b>	<b>Auction date</b>
Andacollo 11	041040658-6	2001	2.371-2001	30-11-2001
Mercedes 4 al 7	041060564-3	2002 a 2005	3465-02; 3859-03,3973-04, 41131-05	20-03-2003; 04-11-2005;30-01-2006;29-06-2006
Mercedes 1 al 3	041060534-1	2002 a 2005	3465-02; 3859-03,3973-04, 41131-05	20-03-2003; 04-11-2005;30-01-2006;29-06-2006
Nerransula	041060195-8	2002 a 2005	3465-02; 3859-03,3973-04, 41131-05	20-03-2003; 04-11-2005;30-01-2006;29-06-2006
Nueva	041060546-5	2002 a 2005	3465-02; 3859-03,3973-04, 41131-05	20-03-2003; 04-11-2005;30-01-2006;29-06-2006
Rodrigo	041060532-5	2002 a 2005	3465-02; 3859-03,3973-04, 41131-05	20-03-2003; 04-11-2005;30-01-2006;29-06-2006
Gabriela	041060533-3	1999 a 2005	3465-02; 3859-03,3973-04, 41131-05	20-03-2003; 04-11-2005;30-01-2006;29-06-2006
María Luz	041060531-7	1999 a 2005	3465-02; 3859-03,3973-04, 41131-05	20-03-2003; 04-11-2005;30-01-2006;29-06-2006

### ANNEX 1.4.3. MINING CONCESSIONS MAPS





**CATASTRO MINERO  
COMUNAS DE ANDACOLLO  
LAS LOAS**

Pertencencias en informe Código 1932  
 Pertencencias en informe

Pertencencias constituidas Código 1932  
 Pertencencias constituidas  
 Manifestaciones

Solicitudes de Mensura  
 Concesiones de Exploración  
 Pedimentos

Proyección UTM, PSAD-56, Z19  
 Jaime Molina Selt  
 Marzo-2012

**ANNEX 2.2.**  
**WATER RIGHTS**

N°	Name	Current Ownership			Registry	Custodian of Real Estate	CBR Certificates
		Page	Number	Year			
1	Coquimbo 1	10 back	8	1993	Property	Coquimbo	March 26 <sup>th</sup> , 2012
2	Coquimbo 2	13 back	9	1994	Property	Coquimbo	March 26 <sup>th</sup> , 2012
3	Coquimbo 3	9 back	7	1993	Property	Coquimbo	March 26 <sup>th</sup> , 2012
4	Coquimbo 4	11 back	9	1993	Property	Coquimbo	March 26 <sup>th</sup> , 2012
5	Bellavista 1	118	114	1992	Property	Vicuña	March 28 <sup>th</sup> , 2012
6	Bellavista 2	119	115	1992	Property	Vicuña	March 28 <sup>th</sup> , 2012

### **ANNEX 2.2.1.**

#### **OBSERVATIONS AND COMMENTS REGARDING WATER RIGHTS**

- i. According to Bellavista Channel's Administration, as per the application of the rules contained in the Water Code, the ratio conversion is **1 share = 1 l/s**, only if the Elqui River resources are enough to satisfy all shareholders demands. However, under the current availability of water resources in the basin, real water supply equals **1 share = 11.983 m3** per year.
- ii. According to CMD Gold Mine Executives these superficial water rights are not currently being used or extracted for any CMD Gold Mine mining activities.
- iii. The EAR establishes mandatory monitoring programs over streams and monitoring program reports over established time periods. Notwithstanding, according to the available information, it appears that flow restrictions have not been established for any of CMD Gold Mine water rights.

**ANNEX 3.1.**  
**REAL ESTATE**

N°	Name	Current Ownership			Registry	Custodian of Real Estate
		Page	Number	Year		
1	Real Estate	324	280	2000	Property	Andacollo
2	Real Estate	186	100	1996	Property	Andacollo
3	Real Estate	144	75	1996	Property	Andacollo
4	Lot 2	100	67	1994	Property	Andacollo
5	El Toro	102	68	1994	Property	Andacollo
6	Lot 11 and 12	104	69	1994	Property	Andacollo
7	C-1	114	73	1994	Property	Andacollo
8	Real Estate El Rincón	153	91	1994	Property	Andacollo
9	Lot 5	138	84	1994	Property	Andacollo
10	Lot 3	107	70	1994	Property	Andacollo
11	Lot 6	109	71	1994	Property	Andacollo
12	Finca Quebrada La Arenilluda	380	273	1994	Property	Andacollo
13	Lots 1-A and 1-B	98 back	66	1994	Property	Andacollo
14	Lot A	136	83	1994	Property	Andacollo
15	Lot no. 10-A and 10-B; 7, 13, 15, 16, 17; and 18, 19, 20	78	52	1994	Property	Andacollo
16	Lot No. 13	327	282	2000	Property	Andacollo
17	Mining Processing Plant named El Gomero	248	238	2007	Property	Andacollo
18	Lot D-2	133	82	1994	Property	Andacollo
19	Lot 8-A, 8-B and 8-C	111	72	1994	Property	Andacollo
20	Lot 16	235	117	1995	Property	Andacollo
21	Lot 10	182	91	1995	Property	Andacollo
22	Lot 8	110	53	1995	Property	Andacollo
23	Lot 28	243	121	1995	Property	Andacollo

