

**ANNUAL INFORMATION FORM**  
FOR THE FISCAL YEAR ENDED  
OCTOBER 31, 2012



Suite 2300 – 1177 West Hastings Street  
Vancouver, British Columbia  
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January 28, 2013

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## PRELIMINARY NOTES

### Documents Incorporated by Reference

Incorporated by reference into this Annual Information Form (“AIF”) are the following documents:

- (a) Consolidated Audited Financial Statements of the Company for the year ended October 31, 2012;
- (b) Management Discussion and Analysis of the Company for the year ended October 31, 2012 dated January 28, 2013 (“MD&A”);
- (c) Management Information Circular dated August 17, 2012 in respect of the 2012 Annual General Meeting (“Information Circular”);
- (d) Technical report dated November 6, 2012, effective September 20, 2012, entitled “Technical Report, Prefeasibility Study of the Carbon Creek Coal Property, British Columbia, Canada” prepared by Norwest Corporation (the “Carbon Creek Report”); and
- (e) Technical report dated January 14, 2013, effective January 14, 2013, entitled “Mineral Resource Estimate for the Sheini Hills Iron Project, Ghana” prepared by SRK Consulting (UK) Limited (the “Sheini Report”);

copies of which may be obtained online from SEDAR at [www.sedar.com](http://www.sedar.com).

All financial information in this AIF have been prepared in accordance with International Financial Reporting Standards (“IFRS”).

### Date of Information

All information in this AIF is as of October 31, 2012 unless otherwise indicated.

### Currency and Exchange Rates

All dollar amounts in this AIF are expressed in Canadian dollars unless otherwise indicated. The Company’s accounts are maintained in Canadian dollars and the Company’s financial statements are prepared in accordance with IFRS. All references to “U.S. dollars”, “USD” or to “US\$” are to U.S. dollars, to “MXP” are to Mexican pesos, to “ARS” are to Argentinean pesos, to “PEN” are to Peruvian nuevo soles and to CHS are to Ghanaian cedis.

The following table sets forth the rate of exchange for the Canadian dollar, expressed in United States dollars in effect at the end of the periods indicated, the average of exchange rates in effect on the last day of each month during such periods, and the high and low exchange rates during such periods based on the noon rate of exchange as reported by the Bank of Canada for conversion of Canadian dollars into United States dollars.

Canadian Dollars to U.S. Dollars	Year Ended October 31		
	2012	2011	2010
Rate at end of period	USD 1.0004	USD 1.0065	USD 0.9784
Average rate for period	USD 0.9961	USD 1.0139	USD 0.9636
High for period	USD 1.0299	USD 1.0583	USD 1.0039
Low for period	USD 0.9536	USD 0.9430	USD 0.9278

## Metric Equivalents

For ease of reference, the following factors for converting Imperial measurements into metric equivalents are provided:

To convert from Imperial	To metric	Multiply by
Acres	Hectares	0.404686
Feet	Metres	0.30480
Miles	Kilometres	1.609344
Tons	Tonnes	0.907185
Ounces (troy)/ton	Grams/Tonne	34.2857

1 mile = 1.609 kilometres

2000 pounds (1 short ton) = 0.907 tonnes

1 acre = 0.405 hectares

1 ounce (troy) = 31.103 grams

2,204.62 pounds = 1 metric ton = 1 tonne

1 ounce (troy)/ton = 34.2857 grams/tonne

Terms used and not defined in this AIF that are defined in National Instrument 51-102 “Continuous Disclosure Obligations” shall bear that definition. Other definitions are set out in National Instrument 14-101 “Definitions”.

## Forward-Looking Statements

This AIF contains forward-looking statements and forward-looking information (collectively, “forward-looking statements”) within the meaning of applicable Canadian and US securities legislation. These statements relate to future events or the future activities or performance of the Company. All statements, other than statements of historical fact, are forward-looking statements. Information concerning mineral resource estimates and the economic analysis thereof contained in preliminary economic analyses or prefeasibility studies also may be deemed to be forward-looking statements in that they reflect a prediction of the mineralization that would be encountered if a mineral deposit were developed and mined. Forward-looking statements are typically identified by words such as: believe, expect, anticipate, intend, estimate, postulate, plans and similar expressions, or which by their nature refer to future events. These forward-looking statements include, but are not limited to, statements concerning:

- the Company’s strategies and objectives, both generally and specifically in respect of Carbon Creek and Sheini;
- the potential for a production decision to be made at Sheini for either or both of the ironstone ridges or ferricrete/detrital deposits, the potential commencement of any development of a mine at Sheini following a production decision, the potential for any mining of or production from Sheini, the potential for any ferricrete/detrital deposits to be mined first and without any blasting or open-pit preparation, the potential for the ferricrete/detrital deposits to be mined by equipment such as open bowl scrapers and for any such production carried out in this way to provide significant operational savings and the potential for any non-iron material to be easily removed during beneficiation of ferricrete/detrital mineralization;
- the anticipated timing of the completion of the feasibility study for the Carbon Creek project;
- the potential exercise of the option to acquire the 4 coal licenses forming part of the Carbon Creek project, the potential for a production decision to be made concerning Carbon Creek, the potential

commencement of any development of a mine at Carbon Creek following a production decision and the potential for any production from the Carbon Creek deposit, whether by 2014 or at all;

- the timing of decisions regarding the timing and costs of exploration programs with respect to, and the issuance of the necessary permits and authorizations required for, the Company's ongoing exploration programs on its properties;
- the Company's estimates of the quality and quantity of the resources and reserves at its mineral properties;
- the timing and cost of the planned future exploration programs at Sheini and Carbon Creek and the timing of the receipt of results therefrom;
- general business and economic conditions;
- the Company's ability to meet its financial obligations as they come due, and to be able to raise the necessary funds to continue operations including, without limitation to complete a planned loan with Sprott Resource Lending Partnership; and
- the Company's ability to negotiate acceptable option/joint venture agreements for some or all of its "non-core" properties.

Although the Company believes that such statements are reasonable, it can give no assurance that such expectations will prove to be correct. Inherent in forward-looking statements are risks and uncertainties beyond the Company's ability to predict or control, including, but not limited to, risks related to the Company's inability to identify one or more economic deposits on its properties, variations in the nature, quality and quantity of any mineral deposits that may be located, variations in the market price of any mineral products the Company may produce or plan to produce, the Company's inability to obtain any necessary permits, consents or authorizations required for its activities, to produce minerals from its properties successfully or profitably, to continue its projected growth, to raise the necessary capital or to be fully able to implement its business strategies, and other risks identified herein under "Risk Factors". The Company cautions investors that any forward-looking statements by the Company are not guarantees of future performance, and that actual results are likely to differ, and may differ materially, from those expressed or implied by forward-looking statements contained in this AIF. Such statements are based on a number of assumptions which may prove incorrect, including, but not limited to, assumptions about:

- the Company's future cash requirements, and the ability of the Company to raise the funding necessary to carry out its planned work programs and meet its general and administrative expenses for the remainder of the fiscal year ending October 31, 2013;
- the level and volatility of the price of commodities, and iron ore and coal in particular;
- general business and economic conditions;
- the timing of the receipt of regulatory and governmental approvals, permits and authorizations necessary to implement and carry on the Company's planned exploration programs, particularly at Sheini and Carbon Creek;
- conditions in the financial markets generally;

- the Company's ability to secure the necessary consulting, drilling and related services and supplies on favourable terms in connection with its ongoing and planned exploration programs;
- the Company's ability to attract and retain key staff;
- the accuracy of the Company's resource/reserve estimates (including with respect to size and grade) and the geological, operational and price assumptions on which these are based;
- the timing of the ability to commence and complete the planned work at Sheini and Carbon Creek;
- the anticipated terms of the consents, permits and authorizations necessary to carry out the planned exploration programs at the Company's properties and the Company's ability to comply with such terms on a safe and cost-effective basis;
- the ongoing relations of the Company with its underlying optionors/lessors, its joint venture partners, the applicable regulatory agencies, First Nations in British Columbia and indigenous groups in other countries;
- that the metallurgy and recovery characteristics of samples from certain of the Company's mineral properties are reflective of the deposit as a whole;
- the Company's ability to negotiate and enter into appropriate off-take agreements for the potential products from Carbon Creek; and
- the Company's ability to overcome any potential difficulties in adapting pilot scale operations and testing to commercial scale operations.

In addition, in carrying out the pre-feasibility study with respect to Carbon Creek, as described under "Narrative Description of the Business - Material Mineral Projects – Carbon Creek Metallurgical Coal Deposit, British Columbia, Canada", a number of assumptions have been made which are more particularly described in that section. Also, in preparing the resource estimate for Sheini, as described under "Narrative Description of the Business - Material Mineral Projects – Sheini Hills Iron Ore Project, Ghana", a number of assumptions have been made which are more particularly described in that section.

These forward-looking statements are made as of the date hereof and the Company does not intend and does not assume any obligation to update these forward-looking statements, except as required by applicable law. For the reasons set forth above, investors should not attribute undue certainty to or place undue reliance on forward-looking statements.

#### **Caution Regarding Adjacent or Similar Mineral Properties**

This AIF contains information with respect to adjacent or similar mineral properties in respect of which the Company has no interest or rights to explore or mine. The Company advises US investors that the mining guidelines of the US Securities and Exchange Commission (the "SEC") set forth in the SEC's Industry Guide 7 ("SEC Industry Guide 7") strictly prohibit information of this type in documents filed with the SEC. Because Cardero meets the definition of a "foreign private issuer" under applicable SEC rules and is preparing this AIF pursuant to Canadian disclosure requirements this AIF is not subject to the requirements of SEC Industry Guide 7. Readers are cautioned that the Company has no interest in or right to acquire any interest in any such properties, and that mineral deposits on adjacent or similar properties are not indicative of mineral deposits on the Company's properties.

### **Caution Regarding Reference to Resources and Reserves**

National Instrument 43-101 Standards of Disclosure of Mineral Projects (“NI 43-101”) is a rule developed by the Canadian Securities Administrators which establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. Unless otherwise indicated, all reserve and resource estimates contained in or incorporated by reference in this AIF have been prepared in accordance with NI 43-101 and the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum (the “CIM”) Standards on Mineral Resource and Mineral Reserves, adopted by the CIM Council on November 14, 2004 (the “CIM Standards”) as they may be amended from time to time by the CIM and, with respect to coal, in the Geological Survey of Canada Paper 88-21 entitled “A Standardized Coal Resource/Reserve Reporting System for Canada” originally published in 1988.