24	Lot 1	153	74	1995	Property	Andacollo
25	Lot 2	186	93	1995	Property	Andacollo
26	Lot 35	227	113	1995	Property	Andacollo
27	Lot 10	102	49	1995	Property	Andacollo
28	Lot 7	161	78	1995	Property	Andacollo
29	Lot 14	165	80	1995	Property	Andacollo
30	Lot 13	106	51	1995	Property	Andacollo
31	Lot 24	231	115	1995	Property	Andacollo
32	Lot 29	122	59	1995	Property	Andacollo
33	Lot 37	239	119	1995	Property	Andacollo
34	Lot	126	61	1995	Property	Andacollo
35	Lot 31	149	72	1995	Property	Andacollo
36	Lot 8	470	298	1995	Property	Andacollo
37	Lot 8	466	296	1995	Property	Andacollo
38	Lot 20	442	284	1995	Property	Andacollo
39	Lot 4	438	282	1995	Property	Andacollo
40	Lot 9	458	292	1995	Property	Andacollo
41	Lot 23	446	286	1995	Property	Andacollo
42	Lot 3	532	355	1995	Property	Andacollo
43	Lot 24	178	89	1995	Property	Andacollo
44	Lot 5	454	290	1995	Property	Andacollo
45	Lot Santa Clotilde and House	410	268	1995	Property	Andacollo
46	Lot 4	69	32	1995	Property	Andacollo
47	Lot 12	167-A	81-A	1995	Property	Andacollo
48	Lot 11	145	70	1995	Property	Andacollo
49	Lot 9	141	68	1995	Property	Andacollo
50	Lot 34	194	97	1995	Property	Andacollo
51	Lot 6	118	57	1995	Property	Andacollo
52	Lot and House	128	62	1995	Property	Andacollo
53	Lot	190	95	1995	Property	Andacollo
54	Lot 5	114	55	1995	Property	Andacollo

55	Lot and House	424	275	1995	Property	Andacollo
56	Lot 17	462	294	1995	Property	Andacollo
57	Lot 10	450	288	1995	Property	Andacollo
58	Lot 15	434	280	1995	Property	Andacollo
59	Lot 16	149	77	1996	Property	Andacollo
60	Lot 27	186	100	1996	Property	Andacollo
61	Lot 7	144	75	1996	Property	Andacollo
62	Real Estate	211	119	1997	Property	Andacollo
63	Lot C-5	410	282	1998	Property	Andacollo
64	Lot 1	64	22	1998	Property	Andacollo
65	Lot 1-A and 1-B	468	311	1998	Property	Andacollo
66	Lot 14	320	277	2000	Property	Andacollo
67	Lot 14	336	289	2000	Property	Andacollo
68	Lot N° 2	137	66	1995	Property	Andacollo
69	Lot N° 3	157	76	1995	Property	Andacollo

## **ANNEX 3.2.**

### **OBSERVATIONS AND COMMENTS REGARDING REAL ESTATES.**

The properties subject to mortgages and/or encumbrances are the following<sup>23</sup>:

1. Lot N° 2, registered under page 100, No. 67, at the PReg of the CBR of Andacollo corresponding to the year 1994, subject to an occupation easement, registered under page 1, No. 1 of the MReg of the CBR of Andacollo corresponding to the year 1995.
2. El Toro, registered under page 102 No. 68, at the PReg of the CBR of Andacollo corresponding to the year 1994, subject to an occupation easement in favour of Empresa Eléctrica Emec S.A, registered under page 16, No. 5 of the MReg of the CBR of Andacollo corresponding to the year 1996.
3. Lot No. 11 and 12, registered under page 104 No. 69, at the PReg of the CBR of Andacollo corresponding to the year 1994, subject to a) an occupation easement, registered under page 1, No. 1 of the MReg of the CBR of Andacollo corresponding to the year 1995; and b) a perpetual and free aqueduct easement, registered under page 26, No. 10 of the MReg of the CBR of Andacollo corresponding to the year 2002.
4. C-1 real estate, registered under page 114 No. 73, at the PReg of the CBR of Andacollo corresponding to the year 1994, subject to an occupation easement in favour of Empresa Eléctrica Emec S.A, registered under page 16, No. 5 of the MReg of the CBR of Andacollo corresponding to the year 1996.
5. El Rincón real estate, registered under page 153 No. 91, at the PReg of the CBR of Andacollo corresponding to the year 1994, subject to an occupation easement, registered under page 1, No. 1 of the MReg of the CBR of Andacollo corresponding to the year 1995.
6. Lot No. 5, registered under page 138 No. 84, at the PReg of the CBR of Andacollo corresponding to the year 1994, subject to an occupation easement, registered under page 1, No. 1 of the MReg of the CBR of Andacollo corresponding to the year 1995.
7. Lot No. 3, registered under page 107 No. 70, at the PReg of the CBR of Andacollo corresponding to the year 1994, subject to an occupation easement, registered under page 1, No. 1 of the MReg of the CBR of Andacollo corresponding to the year 1995.
8. Lot No. 6, registered under page 109 No. 71, at the PReg of the CBR of Andacollo corresponding to the year 1994, subject to an occupation easement, registered under page 1, No. 1 of the MReg of the CBR of Andacollo corresponding to the year 1995.
9. Finca Quebrada La Arenilluda, registered under page 380 No. 273, at the PReg of the CBR of Andacollo corresponding to the year 1994, subject to a perpetual and aqueduct easement, registered under page 26, No. 10 of the MReg of the CBR of Andacollo corresponding to the year 2002.
10. Lots 1-A and 1-B, registered under page 98 back, No. 66, at the PReg of the CBR of Andacollo corresponding to the year 1994, subject to an occupation easement, registered under page 1, No. 1 of the MReg of the CBR of Andacollo corresponding to the year 1995.

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<sup>23</sup> Additional information regarding the beneficiaries of the mortgages and/or encumbrances was not available for us.

11. Lots No. 10-a and 10-b; 7, 13, 15, 16, 17; and 18, 19 and 20, registered under page 78 No. 52, at the PReg of the CBR of Andacollo corresponding to the year 1994, subject to: a) an occupation easement, registered under page 1, No. 1 of the MReg of the CBR of Andacollo corresponding to the year 1995 (only Lot No. 7); and b) a perpetual and free aqueduct easement, registered under page 26, No. 10 of the MReg of the CBR of Andacollo corresponding to the year 2002 (only Lots 10-A, 16, 17 and 7).

12. Lot No. 13, registered under page 327 No. 282, at the PReg of the CBR of Andacollo corresponding to the year 2000, subject to a mining occupation easement, registered under page 276, No. 64 of the MReg of the CBM of Andacollo corresponding to the year 1996.

13. Real Estate, registered under page 324 No. 280, at the PReg of the CBR of Andacollo corresponding to the year 2000, subject to: a) a mining occupation easement, registered under page 273, No. 63 of the MReg of the CBM of Andacollo corresponding to the year 1996; b) a mortgage, registered under page 3403, No.1273, MReg of the CBR of Coquimbo corresponding to the year 1993; and c) a promissory purchase agreement, registered under page 3.405, No. 1274, MReg of the CBR of Coquimbo corresponding to the year 1993.

14. Mining Processing Plant named El Gomer, registered under page 248 No. 238, at the PReg of the CBR of Andacollo corresponding to the year 2007, subject to a mining occupation easement in favour of CMD, registered under page 1, No. 1 of the MReg of the CBM of Andacollo corresponding to the year 1999.

15. Lot A, registered under page 136 No. 83, at the PReg of the CBR of Andacollo corresponding to the year 1994, subject to a mortgage registered under page 20, No. 7, of the MReg of the CBM of Andacollo corresponding to the year 1994.

Properties subject to prohibitions are as follows<sup>24</sup>:

1. Lot A, registered under page 136 No. 83, at the PReg of the CBR of Andacollo corresponding to the year 1994, subject to a prohibition registered under page 150, No. 133, Prohibitions and Interdictions Registry of the CBR of Andacollo corresponding to the year 1994.

2. Lot No. 27, registered under page 186 No. 100, at the PReg of the CBR of Andacollo corresponding to the year 1996, is subject to a prohibition as regards to change of the land use, registered under page 2729, No. 1083, Prohibitions and Interdictions Registry of the CBR of Coquimbo, corresponding to the year 1993.

3. Lot No. 7, registered under page 144 No. 75, at the PReg of the CBR of Andacollo corresponding to the year 1996, subject to a prohibition as regards to change of the land use, registered under page 2728, No. 1082, Prohibitions and Interdictions Registry of the CBR of Coquimbo, corresponding to the year 1993.

4. Real estate, registered under page 324 No. 280, at the PReg of the CBR of Andacollo corresponding to the year 2000, subject to a prohibition registered under page 4176, No. 1401, Prohibitions and Interdictions Registry of the CBR of Coquimbo, corresponding to the year 1993.

5. Lot No. 4, registered under page 69 No. 32, at the PReg of the CBR of Andacollo corresponding to the year 1995, subject to a prohibition as regards to change of the land use, registered under Page 11, No. 6, Prohibitions and Interdictions Registry of the CBR of Coquimbo, corresponding to the year 1995.

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<sup>24</sup> Additional information regarding the beneficiaries of the following prohibitions was not available.