The terms “mineral reserve”, “proven mineral reserve” and “probable mineral reserve” are Canadian mining terms as defined in accordance with NI 43-101 and the CIM Standards. These definitions differ from the definitions in SEC Industry Guide 7. The SEC has taken the position that mineral reserves for a mineral property may not be designated unless: (i) competent professional engineers conduct a detailed engineering and economic study, and the “bankable” or “final” feasibility study demonstrates that a mineral deposit can be mined profitably at a commercial rate; (ii) a historic three-year average commodity price is used in any reserve or cash flow analysis used to designate reserves; and (iii) the company has demonstrated that the mineral property will receive its governmental permits, and the primary environmental document has been filed with the appropriate governmental authorities.

In addition, the terms “mineral resource”, “measured mineral resource”, “indicated mineral resource” and “inferred mineral resource” are defined in and required to be disclosed by NI 43-101 and the CIM Standards; however, these terms are not defined terms under SEC Industry Guide 7 and are normally not permitted to be used in reports and registration statements filed with the SEC. Investors are cautioned not to assume that any part or all of mineral deposits in these categories will ever be converted into reserves. “Inferred mineral resources” have a great amount of uncertainty as to their existence, and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian rules, estimates of inferred mineral resources may not form the basis of feasibility or pre-feasibility studies, except in rare cases. Investors are cautioned not to assume that all or any part of an inferred mineral resource exists or is economically or legally mineable. Disclosure of “contained ounces” in a resource is permitted disclosure under Canadian regulations; however, the SEC normally only permits issuers to report mineralization that does not constitute “reserves” by SEC Industry Guide 7 standards as in place tonnage and grade without reference to unit measures.

Accordingly, information contained in this AIF and the documents incorporated by reference herein contain descriptions of the Company’s mineral deposits that may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

### **Caution Regarding Historical Results**

Historical results of operations and trends that may be inferred from the discussion and analysis in this AIF may not necessarily indicate future results from operations. In particular, the current state of the global securities markets may cause significant reductions in the price of the Company’s securities and render it difficult or impossible for the Company to raise the funds necessary to continue operations. See “Risk Factors – Share Price Volatility”.

## Glossary of Terms

The following is a glossary of certain mining and other terms used in this AIF:

<b>“Carbon Creek”</b>	The metallurgical coal deposit located in the Peace River Coal District of northeast British Columbia, Canada in which Cardero Coal holds an interest
<b>“Cardero Argentina”</b>	Cardero Argentina, S.A., a wholly owned Argentinean subsidiary of Cardero
<b>“Cardero Chile”</b>	Compania Minera Cardero Chile Limitada, a wholly owned Chilean subsidiary of Cardero
<b>“Cardero Coal”</b>	Cardero Coal Ltd., a wholly owned British Columbia subsidiary of Cardero
<b>“Cardero Ghana”</b>	Cardero Ghana Ltd., a wholly owned Ghana subsidiary of Cardero Iron Ghana BVI
<b>“Cardero Hierro BVI”</b>	Cardero Hierro Peru (BVI) Ltd., a wholly owned British Virgin Islands subsidiary of Cardero Iron BVI
<b>“Cardero Hierro Peru”</b>	Cardero Hierro del Peru, S.A.C., a wholly owned Peruvian subsidiary of Cardero Hierro BVI
<b>“Cardero Iron”</b>	Cardero Iron Ore Company Ltd., a wholly owned British Columbia subsidiary of Cardero
<b>“Cardero Iron BVI”</b>	Cardero Iron Ore Company (BVI) Ltd., a wholly owned British Virgin Islands subsidiary of Cardero Iron
<b>“Cardero Iron Ghana”</b>	Cardero Iron Ore Ghana (BVI) Ltd., a wholly owned British Virgin Islands subsidiary of Cardero Iron BVI
<b>“Cardero Iron USA”</b>	Cardero Iron Ore (USA) Inc., a wholly owned Delaware subsidiary of Cardero Iron
<b>“Cardero Management USA”</b>	Cardero Iron Ore Management (USA) Inc., a wholly owned Delaware subsidiary of Cardero Iron
<b>“Cardero Peru”</b>	Cardero Peru, S.A.C., a wholly owned Peruvian subsidiary of Cardero
<b>“CCDL”</b>	Cerro Colorado Development Ltd., a wholly owned British Columbia subsidiary of Cardero
<b>“CIPC”</b>	Cardero Intellectual Property Corp., a wholly owned British Columbia subsidiary of Cardero
<b>“elastic”</b>	Pertaining to a rock or sediment composed principally of fragments derived from pre-existing rocks or minerals and transported some distance from their places of origin; also said of the texture of such a rock

<b>“CLL”</b>	Cardero Licensing Ltd., a wholly owned British Columbia subsidiary of Cardero
<b>“cm”</b>	Centimetres
<b>“CMTL”</b>	Cardero Materials Testing Laboratory Ltd., a wholly owned Delaware subsidiary of Cardero
<b>“Common Shares”</b>	The common shares without par value in the capital stock of Cardero as the same are constituted on the date hereof
<b>“conglomerate”</b>	A coarse grained clastic sedimentary rock, composed of rounded to sub-angular fragments larger than 2mm in diameter set in a fine-grained matrix of sand or silt, and commonly cemented by calcium carbonate, iron oxide, silica or hardened clay
<b>“CTL”</b>	Cardero Technologies Ltd., a wholly owned British Columbia subsidiary of Cardero
<b>“deformation”</b>	A general term for the processes of folding, faulting, shearing, compression, or extension of rocks as a result of various earth forces
<b>“deposit”</b>	A mineralized body which has been physically delineated by sufficient drilling, trenching, and/or underground work, and found to contain a sufficient average grade of metal or metals to warrant further exploration and/or development expenditures. Such a deposit does not qualify as a commercially mineable ore body or as containing reserves or ore, unless final legal, technical and economic factors are resolved
<b>“detrital”</b>	Pertaining to or derived from detritus, especially said of minerals occurring in sedimentary rocks which were derived from pre-existing rocks, either within or outside the basin of deposition.
<b>“diamond drill”</b>	A type of rotary drill in which the cutting is done by abrasion rather than percussion. The cutting bit is set with diamonds and is attached to the end of the long hollow rods through which water is pumped to the cutting face. The drill cuts a core of rock which is recovered in long cylindrical sections, an inch or more in diameter
<b>“dip”</b>	The angle that a stratum or any planar feature makes with the horizontal, measured perpendicular to the strike and in the vertical plane
<b>“Director”</b>	A member of the Board of Directors of Cardero
<b>“disseminated”</b>	Fine particles of mineral dispersed throughout the enclosing rock

<b>“executive officer”</b>	When used in relation to any issuer (including Cardero) means an individual who is: <ul style="list-style-type: none"><li>(a) a chair, vice chair or president;</li><li>(b) a vice-president in charge of a principal business unit, division or function, including sales, finance or production;</li><li>(c) an officer of the issuer or any of its subsidiaries that performs a policy-making function in respect of the issuer; or</li><li>(d) performing a policy-making function in respect of the issuer</li></ul>
<b>“Fe”</b>	Iron
<b>“ferricrete”</b>	A conglomerate consisting of surficial sand and gravel cemented into a hard mass by iron oxide
<b>“footwall”</b>	The mass of rock beneath a fault, orebody or mine working; especially the wall rock beneath an inclined vein or fault
<b>“FSI”</b>	“Free Swelling Index” is a measure of the tendency of a coal to swell when heated under controlled conditions. Coking coal is best if it has a very narrow range of volatility and plasticity, and this is measured by the Free Swelling Index test. Tar content, volatile content and swelling index are used to select coals for coke blending.
<b>“gangue”</b>	The valueless rock or mineral aggregates in an ore; that part of the ore that is not economically desirable but cannot be avoided in mining. It is separated from the ore minerals during concentration
<b>“grade”</b>	To contain a particular quantity of ore or mineral, relative to other constituents, in a specified quantity of rock
<b>“hanging wall”</b>	The overlying side of an orebody, fault, or mine working, especially the wall rock above an inclined vein or fault
<b>“heavy media separation”</b>	A form of gravity separation, utilizing differences in specific gravity of the materials to be separated and a fluid medium in which the separation occurs (commonly air)
<b>“hematite”</b>	A common iron mineral found in igneous, sedimentary and metamorphic rocks – a principal ore of iron
<b>“hydrothermal”</b>	A term pertaining to hot aqueous solutions of magmatic origin which may transport metals and minerals in solution
<b>“ironstone”</b>	Any rock containing a substantial proportion of an iron compound, specifically, an iron rich sedimentary rock. The term is customarily applied to hard, coarsely banded or nonbanded noncherty sedimentary rock of post-Precambrian age
<b>“km”</b>	Kilometres

<b>“m”</b>	Metres
<b>“mm”</b>	Millimetres
<b>“magmatic”</b>	Of, or pertaining to, or derived from, magma
<b>“magnetic separation”</b>	A process in which a magnetically susceptible mineral is separated from gangue minerals by applying a strong magnetic field; ores of iron are commonly treated in this way. It can be either “dry”(the matter to undergo separation does not have any added fluids, such as water) or “wet” (the matter to undergo separation has a fluid, such as water, added prior to undergoing separation)
<b>“magnetite”</b>	A black, isometric, strongly magnetic, opaque mineral of the spinel group which constitutes an important ore of iron and is a very common and widely distributed accessory mineral in rock of all kinds
<b>“metallurgical coal”</b>	A term used to describe varieties of bituminous coal that are converted into coke for use in the steelmaking process (also called “Coking coal”). This is hard coal with a quality that allows the production of coke suitable to support a blast furnace charge. Coking coals have a higher carbon content than steam (thermal) coals, which are mainly used in electricity generation. 1 tonne of coking coal produces 1.37 tonnes of coke
<b>“mineral reserve”</b>	The economically mineable part of a measured or indicated mineral resource demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A mineral reserve includes diluting materials and allowances for losses that may occur when the material is mined and processed
<b>“mineral resource”</b>	A concentration or occurrence of natural, solid, inorganic or fossilized organic material in or on the Earth’s crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge. The term “mineral resource” covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which mineral reserves may subsequently be defined by the consideration and application of technical, economic, legal, environmental, socio-economic and governmental factors. The phrase “reasonable prospects for economic extraction” implies a judgement by a qualified person (as that term is defined in NI 43-101) in respect of the technical and economic factors likely to influence the prospect of economic extraction. A mineral resource is an inventory of mineralization that, under realistically assumed and justifiable technical and economic conditions, might become economically extractable
<b>“mineralization”</b>	The concentration of metals and their chemical compounds within a body of rock
<b>“MMC”</b>	Minerales Y Metales California, S.A. de C.V., a wholly owned Mexican subsidiary of Cardero

<b>“National Instrument 43-101”/ “NI 43-101”</b>	National Instrument 43-101 of the Canadian Securities Administrators entitled “Standards of Disclosure for Mineral Projects”
<b>“NSR”</b>	Net smelter return
<b>“NYSE-MKT”</b>	NYSE MKT LLC
<b>“open pit”</b>	A surface mine, open to daylight, such as a quarry. Also referred to as open-cut or open-cast mine
<b>“PCI coal”</b>	Coal suitable for “Pulverized Coal Injection”. PCI allows coal to be directly injected into the blast furnace to provide the chemical reaction agents to convert iron ore to pig iron. PCI allows steam (thermal) coal to be used in the steel production process.
<b>“PPB” or “ppb”</b>	Parts per billion
<b>“PPM or “ppm”</b>	Parts per million
<b>“reverse circulation drilling”</b>	RC drilling is similar to air core drilling, in that the drill cuttings are returned to surface inside the rods. The drilling mechanism is a pneumatic reciprocating piston known as a “hammer” driving a tungsten-steel drill bit. Reverse circulation is achieved by blowing air down the rods, the differential pressure creating air lift of the water and cuttings up the “inner tube”, which is inside each rod. It reaches the “bell” at the top of the hole, then moves through a sample hose which is attached to the top of the “cyclone”. The drill cuttings travel around the inside of the cyclone until they fall through an opening at the bottom and are collected in a sample bag
<b>“seam”</b>	A stratum or bed of coal; a plane in a coal bed at which the different layers are easily separated
<b>“Sheini”</b>	The iron ore deposit(s) under lands subject to certain prospecting licenses granted by the Government of Ghana and covering lands located in the Zabzugu-Tatale District in the Northern Region of the Republic of Ghana
<b>“stratigraphy”</b>	The arrangement of strata, especially as to geographic position and chronological order of sequence, e.g. the arrangement of sedimentary rocks in strata
<b>“strike”</b>	The direction taken by a structural surface
<b>“tailings”</b>	The material that remains after all metals considered economic have been removed from ore during milling
<b>“thermal coal”</b>	A term used to describe coal which is used primarily to generate heat. Also referred to as steam coal
<b>“TSE”</b>	Toronto Stock Exchange

**“washability”**

As applied to coal, the technical estimate of the potential extent of the extraction of valuable components from coals by the concentration of useful minerals. The washability characteristics of a coal sample are provided by obtaining liberation data on the raw coal sample. Liberation refers to the amount of physical breakage required to separate material of different material densities. Low density material is clean coal whereas high density material is reject (rock). The intermediate density material is called middlings.

## CORPORATE STRUCTURE

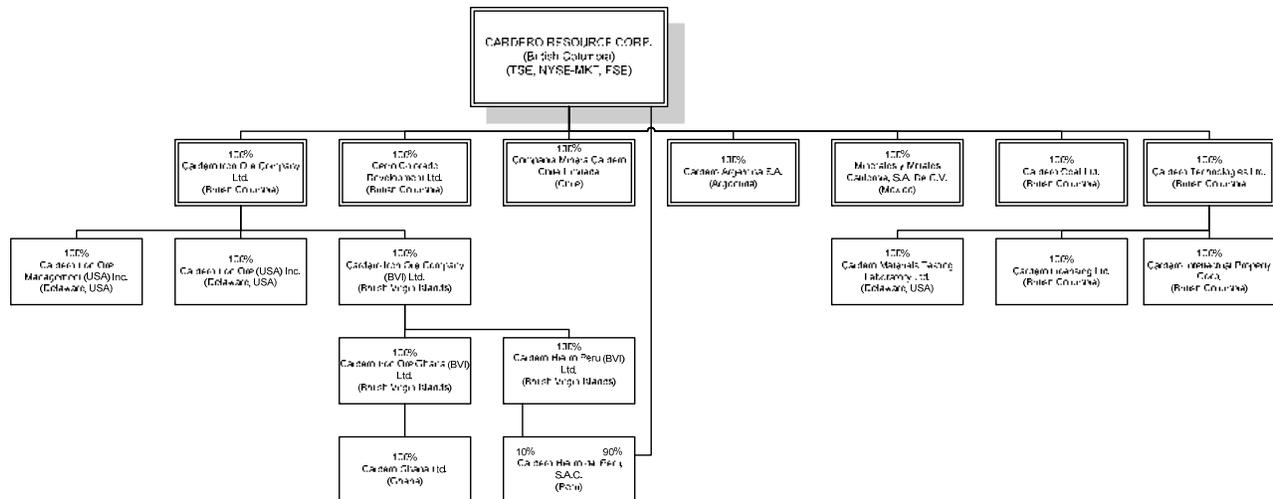
### Name, Address and Incorporation

Cardero Resource Corp. (“Cardero”) was incorporated under the *Company Act* (British Columbia) on December 31, 1985 under the name “Halley Resources Ltd.”. The name was subsequently changed to “Rugby Resources Limited” on September 6, 1991, to “Euro-Ad Systems Inc.” on April 30, 1993, to “Sun Devil Gold Corp.” on July 3, 1997, and to “Cardero Resource Corp.” on May 18, 1999. Cardero was transitioned under the *Business Corporations Act* (British Columbia) (“BCBCA”) on January 13, 2005, and is now governed by that statute. On April 22, 2005, Cardero filed a new Notice of Articles, reflecting the adoption by the shareholders, on April 15, 2005, of a new form of Articles to govern the affairs of the Company in substitution for the original articles adopted under the old *Company Act* (B.C.) and reflecting the increased flexibility available to companies under the BCBCA. A copy of the new Articles is available on SEDAR at [www.sedar.com](http://www.sedar.com).

The head office and principal business address of Cardero is located at Suite 2300 – 1177 West Hastings Street, Vancouver, British Columbia, Canada V6E 2K3, and its registered and records office is located at 550 Burrard Street, Suite 2300, P.O. Box 30, Bentall 5, Vancouver, British Columbia, Canada V6C 2B5.

### Intercorporate Relationships

The following corporate chart sets forth all of Cardero’s subsidiaries and their respective jurisdictions of incorporation. Each of these subsidiaries is wholly owned, directly or indirectly, by Cardero:



Throughout this document references made to the “Company” refer to Cardero and its consolidated subsidiaries, Cardero Coal, Cardero Iron, Cardero Argentina, Cardero Peru, Cardero Chile, CCDL, MMC, Cardero Iron USA, Cardero Management USA, Cardero Iron BVI, Cardero Hierro BVI, Cardero Hierro Peru, Cardero Iron Ghana, Cardero Ghana, CTL, CMTL, CLL and CIPC, while reference to “Cardero” refers to the Canadian parent company only.

## GENERAL DEVELOPMENT OF THE BUSINESS

### Three Year History

The Company is a mineral exploration company engaged in the acquisition, exploration and development of mineral properties. The Company is in the exploration stage as its properties have not yet reached commercial production and none of its properties is beyond the exploration stage. All work presently planned by the Company is directed at defining mineralization and increasing understanding of the characteristics of, and

economics of, that mineralization. **Other than at the Carbon Creek property in British Columbia, there are currently no identified mineral reserves and, other than at the Sheini property in Ghana and the Titac and Longnose properties in Minnesota, there are currently no identified mineral resources, on any of the Company's mineral properties.**

Over the past three financial years, the Company focused on the acquisition and exploration of mineral properties primarily in Canada, Ghana, Argentina, Mexico and the United States. During the 2010, 2011 and 2012 financial years, the Company entered into a number of option/joint venture agreements to acquire interests in properties in these countries that it believed to have the potential to host large gold, silver, copper-gold, iron ore/titanium/vanadium and/or coal deposits. Some of these properties have since been returned to the respective vendors or abandoned, and the associated costs written off, in light of disappointing exploration results. In this regard, during the 2010 fiscal year, the Company wrote off \$8,498,083 in acquisition and exploration costs due to disappointing exploration results. During the 2011 fiscal year the Company wrote off \$12,206,614 in acquisition and exploration costs and during the 2012 fiscal year the Company wrote off \$3,554,667 in acquisition and exploration costs. However, the Company has retained the most strategic of its properties and continues to look for joint venture partners to carry out additional exploration on its non-core properties. The Organullo property in Argentina was the subject of an extensive work program in the fall of 2010, and in September 2011, the Company entered into an option/joint venture agreement with Artha Resources Corporation ("Artha"), whereby an Argentinean subsidiary of Artha can earn a 55% working interest in the Organullo property, and thereafter form a joint venture with Cardero Argentina S.A. Joint venturing of the Organullo Project is part of Cardero's strategy to option-out all non-core assets, allowing the Company to focus on development of its coal and iron ore projects.

During fiscal 2010, the Company optioned out its Corrales and Santa Teresa properties in Mexico and its Pirquitas property in Argentina, and has continued to seek joint venture partners for its Los Manantiales (Mina Angela) property in Argentina. The optionee of the Mexican properties has since returned all of these properties to the Company due to disappointing exploration results, and the Company has, or is in the process, of returning all such properties to their owners or surrendering them to the Mexican government. The Company does not plan any further activities in Mexico or Peru, and is in the process of divesting all of its remaining properties to the Mexican government. The Company plans to dispose of its remaining assets in Peru (none of which are mineral properties).