# Appendix D

**Listing of Drilling Results Received After  
Resource Statement Date**



## Exploration holes drilled subsequent to resource update

Area	Hole ID	Northing mN	Easting mE	mRL	Azimuth	Dip	From m	To m	Intercept m	Au g/t	From m	To m	Intercept m	Cu ppm
Socorro	DDH-2011-122	2569.7	6496.6	1118.6	0.0	-86.9	4	7	3	0.31				
							9	11	2	0.32				
							67	71	4	0.21				
							149	157	8	0.21				
Floridor	DDH-2011-133	1760.6	5803.4	1170.1	323.1	-89.8	54	70	16	0.96				
							93	101	8	0.24				
							173	174	1	1.82				
Socorro	DDH-2011-146	2229.0	6015.5	1159.5	139.9	-89.5	59	60	1	0.50				
							162	168	6	0.63				
							220	228	8	0.31				
Socorro	DDH-2011-117	2500.2	6262.0	1132.2	0.0	-86.8	53	57	4	0.71				
							81	83	2	0.80				
							108	111	3	0.90				
							118	121	3	0.39				
Floridor	DDH-2011-169	1510.0	5832.6	1140.2	267.9	-64.6	5	16	11	0.53				
							41	44	3	0.20				
							50	52	2	0.47				
							60	78	18	1.14				
Floridor	DDH-2011-175	1461.3	5797.0	1160.1	56.3	-89.6	69	86	17	1.11				
Las Loas	DDH-2012-10	6531.3	7697.1	979.9	42.8	-60.2	26.4	28.6	2.2	0.43				
							37.4	58	20.6	0.83				
							81.3	93.5	12.2	0.92				
Las Loas	DDH-2012-11	6554.7	7725.8	970.1	40.5	-65.4	32.5	35.5	3	0.29				
							77	78.6	1.6	0.68				
							99	101	2	4.42				

# Appendix E

## Reconciliation Memorandum

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Compañía Minera Dayton

RECONCILIATION OF RESOURCE  
MODELS TO ACTUAL PRODUCTION  
January 2011 to February 2012

26<sup>th</sup> March 2012

Author

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Lachlan Star Limited

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## 1.0 SUMMARY

Resource updates were estimated for the Toro and Tres Perlas (including Churrumata, Natalia and El Sauce) resources in December 2011 and January 2012 respectively. The resources for Las Loas and Chisperos were estimated in January and February 2011.

This memorandum details the comparison between the current resource models and the mined production over the timeframe that the resource model is valid (i.e. the date of the topographic surface that was used to constrain the resource model).

In general the updated resource models have improved the reconciliation between actual production and that estimated in the resource models. Table 1.1 compares ore tonnage and contained gold from production to the Indicated and Inferred Mineral Resource, with modifying parameters for dilution and recovery applied.

Table 1.1 – Comparison of current resource (including Inferred) estimates with mined production

Area	Comparison Period		Ore mined kt	Resource (Ind+Inf) kt	Variance %	Au mined oz	Resource (Ind+Inf) oz	Variance %
	From	To						
Churrumata	1/01/12	29/02/12	155	165	-6%	2,613	2,599	1%
Toro	1/01/12	29/02/12	210	182	16%	3,628	3,755	-3%
Las Loas	1/01/11	29/02/12	578	752	-23%	12,153	14,965	-19%
Chisperos	1/06/11	29/02/12	141	82	72%	2,538	1,681	51%

The comparison for both Churrumata and Toro for contained gold was close to the quantity of contained gold actually mined. The Churrumata resource overestimated the ore tonnage by 6%, whilst the Toro resource tonnage was underestimated by 16%.

Las Loas resulted in a negative reconciliation for both ore tonnage and contained gold, with 23% reduction between the Indicated and Inferred Resource to ore mined with a corresponding 19% reduction in contained Au from the Indicated and Inferred Resource to that actually mined.

Chisperos outperformed the Indicated and Inferred Resource by 72% on tonnage and 51% in contained gold between June 2011 and February 2012.

## 2.0 MINE PRODUCTION

Table 1.1 summarises the production for the CMD Gold Mine between January 2011 and February 2012. Complete detail of the monthly production is shown in Table 2.2, but is summarised figures 1.1, 1.2 and 1.3.

Table 2.1 – CMD Mine Production since ownership (Jan-11 to Feb-12)

Area	Ore kt	Au g/t	Au oz	Waste kt	Total kt	Strip Ratio
Las Loas	636	0.66	13,515	4,914	5,550	7.7
Tres Perlas	487	0.49	7,702	1,616	2,103	3.3
Churrumata	1,035	0.55	18,275	3,964	4,999	3.8
Chisperos	141	0.56	2,538	2,191	2,332	15.5
Toro	939	0.59	17,934	2,899	3,839	3.1
Tailings	46	0.84	1,252	-	46	-
<b>Total</b>	<b>3,284</b>	<b>0.58</b>	<b>61,216</b>	<b>15,585</b>	<b>18,869</b>	<b>4.7</b>