The sale of the Company's Pampa de Pongo Iron Ore property in Peru completed in January, 2010 and the total sale price of USD 100 million was received by the Company. The Company paid a finder's fee to an arm's length private company in consideration of the finder introducing Cardero to the purchaser, Nanjinzha Group Co., Ltd., and providing ongoing advice in the negotiations.

In keeping with bulk-commodity focus, in June, 2010, Cardero acquired an initial interest of 49.9% in Coalhunter Mining Corporation ("Coalhunter"). Pursuant to private placements completed on September 27, 2010 and December 21, 2010, Cardero's interest in Coalhunter increased to 45.5%. On June 1, 2011, Cardero acquired all of the issued and outstanding common shares of Coalhunter and Coalhunter subsequently changed its name to "Cardero Coal Ltd.". Pursuant to an Arrangement Agreement dated April 18, 2011 between Cardero and Coalhunter, on June 1, 2011 each Coalhunter shareholder (other than Cardero) received 0.8 of a common share of Cardero for each common share of Coalhunter held, resulting in the issuance of 23,397,002 Common Shares. A further 5,885,543 Common Shares are reserved upon the exercise of options held by former Coalhunter optionees, the exercise of Coalhunter warrants and pursuant to Coalhunter property acquisition agreements. The reason for the acquisition of Coalhunter was to acquire the interest of Coalhunter in Carbon Creek. Since the time of the acquisition, the Company has focused primarily on the further exploration and development of the Carbon Creek asset. In December, 2011, the Company exercised its option to enter into a coal lease covering approximately 2,600 hectares of freehold coal comprising a portion of Carbon Creek. At the same time, the Company also made the necessary payment to enter into a joint

venture with the Carbon Creek Partnership with respect to Carbon Creek as required for the further development of Carbon Creek. The Company completed a significant exploration program during 2011, which led to the preparation of a preliminary economic assessment on a portion of Carbon Creek. The Company also completed a major drilling program in 2012, which led to the preparation of a pre-feasibility study for Carbon Creek. Also, in June 2012, Ridley Terminals Inc. (“Ridley”) and Cardero Coal entered into an agreement for the shipment of metallurgical coal from Carbon Creek. The agreement has a 15 year term from January 1, 2014 to December 31, 2028, with provision to extend the term by three years to December 31, 2031. Contract volume is set at 500,000 tonnes per annum (“tpa”) through 2014, increasing to 900,000 tpa in 2015. The agreement is subject to Ridley receiving Federal Government approval for addition of a fourth stacker/reclaimer that will increase capacity from 24 Mtpa to 30 Mtpa. Also in 2012, Cardero Coal had its Project Description accepted by provincial and federal regulators, thereby initiating the environmental assessment process for Carbon Creek. In January, 2013, the Company entered into an agreement with the optionor of four coal licenses forming part (3,513 hectares) of Carbon Creek to extend the exercise deadline of the option for a period of up to three months. Previously, the Company was required to exercise the option on or before January 14, 2013 by paying the option holder \$5M and issuing 400,000 common shares. Under the new terms, Cardero has agreed to pay a non-refundable deposit of \$1M on January 14, 2013, with the \$4M balance and 400,000 shares due upon exercise of the option. The Company may extend the deadline for the exercise of the option for up to three months (to April 14, 2013) upon payment of an extension fee of \$20,000 for each month of the extension. To date, the Company has made the initial \$1M interim payment and the first \$20,000 payment to extend the option. See “Narrative Description of the Business - Material Mineral Projects – Carbon Creek Metallurgical Coal Deposit, British Columbia, Canada”.

In November, 2011, Cardero completed a-brokered private placement (the “2011 Offering”). A total of 8,029,750 units (“Cardero Units”) were sold at a price of CAD 0.95 per Cardero Unit for aggregate gross proceeds of CAD 7,628,262.50. Each Cardero Unit consisted of one Common Share and one-half of one common share purchase warrant (each whole warrant, a “Cardero Warrant”). Each Cardero Warrant was exercisable into one additional Common Share for a period of 12 months from the closing of the Offering at an exercise price of CAD 1.25. If, at any time from 4 months after the closing of the Offering until the expiry of the Cardero Warrants, the daily volume-weighted average trading price of the Common Shares on the TSE exceeds CAD 1.75 for at least 10 consecutive trading days, the Company may, within 30 days, give an expiry acceleration notice to the holders of Cardero Warrants and, if it does so, the Cardero Warrants will, unless exercised, expire on the 30<sup>th</sup> day after the expiry acceleration notice is given. All of the Cardero Warrants subsequently expired on November 29, 2012, unexercised.

In December, 2011, Cardero, through Cardero Ghana, entered into three separate joint ventures (one for each prospecting license) with Emmaland Resources Limited (“Emmaland”) to explore and, if warranted, develop, the iron ore deposit(s) under lands subject to certain prospecting licenses granted to Emmaland and covering lands located in the Zabzugu-Tatale District in the Northern Region of the Republic of Ghana and referred to as the Sheini Hills Iron Project (approximately 400 square kilometres in aggregate). Under the three joint ventures, Cardero Ghana will have the right to earn a 100% working interest in each license, subject to (a) a 10% NPI in favour of Emmaland and (b) a 10% fully carried interest, in favour of the Government of Ghana, in the portions of the license areas that become the subject of one or more mining licenses subsequently issued to Emmaland. In order to earn its interest, Cardero will fund all expenditures under the particular joint venture and make totalling USD 16.5 million to Emmaland. Following execution of the joint venture agreements, in mid-2012 the Company carried out an initial exploration program in the region, which resulted in the preparation of an initial resource estimate for a portion of the joint venture area (see “Narrative Description of the Business - Material Mineral Projects – Sheini Hills Iron Project, Ghana”). The Company is currently determining its future plans for Sheini, but elected not to make a payment of USD 500,000 due December 31, 2012 in respect of the joint venture agreement on the Sheini North prospecting license, and is in the process of negotiating an extension for such payment with the joint venture partner. If the payment cannot be renegotiated, and the joint venture partner elects to deliver a notice of default, then Cardero Ghana would be

deemed to have withdrawn from the joint venture 21 days after receipt of such notice of default if it does not make the required payment prior to such time. Accordingly, since there can be no certainty that the payment schedule can be renegotiated, the Company has written off exploration and evaluation assets expenditures related to the Sheini North prospecting license joint venture in the amount of \$374,716. The Company made the required payments in order to maintain the Sheini Central and Sheini South joint ventures in good standing until December 31, 2013.

In January, 2012, Cardero received repayment of the USD 8 million loan originally made to Kria Resources Inc. ("Kria") (now a wholly owned subsidiary of Trevali Mining Corporation ("Trevali")). The Company, Kria and Trevali agreed that the loan, plus interest of USD 645,260, was to be repaid as follows: (i) Kria paid Cardero USD 5,000,000 in cash; and (ii) the balance of USD 3,645,260 (equivalent to CAD 3,734,569) was been satisfied by Trevali issuing to Cardero 4,149,521 units ("Trevali Units"), with each Trevali Unit being comprised of one common share of Trevali ("Trevali Common Share") and one-half of one transferrable common share purchase warrant (a "Trevali Warrant"), at a deemed price of CAD 0.90 per Trevali Unit. Each whole Trevali Warrant will entitle the holder thereof to purchase one Trevali Common Share ("Trevali Warrant Share") at a price of CAD 1.10 per share until January 16, 2014.

In December, 2012, The Company carried out a non-brokered financing of Common Shares and of flow-through Common Shares, resulting in the issuance of 13,967,594 Common Shares to raise gross proceeds of \$6,585,457.

During the fiscal year ended October 31, 2012 and to January 28, 2013, the Company was primarily focused on Carbon Creek (including initiation of the 2012 drill program and preparation of the prefeasibility study), and completion of the initial exploration program at Sheini and preparation of the initial resource estimate. While the Company also investigated and evaluated a number of additional potential acquisitions, none were determined to be appropriate. The Company also continues to seek joint venture partners for its assets other than Carbon Creek and Sheini, but no new joint ventures were entered into and none are presently under negotiation. The Company anticipates that its primary focus for the fiscal year ending October 31, 2013 will be on the continued exploration and development of Carbon Creek, including preparation of a feasibility study and pursuing the environmental assessment process as required to secure the appropriate permits for production at Carbon Creek. The Company is presently assessing its plans for Sheini.

### **Significant Acquisitions**

Since November 1, 2011, being the commencement of the Company's last completed fiscal year, Cardero did not complete any significant acquisitions for which disclosure is required under Part 8 of National Instrument 51-102.

## **NARRATIVE DESCRIPTION OF THE BUSINESS**

### **General**

#### ***Summary***

The Company currently holds, or has rights to acquire, interests (ranging from 75% to 100%) in several mineral properties (subject, in certain cases, to net smelter return royalties or net profits interests payable to the original property vendors) in Canada, Ghana, Argentina, Mexico and the United States. The Company is in the process of evaluating such properties through exploration programs or, in some cases, mineralogical and metallurgical studies, materials processing tests and feasibility studies. In all cases, the objective is to evaluate the potential of the subject property and to determine if spending additional funds is warranted (in which case, an appropriate program to advance the property to the next decision point will be formulated and, depending upon available funds, implemented) or not (in which case the property may be offered for option/joint venture or returned to the vendor or abandoned, as applicable). At the present time, the Company is primarily interested in properties that are prospective for coal and iron ore.

The Company considers that Carbon Creek and Sheini are its material mineral properties at the present time. Information with respect to the Company's material mineral properties is set out in the Material Mineral Projects section of this AIF. The Company intends to seek to option/joint venture all of its other mineral properties or, in some cases, abandon or surrender the tenures to the applicable governmental agency and thereby terminate its interest therein.

The Company is in the exploration stage and does not mine, produce or sell any mineral products at this time, nor do any of its current properties have any known or identified mineral resources (with the exception of the Sheini, Titac and Longnose properties), or mineral reserves (with the exception of the Carbon Creek property). Other than with respect to Carbon Creek, the Company does not propose any method of production on any of its mineral properties at this time. At Carbon Creek, the Company has determined the likely methods of production (see "Narrative Description of the Business - Material Mineral Projects – Carbon Creek Metallurgical Coal Deposit, British Columbia, Canada"), although it is conducting extensive work as part of the preparation of the feasibility study on Carbon Creek in order to confirm the presently envisioned production methods are appropriate to employ should the property go into commercial production.

All aspects of the Company's business require specialized skills and knowledge. Such skills and knowledge include the areas of geology, drilling, logistical planning, geophysics, metallurgy and mineral processing, implementation of exploration programs, mine development, mine operation and accounting. While recent increased activity in the resource mining industry has made it more difficult to locate competent employees and consultants in such fields, the Company has found that it can locate and retain such employees and consultants and believes it will continue to be able to do so.

All of the raw materials the Company requires to carry on its business are readily available through normal supply or business contracting channels in Canada, Ghana, Argentina, Mexico, Peru and the United States. The Company has secured, or reasonably believes that it will be able to secure, personnel to conduct its contemplated programs.

The mining business is subject to mineral price cycles. The marketability of minerals and mineral concentrates is also affected by worldwide economic cycles. In recent years, the significant demand for minerals in some countries (notably China and India) has driven increased commodity prices to historic highs. While the downturn in the world economy which commenced in 2008 and continues through today significantly moderated the record high prices, and temporarily reduced the upward price pressures, for some commodities (including metallurgical coal and iron ore) upward price movements have recently become re-established, primarily as a result of Chinese demand. It is difficult to assess if the apparent upward momentum in several commodity prices are long-term trends, and there is great uncertainty as to the recovery, or otherwise, of the world, and particularly, the Chinese, economy. If the economic recovery stalls and coal and iron ore prices decline as a consequence, a continuing period of lower prices could significantly affect the economic potential of Carbon Creek (metallurgical coal) and/or Sheini (iron ore) and result in the Company determining to cease work on, or drop its interest in, some or all of such properties.

The Company's business is not substantially dependent on any contract such as a contract to sell the major part of its products or services or to purchase the major part of its requirements for goods, services or raw materials, or on any franchise or licence or other agreement to use a patent, formula, trade secret, process or trade name upon which its business depends.

It is not expected that the Company's business will be affected in the current financial year by the renegotiation or termination of contracts or sub-contracts.

As of October 31, 2012, Cardero had 8 full-time and 6 part-time employees, Cardero Coal had 10 full-time employees and Cardero Management USA had 5 full-time employees. The Company relies to a large degree upon consultants and contractors to carry on many of its activities and, in particular, to supervise and carry out the work programs on its mineral properties. However, should the Company expand its activities, it is likely that it will choose to hire additional employees.

### ***Bankruptcy and Similar Procedures***

There are no bankruptcy, receivership or similar proceedings against Cardero, nor is Cardero aware of any such pending or threatened proceedings. There have not been any voluntary bankruptcy, receivership or similar proceedings by Cardero within the three most recently completed financial years or completed or currently proposed for the current financial year.

### ***Reorganizations***

There have been no reorganizations of or involving Cardero within the three most recently completed financial years and no reorganizations are currently proposed for the current financial year.

### ***Social or Environmental Policies***

Cardero has created a Sustainable Development Committee (“SDC”), which has adopted a formal charter. The overall purpose of the SDC is to assist the Board in fulfilling its oversight responsibilities with respect to the Board’s and the Company’s continuing commitment to improving the environment and ensuring that the Company’s activities are carried out, and that its facilities are operated and maintained, in a safe, sustainable and environmentally sound manner. The primary function of the SDC is to monitor, review and provide oversight with respect to the Company’s policies, standards, accountabilities and programs relative to health, safety, community relations and environmental-related matters. Further, the SDC is to advise the Board and make recommendations for the Board’s consideration regarding health, safety, community relations and environmental-related issues. In particular, the SDC is to consider and advise the Board with respect to current standards of sustainable development for projects and activities such as those of the Company, particularly with a view to ensuring that the Company’s business is run in a manner, and its projects are operated and developed, so as to achieve the ideals and reflect the following principles of sustainable development:

- (a) living within environmental limits,
- (b) ensuring a strong, healthy and just society,
- (c) achieving a sustainable economy,
- (d) using sound science responsibly, and
- (e) promoting good governance.

The SDC is also responsible for monitoring the activities of the Company in connection with the initial and ongoing interaction between the Company’s activities, operations and personnel and the communities in which the Company’s projects and related activities are located, with a view to ensuring that management develops and follows appropriate policies and activities to enhance the relationship between the Company and its personnel and the communities in which it operates and reflect the principles of sustainable development in that regard.

Although not set out in a specific policy, the Company strives to be a positive influence in the local communities where its mineral projects are located, not only by contributing to the welfare of such communities through donations of money and supplies, as appropriate, but also through hiring, when appropriate, local workers to assist in ongoing exploration programs as well as contributing to and improving local infrastructure. The Company considers that building and maintaining strong relationships with such communities is fundamental to its ability to continue to operate in such regions and to assist in the eventual

development (if any) of mining operations in such regions, and it attaches considerable importance to commencing and fostering them from the beginning of its involvement in any particular area.

Cardero has also adopted a Code of Business Conduct and Ethics, which provides, among other things, that the Company is committed to complying with all laws and governmental regulations applicable to its activities and, specifically, to maintaining a safe and healthy work environment and conducting its activities in full compliance with all applicable environmental laws.

### **Risk Factors**

**In addition to those risk factors discussed elsewhere in this AIF, the Company is subject to the following risk factors:**

*Resource Exploration and Development is Generally a Speculative Business:* Resource exploration and development is a speculative business and involves a high degree of risk, including, among other things, unprofitable efforts resulting both from the failure to discover mineral deposits and from finding mineral deposits which, though present, are insufficient in size and grade at the then prevailing market conditions to return a profit from production. The marketability of natural resources which may be acquired or discovered by the Company will be affected by numerous factors beyond the control of the Company. These factors include market fluctuations, the proximity and capacity of natural resource markets, government regulations, including regulations relating to prices, taxes, royalties, land use, importing and exporting of minerals and environmental protection. The exact effect of these factors cannot be accurately predicted, but the combination of these factors may result in the Company not receiving an adequate return on invested capital.

**Other than on the Carbon Creek property, there are no known reserves and, other than on the Carbon Creek, Sheini, Titac and Longnose properties there are no known resources, on any of the Company's properties. The majority of exploration projects do not result in the discovery of commercially mineable deposits of ore.** Substantial expenditures are required to establish ore reserves through drilling and metallurgical and other testing techniques, determine metal content and metallurgical recovery processes to extract metal from the ore, and construct, renovate or expand mining and processing facilities. No assurance can be given that any level of recovery of ore reserves will be realized or that any identified mineral deposit, even it is established to contain an estimated resource, will ever qualify as a commercial mineable ore body which can be legally and economically exploited. Mineral resources are not mineral reserves and there is no assurance that any mineral resources will ultimately be reclassified as proven or probable reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability.

*Fluctuation of Commodity Prices:* Even if commercial quantities of mineral deposits are discovered by the Company, there is no guarantee that a profitable market will exist for the sale of the minerals produced. The Company's long-term viability and profitability depend, in large part, upon the market price of minerals which have experienced significant movement over short periods of time, and are affected by numerous factors beyond the control of the Company, including international economic and political trends, expectations of inflation, currency exchange fluctuations, interest rates and global or regional consumption patterns, speculative activities and increased production due to improved mining and production methods. The recent price fluctuations in the price of all commodities for which the Company is presently exploring is an example of a situation over which the Company has no control and may materially adversely affect the Company in a manner that it may not be able to compensate for. The supply of and demand for minerals are affected by various factors, including political events, economic conditions and production costs in major producing regions. There can be no assurance that the price of any minerals produced from the Company's properties will be such that any such deposits can be mined at a profit.

*Recent market events and conditions:* Since 2008, the U.S. credit markets have experienced serious disruption due to a deterioration in residential property values, defaults and delinquencies in the residential mortgage

market (particularly, sub-prime and non-prime mortgages) and a decline in the credit quality of mortgage backed securities. These problems have led to a slow-down in residential housing market transactions, declining housing prices, delinquencies in non-mortgage consumer credit and a general decline in consumer confidence. These conditions caused a loss of confidence in the broader U.S. and global credit and financial markets and resulting in the collapse of, and government intervention in, major banks, financial institutions and insurers and creating a climate of greater volatility, less liquidity, widening of credit spreads, a lack of price transparency, increased credit losses and tighter credit conditions. Notwithstanding various actions by the U.S. and foreign governments, concerns about the general condition of the capital markets, financial instruments, banks, investment banks, insurers and other financial institutions caused the broader credit markets to further deteriorate and stock markets to decline substantially. In addition, general economic indicators have deteriorated, including declining consumer sentiment, increased unemployment and declining economic growth and uncertainty about corporate earnings.

While these conditions appear to have improved slightly in 2011/12, unprecedented disruptions in the credit and financial markets have had a significant material adverse impact on a number of financial institutions and have limited access to capital and credit for many companies. These disruptions could, among other things, make it more difficult for the Company to obtain, or increase its cost of obtaining, capital and financing for its operations. The Company's access to additional capital may not be available on terms acceptable to it or at all.

*General Economic Conditions:* The recent unprecedented events in global financial markets have had a profound impact on the global economy. Many industries, including the gold and base metal mining industry, are impacted by these market conditions. Some of the key impacts of the current financial market turmoil include contraction in credit markets resulting in a widening of credit risk, devaluations and high volatility in global equity, commodity, foreign exchange and precious metal markets, and a lack of market liquidity. A continued or worsened slowdown in the financial markets or other economic conditions, including but not limited to, consumer spending, employment rates, business conditions, inflation, fuel and energy costs, consumer debt levels, lack of available credit, the state of the financial markets, interest rates, and tax rates may adversely affect the Company's growth and profitability. Specifically:

- The global credit/liquidity crisis could impact the cost and availability of financing and the Company's overall liquidity
- the volatility of gold and other base metal prices may impact the Company's future revenues, profits and cash flow
- volatile energy prices, commodity and consumables prices and currency exchange rates impact potential production costs
- the devaluation and volatility of global stock markets impacts the valuation of the Common Shares, which may impact the Company's ability to raise funds through the issuance of Common Shares

These factors could have a material adverse effect on the Company's financial condition and results of operations.