Figure 2.1 – Ore produced and average grade

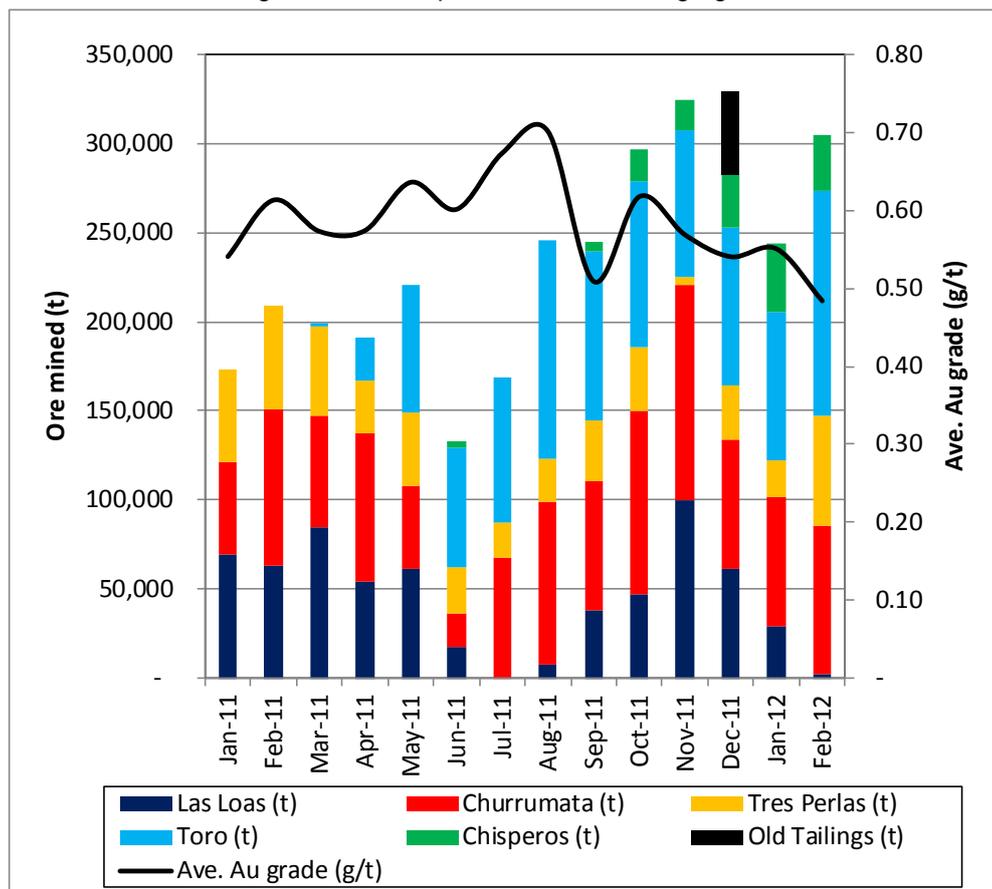


Figure 2.2 – Contained gold added to the leach pads

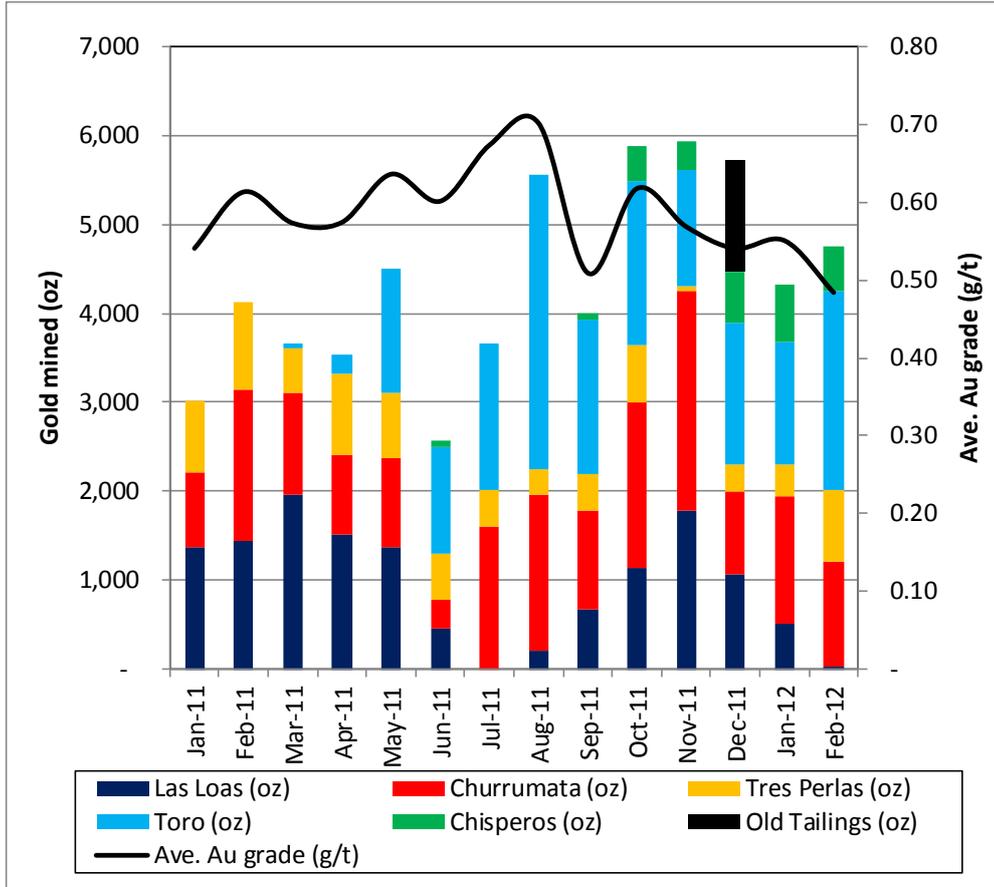


Figure 2.3 – Material movement and strip ratio

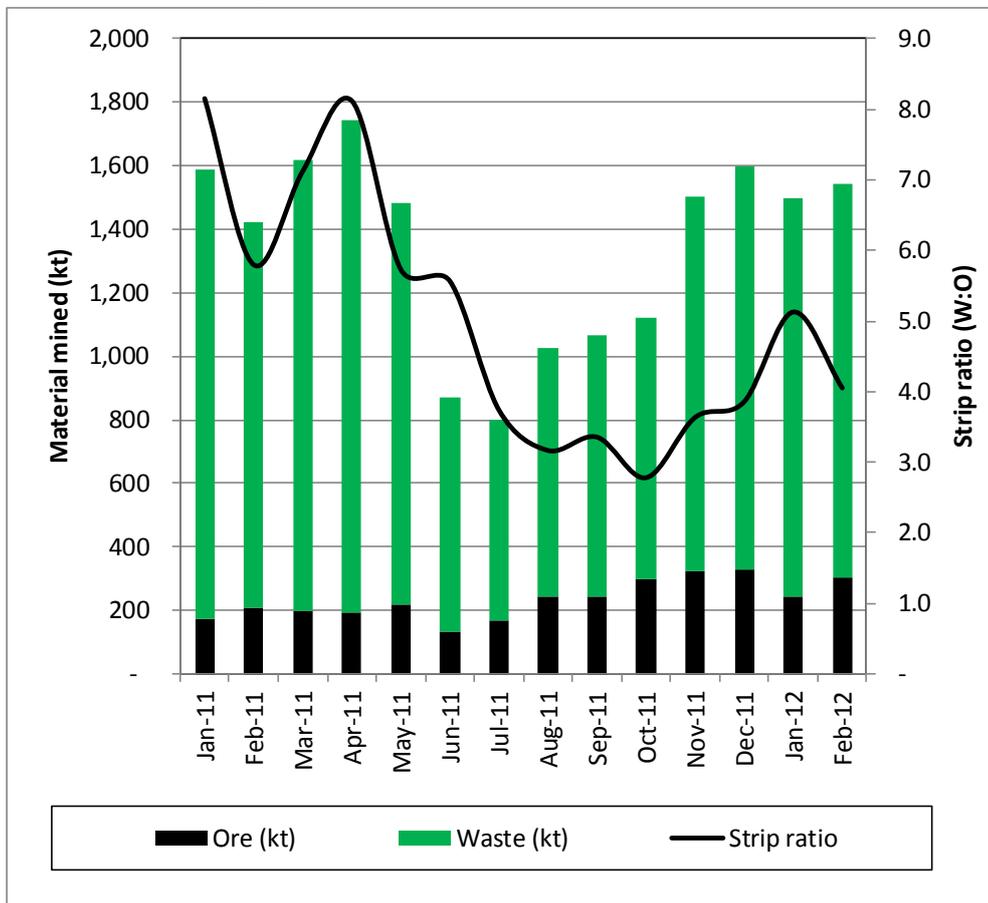


Table 2.2 – CMD Gold Mine Production Statistics January 2011 until February 2012

		Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Total
<b>Churrumata Phase-4</b>	Ore dmt	51,993	87,406	62,714	82,875	47,087	18,884	67,873	91,302	73,282	103,628	120,645	72,037.40	71,976.69	83,008.24	1,034,710
	Au g/t	0.49	0.61	0.57	0.34	0.66	0.54	0.74	0.60	0.48	0.56	0.64	0.41	0.62	0.44	0.55
	Au oz	827	1,703	1,146	901	999	328	1,610	1,767	1,119	1,854	2,467	940	1,442	1,171	18,275
	Waste dmt	307,679	363,419	427,354	401,889	353,885	276,492	286,514	300,069	295,920	198,849	208,234	251,270	131,443	161,109	3,964,126
	Total dmt	359,673	450,825	490,067	484,765	400,972	295,376	354,387	391,371	369,202	302,477	328,878	323,307	203,420	244,117	4,998,836
	S.R.	5.92	4.16	6.81	4.85	7.52	14.64	4.22	3.29	4.04	1.92	1.73	3.49	1.83	1.94	3.83
<b>Tres Perlas Fase-4</b>	Ore dmt	51,766	58,093	49,994	29,797	40,596	25,992	19,085	24,276	33,678	35,228	4,775	30,717	21,007	61,915	486,918
	Au g/t	0.49	0.52	0.31	0.94	0.57	0.61	0.66	0.35	0.38	0.58	0.37	0.30	0.53	0.40	0.49
	Au oz	810	976	502	905	740	510	405	272	410	656	57	298	357	805	7,702
	Waste dmt	217,411	151,039	151,764	129,462	144,776	63,481	64,494	68,622	60,658	32,045	14,022	23,709	243,989	250,331	1,615,803
	Total dmt	269,177	209,132	201,758	159,259	185,372	89,472	83,579	92,898	94,336	67,273	18,797	54,427	264,997	312,245	2,102,722
	S.R.	4.20	2.60	3.04	4.34	3.57	2.44	3.38	2.83	1.80	0.91	2.94	0.77	11.61	4.04	3.32
<b>Chisperos</b>	Ore dmt	-	-	-	-	-	3,230	-	-	4,917	17,690	16,261	29,801	38,291	31,220	141,410