*Share Price Volatility:* In 2011/12, worldwide securities markets, particularly those in the United States and Canada, have experienced a high level of price and volume volatility, and the market price of securities of many companies, particularly those considered exploration or development stage companies, have experienced unprecedented fluctuations in price which have not necessarily been related to the operating performance, underlying asset values or prospects of such companies. Most significantly, the share prices of junior natural resource companies have experienced an unprecedented decline in value and there has been a significant

decline in the number of buyers willing to purchase such securities. In addition, significantly higher redemptions by holders of mutual funds has forced many of such funds (including those holding the Company's securities) to sell such securities at any price. **As a consequence, despite the Company's past success in securing significant equity financing, market forces may render it difficult or impossible for the Company to secure places to purchase new share issues at a price which will not lead to severe dilution to existing shareholders, or at all.** Therefore, there can be no assurance that significant fluctuations in the Common Shares will not occur, or that such fluctuations will not materially adversely impact on the Company's ability to raise equity funding without significant dilution to its existing shareholders, or at all.

*Permits and Licenses:* The operations of the Company will require licenses and permits from various governmental authorities. There can be no assurance that the Company will be able to obtain all necessary licenses and permits that may be required to carry out exploration, development and mining operations at its projects, on reasonable terms or at all. Delays or a failure to obtain such licenses and permits, or a failure to comply with the terms of any such licenses and permits that the Company does obtain, could have a material adverse effect on the Company.

*Acquisition of Mineral Properties under Agreements:* The agreements pursuant to which the Company has the right to acquire a number of its properties provide that the Company must make a series of cash payments and/or share issuances over certain time periods, expend certain minimum amounts on the exploration of the properties or contribute its share of ongoing expenditures. Failure by the Company to make such payments, issue such shares or make such expenditures in a timely fashion may result in the Company losing its interest in such properties. There can be no assurance that the Company will have, or be able to obtain, the necessary financial resources to be able to maintain all of its property agreements in good standing, or to be able to comply with all of its obligations thereunder, with the result that the Company could forfeit its interest in one or more of its mineral properties.

*Title Matters:* The acquisition of title to mineral properties in Mexico, Argentina and Ghana is a very detailed and time-consuming process. Title to, and the area of, mineral concessions may be disputed. While the Company has diligently investigated title to all mineral properties in which it has an interest and, to the best of its knowledge, title to all such properties is in good standing or, where not yet granted, the application process appears to be proceeding normally in all the circumstances, this should not be construed as a guarantee of title or that any such applications for concessions will be granted. Title to mineral properties may be affected by undetected defects such as aboriginal or indigenous peoples' land claims, or unregistered agreements or transfers. The Company has not obtained title opinions for the majority of its mineral properties. Not all the mineral properties in which the Company has an interest have been surveyed, and their actual extent and location may be in doubt.

*Surface Rights and Access:* Although the Company acquires the rights to some or all of the minerals in the ground subject to the mineral tenures that it acquires, or has a right to acquire, in most cases it does not thereby acquire any rights to, or ownership of, the surface to the areas covered by its mineral tenures. In such cases, applicable mining laws usually provide for rights of access to the surface for the purpose of carrying on mining activities, however, the enforcement of such rights through the courts can be costly and time consuming. It is necessary to negotiate surface access or to purchase the surface rights if long-term access is required. There can be no guarantee that, despite having the right at law to access the surface and carry on mining activities, the Company will be able to negotiate satisfactory agreements with any such existing landowners/occupiers for such access or purchase of such surface rights, and therefore it may be unable to carry out planned mining activities. In addition, in circumstances where such access is denied, or no agreement can be reached, the Company may need to rely on the assistance of local officials or the courts in the applicable jurisdiction, the outcomes of which cannot be predicted with any certainty. The inability of the Company to secure surface access or purchase required surface rights could materially and adversely affect the timing, cost or overall ability of the Company to develop any mineral deposits it may locate. This is a particular problem in many

areas of Mexico, Argentina, Peru and Ghana, where blockades of access to the Company's properties, hostile actions by local communities and the potential unwillingness of local police or governmental officials to assist a foreign company against its own citizens can result in the Company being unable to carry out any exploration activities despite being legally authorized to do so and having complied with all applicable local laws and requirements.

*No Assurance of Profitability:* The Company has no history of production or earnings and due to the nature of its business there can be no assurance that the Company will be profitable. The Company has not paid dividends on its shares since incorporation and does not anticipate doing so in the foreseeable future. All of the Company's properties are in the exploration stage and, with the exception of Carbon Creek, the Company has not defined or delineated any proven or probable reserves on any of its properties. None of the Company's properties are currently under development. Continued exploration of its existing properties and the future development of any properties found to be economically feasible, will require significant funds. The only present source of funds available to the Company is through the sale of its equity securities or the sale or optioning of a portion of its interest in its mineral properties. Even if the results of exploration are encouraging, the Company may not have sufficient funds to conduct the further exploration that may be necessary to determine whether or not a commercially mineable deposit exists. While the Company may generate additional working capital through further equity offerings or through the sale or possible syndication of its properties, there is no assurance that any such funds will be available on favourable terms, or at all. At present, it is impossible to determine what amounts of additional funds, if any, may be required. Failure to raise such additional capital could put the continued viability of the Company at risk.

*Uninsured or Uninsurable Risks:* Exploration, development and mining operations involve various hazards, including environmental hazards, industrial accidents, metallurgical and other processing problems, unusual or unexpected rock formations, structural cave-ins or slides, flooding, fires, metal losses and periodic interruptions due to inclement or hazardous weather conditions. These risks could result in damage to or destruction of mineral properties, facilities or other property, personal injury, environmental damage, delays in operations, increased cost of operations, monetary losses and possible legal liability. The Company may not be able to obtain insurance to cover these risks at economically feasible premiums or at all. The Company may elect not to insure where premium costs are disproportionate to the Company's perception of the relevant risks. The payment of such insurance premiums and of such liabilities would reduce the funds available for exploration and production activities.

*Government Regulation:* Any exploration, development or mining operations carried on by the Company will be subject to government legislation, policies and controls relating to prospecting, development, production, environmental protection, mining taxes and labour standards. The Company cannot predict whether or not such legislation, policies or controls, as presently in effect, will remain so, and any changes therein (for example, significant new royalties or taxes), which are completely outside the control of the Company, may materially adversely affect to ability of the Company to continue its planned business within any such jurisdictions.

*Foreign Countries and Political Risk:* The Company has mineral properties located in Peru, Argentina, Mexico, the United States and Ghana. In such countries, mineral exploration and mining activities may be affected in varying degrees by political or economic instability, expropriation of property and changes in government regulations such as tax laws, business laws, environmental laws and mining laws. Any changes in regulations or shifts in political conditions are beyond the control of the Company and may materially adversely affect it business, or if significant enough, may make it impossible to continue to operate in certain countries. Operations may be affected in varying degrees by government regulations with respect to restrictions on production, price controls, foreign exchange restrictions, export controls, income taxes, expropriation of property, environmental legislation and mine safety.

*Dependence Upon Others and Key Personnel:* The success of the Company's operations will depend upon numerous factors, many of which are beyond the Company's control, including (i) the ability of the Company to enter into strategic alliances through a combination of one or more joint ventures, mergers or acquisition transactions; and (ii) the ability to attract and retain additional key personnel in exploration, mine development, sales, marketing, technical support and finance. These and other factors will require the use of outside suppliers as well as the talents and efforts of the Company. There can be no assurance of success with any or all of these factors on which the Company's operations will depend. The Company has relied and may continue to rely, upon consultants and others for operating expertise.

*Exploration and Mining Risks:* Fires, power outages, labour disruptions, flooding, explosions, cave-ins, landslides and the inability to obtain suitable or adequate machinery, equipment or labour are other risks involved in the operation of mines and the conduct of exploration programs. Substantial expenditures are required to establish reserves through drilling, to develop metallurgical processes, to develop the mining and processing facilities and infrastructure at any site chosen for mining. Although substantial benefits may be derived from the discovery of a major mineralized deposit, no assurance can be given that minerals will be discovered in sufficient quantities to justify commercial operations or that funds required for development can be obtained on a timely basis. The economics of developing mineral properties is affected by many factors including the cost of operations, variations of the grade of ore mined, fluctuations in the price of gold or other minerals produced, costs of processing equipment and such other factors as government regulations, including regulations relating to royalties, allowable production, importing and exporting of minerals and environmental protection. In addition, the grade of mineralization ultimately mined may differ from that indicated by drilling results and such differences could be material. Short term factors, such as the need for orderly development of ore bodies or the processing of new or different grades, may have an adverse effect on mining operations and on the results of operations. There can be no assurance that minerals recovered in small scale laboratory tests will be duplicated in large scale tests under on-site conditions or in production scale operations. Material changes in geological resources, grades, stripping ratios or recovery rates may affect the economic viability of projects.

*Currency Fluctuations:* The Company presently maintains its accounts in Canadian dollars. Due to the nature of its operations in such countries, the Company also maintains accounts in U.S. dollars, Mexican and Argentinean pesos, Peruvian nuevo soles and Ghanaian cedis. The Company's operations in the United States, Mexico, Argentina, Peru and Ghana and its proposed payment commitments and exploration expenditures under many of the agreements pursuant to which it holds, or has a right to acquire, an interest in its mineral properties are denominated in U.S. dollars, making it subject to foreign currency fluctuations. Such fluctuations are out of its control and may materially adversely affect the Company's financial position and results. The Company does not engage in any hedging programs with respect to currencies.

*Environmental Restrictions:* The activities of the Company are subject to environmental regulations promulgated by government agencies in different countries from time to time. Environmental legislation generally provides for restrictions and prohibitions on spills, releases or emissions into the air, discharges into water, management of waste, management of hazardous substances, protection of natural resources, antiquities and endangered species and reclamation of lands disturbed by mining operations. Certain types of operations require the submission and approval of environmental impact assessments. Environmental legislation is evolving in a manner which means stricter standards, and enforcement, fines and penalties for non-compliance are more stringent. Environmental assessments of proposed projects carry a heightened degree of responsibility for companies and directors, officers and employees. The cost of compliance with changes in governmental regulations has a potential to reduce the profitability of operations.

*Regulatory Requirements:* The activities of the Company are subject to extensive regulations governing various matters, including environmental protection, management and use of toxic substances and explosives, management of natural resources, exploration, development of mines, production and post-closure

reclamation, exports, price controls, taxation, regulations concerning business dealings with indigenous peoples, labour standards on occupational health and safety, including mine safety, and historic and cultural preservation. Failure to comply with applicable laws and regulations may result in civil or criminal fines or penalties, enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment, or remedial actions, any of which could result in the Company incurring significant expenditures. The Company may also be required to compensate those suffering loss or damage by reason of a breach of such laws, regulations or permitting requirements. It is also possible that future laws and regulations, or more stringent enforcement of current laws and regulations by governmental authorities, could cause additional expense, capital expenditures, restrictions on or suspension of the Company's operations and delays in the exploration and development of the Company's properties.

*Limited Experience with Development-Stage Mining Operations:* The Company has limited experience in placing resource properties into production, and its ability to do so will be dependent upon using the services of appropriately experienced personnel or entering into agreements with other major resource companies that can provide such expertise. There can be no assurance that the Company will have available to it the necessary expertise when and if it places its resource properties into production.

*Estimates of Mineral Reserves and Resources and Production Risks:* The mineral resource estimates presented in the Company's filings with securities regulatory authorities, press releases and other public statements that may be made from time to time are based upon estimates made by Company personnel and independent geologists, and no assurance can be given that any particular level of recovery of minerals will in fact be realized or that an identified reserve or resource will ever qualify as a commercially mineable (or viable) deposit which can be legally and economically exploited. The estimating of mineral resources and mineral reserves is a subjective process and the accuracy of mineral resource and mineral reserve estimates is a function of the quantity and quality of available data, the accuracy of statistical computations, and the assumptions used and judgments made in interpreting available engineering and geological information. There is significant uncertainty in any mineral resource or mineral reserve estimate and the actual deposits encountered and the economic viability of a deposit may differ materially from the Company's estimates. Accordingly, there can be no assurance that:

- these estimates will be accurate;
- reserves, resource or other mineralization figures will be accurate; or
- this mineralization could be mined or processed profitably.

Because the Company has not commenced production at any of its properties, and has not (with the exception of Carbon Creek) defined or delineated any proven or probable reserves on any of its properties, mineralization estimates for the Company's properties may require adjustments or downward revisions based upon further exploration or development work or actual production experience. In addition, the grade of mineralization ultimately mined may differ from that indicated by drilling results and such differences could be material. There can be no assurance that minerals recovered in small-scale tests will be duplicated in large-scale tests under on-site conditions or in production scale. Production can be affected by such factors as permitting regulations and requirements, weather, environmental factors, unforeseen technical difficulties, unusual or unexpected geological formations and work interruptions. Short term factors, such as the need for orderly development of deposits or the processing of new or different grades, may have a material adverse effect on mining operations and on the results of operations. There can be no assurance that minerals recovered in small scale laboratory tests will be duplicated in large scale tests under on-site conditions or in production scale operations. Material changes in reserves or resources, grades, stripping ratios or recovery rates may affect the economic viability of projects. The estimated resources described in the Company's filings with securities regulatory authorities, press releases and other public statements that may be made from time to time should not be interpreted as assurances of mine life or of the profitability of future operations.

Estimated mineral resources and mineral reserves may have to be re-estimated based on changes in applicable commodity prices, further exploration or development activity or actual production experience. This could materially and adversely affect estimates of the volume or grade of mineralization, estimated recovery rates or other important factors that influence mineral resource or mineral reserve estimates. Market price fluctuations for gold, silver or base metals, increased production costs or reduced recovery rates or other factors may render any particular reserves uneconomical or unprofitable to develop at a particular site or sites. A reduction in estimated reserves could require material write downs in investment in the affected mining property and increased amortization, reclamation and closure charges.

**Mineral resources are not mineral reserves and there is no assurance that any mineral resources will ultimately be reclassified as proven or probable reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability.**

*Enforcement of Civil Liabilities:* As many of the assets of the Company are located outside of Canada and the United States, and certain of the directors and officers of Cardero are resident outside of Canada and/or the United States, it may be difficult or impossible to enforce judgements granted by a court in Canada or the United States against the assets of the Company or the directors and officers of Cardero residing outside of such country.

*Mining Industry is Intensely Competitive:* The Company's business of the acquisition, exploration and development of mineral properties is intensely competitive. The Company may be at a competitive disadvantage in acquiring additional mining properties because it must compete with other individuals and companies, many of which have greater financial resources, operational experience and technical capabilities than the Company. The Company may also encounter increasing competition from other mining companies in efforts to hire experienced mining professionals. Competition for exploration resources at all levels is currently very intense, particularly affecting the availability of manpower, drill rigs and helicopters. Increased competition could adversely affect the Company's ability to attract necessary capital funding or acquire suitable producing properties or prospects for mineral exploration in the future.

*The Company may be a "passive foreign investment company" under the U.S. Internal Revenue Code, which may result in material adverse U.S. federal income tax consequences to investors in Common Shares that are U.S. taxpayers:* Investors in Common Shares that are U.S. taxpayers should be aware that Cardero believes that it has been in one or more prior tax years, and may be in current and future tax years, a "passive foreign investment company" under Section 1297(a) of the U.S. Internal Revenue Code (a "PFIC"). However, no determination has been made regarding Cardero's PFIC status for any particular tax year. If Cardero is or becomes a PFIC, generally any gain recognized on the sale of the Common Shares and any "excess distributions" (as specifically defined) paid on the Common Shares must be ratably allocated to each day in a U.S. taxpayer's holding period for the Common Shares. The amount of any such gain or excess distribution allocated to prior years of such U.S. taxpayer's holding period for the Common Shares generally will be subject to U.S. federal income tax at the highest tax applicable to ordinary income in each such prior year, and the U.S. taxpayer will be required to pay interest on the resulting tax liability for each such prior year, calculated as if such tax liability had been due in each such prior year. The amount of any such gain or excess distribution allocated to the tax year of disposition or distribution of the excess distribution and to years before the entity became a PFIC, if any, would be taxed as ordinary income.

Alternatively, a U.S. taxpayer that makes a "qualified electing fund" (a "QEF") election with respect to Cardero generally will be subject to U.S. federal income tax on such U.S. taxpayer's pro rata share of Cardero's "net capital gain" and "ordinary earnings" (as specifically defined and calculated under U.S. federal income tax rules), regardless of whether such amounts are actually distributed by Cardero. U.S. taxpayers should be aware, however, that there can be no assurance that Cardero will satisfy record keeping requirements under the QEF rules or that Cardero will supply U.S. taxpayers with required information under the QEF rules,

if Cardero is a PFIC and a U.S. taxpayer wishes to make a QEF election. As a second alternative, a U.S. taxpayer may make a “mark-to-market election” if Cardero is a PFIC and the Common Shares are “marketable stock” (as specifically defined). A U.S. taxpayer that makes a mark-to-market election generally will include in gross income, for each taxable year in which Cardero is a PFIC, an amount equal to the excess, if any, of (a) the fair market value of the Common Shares as of the close of such taxable year over (b) such U.S. taxpayer’s adjusted tax basis in the Common Shares.

The above paragraphs contain only a brief summary of certain U.S. federal income tax considerations. Investors should consult their own tax advisor regarding the PFIC rules and other U.S. federal income tax consequences of the acquisition, ownership, and disposition of Common Shares.

## **Material Mineral Projects**

### **Carbon Creek Metallurgical Coal Deposit, British Columbia, Canada**

Information in this AIF regarding Carbon Creek is based on information provided by the Carbon Creek Report. The following is from the summary section of the Carbon Creek Report and the detailed disclosure in the Carbon Creek Report is incorporated into this AIF by reference. Readers are encouraged to review the entire Carbon Creek Report, which is filed on SEDAR at [www.sedar.com](http://www.sedar.com). Note – in the following summary “Cardero” refers to Cardero Coal.

#### **1.1 Property Description and Location**

The Carbon Creek property lies approximately 60 kilometers (km) northwest of the town of Chetwynd, BC and 40km west of the town of Hudson’s Hope. Improved forest service roads connect the property with British Columbia Highway 29 between the towns of Chetwynd and Hudson’s Hope. The CN Rail line connecting Fort St. John and Tumbler Ridge areas with Prince George passes 40km south of the property. The CN Rail line provides direct access to the ports of Vancouver and Ridley Terminals in Prince Rupert, BC. The northern end of the property is adjacent to the Williston Lake and is approximately 175km east of Mackenzie, BC by water.

#### **1.2 Tenure and Joint Venture**

The Carbon Creek property is in the Peace River Coalfield and consists of twelve Coal License Applications (and any coal licenses issued pursuant to such applications) and ten Crown Granted District Lots (CGDL), comprising a contiguous tenure parcel of 17,200 hectares (ha).

Ten of the Coal License Applications have been submitted by P. Burns Resources Ltd. (Burns) of Calgary, Alberta and, upon the issuance of any coal licenses thereunder, such licenses are to be transferred to the Carbon Creek Partnership (CCP), an Alberta partnership.

The CGDL’s, totalling approximately 2,600ha, are controlled by Peace River Partnership (PRP), an Alberta partnership. Cardero has entered into an option, and made all requisite payments, to exercise a coal lease over the coal resources on the CGDL from PRP.

A contiguous coal tenure application submitted by Alan A Johnson was processed by the province of BC and converted into four coal licenses (418174, 418175, 418176, and 418177) on June 14, 2012. Cardero has an exclusive option to purchase these licenses within four months of issuance for the sum of \$5 million (M). The option exercise period can be extended up to three months provided Cardero makes a payment of \$20,000 per month to Mr. Johnson. Cardero informed Mr. Johnson of their intent to exercise the extension option on October 10, 2012 and has made the initial \$20,000 payment.

Cardero has entered into a joint venture agreement with CCP, in which Cardero will have a 75% net proceeds interest and CCP will have a 25% net proceeds interest. Pursuant to the joint venture agreement, each joint venture partner is contributing its resource in the Carbon Creek deposit. The joint venture, known as the Carbon Creek Joint Venture, will control and operate the Carbon Creek property described above. The joint venture agreement provides that the CCP interest is a carried net profit interest which requires Cardero to fund the exploration, development, construction and operation of the mine. However, CCP will not receive any of its share of the proceeds until Cardero has recovered 100% of its investment including all development monies, exploration expenditures, and capital expenditures as well as the cost of the Johnson coal licences. Following Cardero recovering its investment, CCP is entitled to 25% of the net proceeds of the Carbon Creek Joint Venture. Cardero is the manager of the Carbon Creek Joint Venture.