	Au g/t	-	-	-	-	-	0.69	-	-	0.41	0.69	0.59	0.60	0.51	0.49	0.56
	Au oz	-	-	-	-	-	71	-	-	66	392	310	576	633	490	2,538
	Waste dmt	-	-	-	-	-	89,252	-	-	32,965	220,321	422,010	521,951	430,051	474,173	2,190,723
	Total dmt	-	-	-	-	-	92,482	-	-	37,882	238,011	438,271	551,752	468,343	505,393	2,332,133
	S.R.	-	-	-	-	-	27.63	-	-	6.70	12.45	25.95	17.51	11.23	15.19	15.49
<b>Toro</b>	Ore dmt	-	-	1,933	23,936	71,731	67,021	82,163	122,931	95,126	93,161	82,461	88,520	83,508	126,791	939,282
	Au g/t	-	-	0.87	0.27	0.61	0.56	0.62	0.84	0.57	0.62	0.49	0.56	0.52	0.55	0.59
	Au oz	-	-	54	209	1,404	1,199	1,646	3,311	1,741	1,845	1,309	1,587	1,385	2,243	17,934
	Waste dmt	-	-	21,465	247,652	245,331	172,547	281,185	384,792	209,641	152,136	288,444	222,330	347,805	326,081	2,899,409
	Total dmt	-	-	23,398	271,588	317,063	239,568	363,348	507,724	304,767	245,296	370,905	310,850	431,313	452,871	3,838,691
	S.R.	-	-	11.10	10.35	3.42	2.57	3.42	3.13	2.20	1.63	3.50	2.51	4.16	2.57	3.09
<b>Las Loas</b>	Ore dmt	69,620	63,480	84,256	54,533	61,180	17,674	-	7,649	37,683	46,717.30	100,051	61,439	29,220	2,067	635,570
	Au g/t	0.62	0.71	0.72	0.86	0.70	0.81	-	0.82	0.55	0.76	0.55	0.54	0.54	0.54	0.66
	Au oz	1,377	1,441	1,963	1,513	1,368	459	-	201	668	1,139	1,784	1,063	503	36	13,515
	Waste dmt	887,889	696,794	815,846	772,529	519,487	137,055	-	25,993	221,695	220,876	245,603	249,221	97,671	23,811	4,914,470
	Total dmt	957,509	760,274	900,102	827,061	580,667	154,729	-	33,642	259,379	267,594	345,654	310,660	126,891	25,879	5,550,040
	S.R.	12.75	10.98	9.68	14.17	8.49	7.75	-	3.40	5.88	4.73	2.45	4.06	3.34	11.52	7.73
<b>Tailings Resource mined</b>	Ore dmt												46,360			46,360
	Au g/t												0.84			0.84
	Au oz												1,252			1,252
	Waste dmt												-			-
	Total dmt												46,360			46,360
	S.R.											-			-	
<b>Total Mine Extraction 2011 Hard Rock</b>	Ore dmt	173,379	208,979	198,896	191,141	220,594	132,800	169,121	246,159	244,686	296,424	324,193	328,874	244,003	305,001	3,284,250
	Au g/t	0.54	0.61	0.57	0.57	0.64	0.60	0.67	0.70	0.51	0.62	0.57	0.54	0.55	0.48	0.58
	Au oz	3,014	4,120	3,665	3,528	4,511	2,567	3,661	5,551	4,004	5,886	5,927	5,715	4,320	4,745	61,216
	Waste dmt	1,412,979	1,211,252	1,416,428	1,551,532	1,263,480	738,827	632,193	779,475	820,880	824,227	1,178,312	1,268,482	1,250,960	1,235,505	15,584,532
	Total dmt	1,586,358	1,420,231	1,615,324	1,742,673	1,484,074	871,627	801,314	1,025,634	1,065,566	1,120,651	1,502,505	1,597,356	1,494,963	1,540,506	18,868,782
	S.R.	8.15	5.80	7.12	8.12	5.73	5.56	3.74	3.17	3.35	2.78	3.63	3.86	5.13	4.05	4.75

### 3.0 RECONCILIATION OF RESOURCE MODELS

Coffey Mining completed a resource update for the Toro area in December 2011 and Tres Perlas and Churrumata areas in January 2012. Earlier resource estimates for Las Loas and Chisperos, completed in January and June 2011 respectively.

The reconciliation documented in this section was compared to actual CMD Mine production over the period that the model was valid, and so varied depending on the update status of the latest resource model. Generally, the updated resource models for the Toro and Tres Perlas areas appear to have resulted in better reconciliation. This is principally a result of more drilling, but also a change in estimation techniques with the inclusion of a resource cut-off grade of 0.15g/t, compared to 0.3g/t previously used, which provided a better estimate of the bulk, low grade mineralisation typically encountered the the CMD Mine.

#### 3.1 Tres Perlas Reconciliation

At the time of writing this report, mining had not commenced at the Tres Perlas Pit, and so it was not possible to reconcile production to the new Tres Perlas resource model.

#### 3.2 Churrumata Reconciliation

Resource modeling for the Churrumata Pit was included in the Tres Perlas resource model, which covered the entire eastern area of the CMD Gold Mine, and was modeled in January 2012. Table 1.3 details the comparison between the model and mined production for the Churrumata Pit between January 2012 and February 2012.

Table 3.1 – Churrumata Reconciliation (Jan 2012 to Feb 2012)

Item	Ore kt	Au g/t	Au oz	Waste kt	Strip Ratio
Mined Production	155	0.52	2,613	293	1.9
Probable Reserve	144	0.51	2,367	334	2.3
Mine Inventory (incl. inferred resource)	165	0.49	2,599	314	1.9

The Probable Reserve and inventory included modifying factors of 20% for dilution and 4% ore mining losses, and was reported above a cut off of 0.28g/t Au. Using these parameters, the mine inventory, which included the Indicated and Inferred Mineral Resource over the same benches as those actually mined, provided a very close reconciliation with the actual production.

During the December 2011 half year, 83% of the mine production from Churrumata was from outside the Indicated and Inferred Mineral Resource. With the January 2012 update, the entire mine production in January and February 2012 was contained in the Mine Inventory (or Indicated and Inferred Mineral Resource).

### 3.3 Toro

Table 1.5 details the comparison of Toro production with the Coffey December 2011 resource model.

Table 3.2- Toro Reconciliation (Jan 2012 to Feb 2012)

Item	Ore kt	Au g/t	Au oz	Waste kt	Strip Ratio
Mined Production	210	0.54	3,628	674	3.2
Probable Reserve	139	0.72	3,228	768	5.5
Mine Inventory (incl inferred resource)	182	0.64	3,755	725	4.0

Modifying parameters used for the resource to reserve and mine inventory were 10% for dilution and ore mining losses of 4%, which were considered appropriate for the style of mineralisation at Toro. The probable reserve and inventory was reported above a cut off of 0.28g/t Au. Production over the period totalled 210kt at 0.54g/t, whilst the inventory estimate contained 182kt at 0.64g/t.

It appears that the contained metal within the Toro Resource is close to that actually mined. Further evaluation is required to determine if the model is over-estimating grade, or in fact greater dilution is being incurred in mining.

In general however, the resource is far more representative of what has been mined at Toro. In the December 2011 half year, 44% of the total Toro ore tonnage was mined from outside the Toro Indicated and Inferred Resource. This compares with just 16% of the total Toro production being sourced from outside the mine inventory (or Indicated and Inferred Resource) in January and February 2012.

### 3.4 Las Loas Reconciliation

Table 1.2 details the reconciliation of the Coffey resource against recorded production from the Las Loas pit, and covers mining between February 2011 and February 2012.

Table 3.3 – Las Loas Reconciliation (Feb 2011 to Feb 2012)

Item	Ore kt	Au g/t	Au oz	Waste kt	Strip Ratio
Mined Production	578	0.65	12,153	4,027	7.0
Probable Reserve	733	0.61	14,379	3,971	5.4
Mine Inventory (incl inferred resource)	752	0.62	14,965	3,952	5.3

The Probable Reserve and inventory included modifying factors of 30% for dilution and a 5% mining loss, and was reported above a cut off of 0.34g/t Au. Actual mined production was 578kt at 0.65g/t, against the probable reserve estimate for the same benches of 733kt at 0.61g/t. Whilst total material was similar for the Probable Reserve, the reserve overestimated total ore mined by 21% and total contained gold by 15%, with a corresponding improvement in strip ratio.

In general the Las Loas resource model appears to overestimate ore tonnage whilst being a little conservative on gold grade, with the net effect of overestimating contained metal.

### 3.5 Chisperos Reconciliation

The Chisperos resource estimate was completed in February 2011, and mining commenced in June 2011. The Chisperos resource was estimated above a cut-off grade of 0.3g/t.

To date, mining at Chisperos has been a waste pre-stripping operation, with a total of 2.1Mt of waste removed Between 1 June 2011 and 29 February 2012, with only 141kt of ore, a strip ratio of 15.5 to 1. Table 3.4 summarises production, Probable Reserve and a mine inventory estimate over this time, and included modifying parameters of 10% dilution at zero grade, mining losses of 4% applied to contained gold, and reported above a cut off of 0.28g/t Au.

Table 3.4 – Chisperos Reconciliation (June 2011 to Feb 2012)

Item	Ore kt	Au g/t	Au oz	Waste kt	Strip Ratio
Mined Production	141	0.56	2,538	2,191	15
Probable Reserve	11	0.61	220	2,248	200
Mine Inventory (incl inferred resource)	82	0.64	1,681	2,177	26

72% of the mine ore tonnage of 141kt was sourced from outside the mine inventory, which in part is due to the proportion of Inferred Mineral Resource mined. The spatial relationship of the mineralisation and drilling that had been completed prior to the estimation resulted in a significant proportion of the resource close to surface being included in the inferred category. This is reflected in the low conversion to Probable Reserve in Table 3.4, and is significant in the relatively poor reconciliation between ore production and the estimate. This is illustrated in Figure 3.1.

Figure 3.1 – Chisperos Section through 2825mN, looking north