Cardero Resource Corp. completed the acquisition of the balance of the outstanding shares of Cardero through a plan of arrangement that was completed on June 1, 2011.

### **1.3 Accessibility, Climate, Local Resources, Infrastructure and Physiography**

The Carbon Creek property is accessible by improved forest service roads that connect with British Columbia Highway 29 between the towns of Chetwynd and Hudson's Hope.

The nearest towns to the property are Chetwynd (population 2,500) located 60km southeast of the property and Hudson's Hope (population 1,200) located 40km east of the property. The nearest city is Fort St. John (population 18,300) located 110km east of property and is connected to the towns of Chetwynd and Hudson's Hope by Highway 29. The CN Rail line connecting Fort St John and Tumbler Ridge areas with Prince George passes 40km south of the property. The CN Rail line provides direct access to the ports of Vancouver and Ridley Terminals in Prince Rupert, BC.

The area has a continental highland climate featuring short, warm summers averaging 15.3°C (Chetwynd, July) and long, cold winters averaging -10.3°C (Chetwynd, January). Nearby Chetwynd averages 318 millimeters (mm) of rain and 1.69m of snow per year. Year-round mining operations are common in the region and winter conditions do not preclude surface or underground mining activities.

The property is located in the Inner Foothills of the Canadian Rocky Mountains. The regional topography is a belt of hills and low mountains. The highest elevation on the property is slightly over 1,600 meters (m) above sea level.

Carbon Creek flows from south to north through the property and enters the Williston Lake located in the north of the property.

### **1.4 History**

The history of coal exploration and evaluation at the Carbon Creek property prior to the recent 2010 to present programs is summarized in Table 1.1. These estimates focused on differing areas of the property and were subject to different criteria and objectives over their time span. During the period 1908 to 1951 exploration was limited to surface mapping, trenching, and sampling along creek beds. From 1970 to 1981 Trend Exploration Limited conducted an aerial mapping survey and subsequently Utah International (now BHP Billiton) and its subsidiary, Utah Mines Ltd. (Utah) completed comprehensive campaigns of exploration, including surface mapping, drilling, trenching, and bulk sampling.

**TABLE 1.1 PRE 2010 EXPLORATION HISTORY**

<b>Year</b>	<b>Company/ Individual</b>	<b>Tonnes Millions</b>	<b>Units</b>
1943	Stines	2,700	Short tons
1971	Utah	316	Short tons
1972	Utah	245	Short tons
1973	Utah	188	Short tons
1975	Utah	133	Short tons
1976	Utah	143	Metric tonnes

There was a hiatus in coal exploration from the early 80s to 2010 when Coalhunter Mining Corporation (Coalhunter) completed an eight-hole validation drilling program. The positive results permitted the Utah drilling data to be used in the estimation of a NI 43-101 compliant resource estimate. Starting in August 2011 Cardero initiated an in-fill drilling, surface mapping and bulk sampling program.

In June 2011, Norwest estimated a NI 43-101 compliant resource using historic (pre-2010) and 2010 validation drilling data only. In this report an estimated total resource of 114.0 million tonnes (Mt) of Measured and Indicated plus 89.1Mt of Inferred resources were identified from twelve coal seams within license application areas north of Eleven Mile Creek and west of Carbon Creek. This resource report was followed up by a NI 43-101 Preliminary Economic Assessment (PEA) report that was completed by Norwest in December 2011. In this PEA report, 166.7Mt of Measured and Indicated plus 167.1Mt of Inferred resources were estimated within the same area outlined in June 2011 report. The increase in resource tonnes from the previous June 2011 report is mostly attributed to decreases in minimum seam thickness and increase in maximum depth from surface for surface mining. A total of 137Mt from the PEA resource was identified by Norwest as extractable utilizing underground and surface mining methods after the application of mining loss and dilution factors.

Cardero initiated an in-fill drilling, surface mapping and bulk sampling program that was conducted from August to December, 2011. The data generated from the 2011 field program was incorporated into the geologic model which forms the basis of resource and reserve estimates presented in this report.

### **1.5 Geologic Setting and Mineralization**

The Carbon Creek property lies within the Inner Foothills structural province of western Canada and contains medium volatile bituminous coals of the Gething Formation. The Foothills belt is characterized by folded and faulted Mesozoic sediments that are in transition between the relatively gently-dipping, non-deformed formations of the Alberta Plateau to the east and the highly-deformed Rocky Mountain Trend to the west. The subsequent structural deformation resulted in increased pressures and heat flows that have imparted metallurgical properties to the coal seams.

The Gething Formation consists of dark grey mudstone, siltstone, very-fine to coarse-grained sandstone, carbonaceous mudstone, silty and sandy mudstone, coaly plant debris, minor bentonite, black shale, occasional minor tuffs in the upper part, minor conglomerates and abundant but relatively thin coal seams.

Structural interpretations of the Carbon Creek property portray a doubly-plunging syncline lying between two anticlinal belts that straddle the western and eastern boundaries of the property. The synclinal axis roughly parallels the course of Carbon Creek and plunges gently (less than 5°) to the south-southeast through the

main project area. Dips in the central portion of the property are nearly flat, ranging from 0° to 15°, increasing to up to 30° locally along the synclinal flanks in the east and west portions of the property.

For coal deposits, “mineralization” refers to coal development and coal seam stratigraphy. The coals occurring within the Carbon Creek property are thought to occur in the upper to middle sections of the Gething Formation. The coal deposition found on the property is typical of the Gething Formation, consisting of abundant coal seams, some showing favourable metallurgical properties. Although there are numerous seams throughout the property, 27 identified coal seams are developed sufficiently to be considered of economic significance. The average thickness (m) and undiluted raw coal quality for the 27 coal seams is outlined in Table 1.2.

**TABLE 1.2 AVERAGE THICKNESS AND UNDILUTED RAW COAL QUALITY OVER RESOURCE AREA**

Seam	Average Thickness (m)			Coal Quality (Air Dried Basis)						
		Minimum Thickness (m)	Maximum Thickness (m)	Moisture (%)	Ash (%)	Sulphur (%)	Volatile Matter (%)	Fixed Carbon %	Calorific Value Btu/lb	FSI
63	1.72	0.80	2.26	2.4	11.2	0.61	34.4	52.1	12,670	3
60	0.92	0.42	1.50	1.9	11.7	0.73	31.1	55.2	12,710	1½
59	0.88	0.22	2.01	2.3	14.6	0.87	31.9	52.8	12,070	2
58	1.01	0.47	1.80	2.4	15.8	0.82	28.9	52.6	11,890	2
57	0.53	0.14	1.71	1.9	19.0	1.07	31.0	47.9	11,520	2½
56	0.70	0.20	1.60	1.8	17.6	1.08	29.3	51.0	11,940	3½
55	1.55	0.60	2.50	2.4	15.2	0.66	28.3	53.8	12,130	2
54	1.39	0.60	2.22	2.3	5.4	0.79	27.7	66.8	13,720	1½
53	0.71	0.26	0.92	1.5	20.8	1.14	30.4	46.8	10,970	2
52	1.39	0.05	2.44	1.8	15.6	1.59	28.6	54.8	12,160	2½
51A	1.32	0.06	2.87	2.3	6.9	0.75	27.3	63.1	13,500	1½
51	1.44	0.45	3.50	2.2	10.5	0.69	26.7	60.5	12,870	1
48	0.49	0.06	2.29	1.9	18.1	1.24	26.9	57.1	11,820	3½
47	1.21	0.03	3.72	2.3	14.8	0.88	24.5	58.8	12,280	1½
46	1.56	0.14	3.20	2.1	8.2	0.80	26.4	63.0	13,380	2
42	0.66	0.06	2.13	1.8	12.8	0.93	28.0	59.3	12,520	4
40	1.14	0.22	3.02	1.7	14.3	1.12	27.7	55.8	12,500	4½
31	1.59	0.21	4.34	1.3	22.4	1.35	26.2	50.65	11,300	6
29	0.87	0.12	2.32	1.3	16.3	1.00	25.8	61.9	12,390	4½
28	0.88	0.19	2.48	1.2	17.8	0.88	26.6	57.9	12,010	4½
27	1.40	0.36	3.31	1.2	14.1	0.64	26.5	61.3	12,730	3½
23	0.87	0.17	2.22	1.5	26.4	0.65	21.1	50.4	10,770	3½
22	1.00	0.09	4.70	1.3	8.9	0.79	25.0	66.6	13,560	3
21	0.89	0.26	2.41	1.0	18.9	0.71	22.3	60.5	12,080	3½
18	0.81	0.18	2.38	0.8	12.2	0.74	24.4	67.6	13,290	5
15	1.96	0.18	3.52	0.9	11.7	0.52	22.4	66.4	13,400	3½
14	1.61	0.16	4.20	0.8	15.1	0.58	21.1	65.0	12,930	3
Avg	1.13	-	-	1.7	14.3	0.92	26.7	58.5	12,480	3

Values shown represent coal without out-of-seam dilution (OSD). Run-of-Mine (ROM) coal, i.e. mixed with OSD, can be beneficiated using size specific density and froth flotation separating processes to

improve coal quality. Coking properties such as Free Swelling Index (FSI) and dilation are typically improved as well through beneficiation.

## 1.6 Deposit Types

Based on the available data and existing geological interpretation, Norwest has determined coal mineralization to be of the Moderate geology type.

## 1.7 Exploration and Drilling

The periods and types of coal exploration undertaken on the property are summarised in Table 1.3. The coal exploration methods can be separated into four types: regional mapping and field sampling, aerial surveys, coring and open-hole (rotary) drilling, and bulk sampling. Types by era are summarized below.

**TABLE 1.3 EXPLORATION METHODS**

Year	Company/ Individual	Drill Holes	Exploration Activity
1908 -1945	Various		Surface mapping, and sampling, trenching
1970	Trend Exploration		Aerial reconnaissance mapping
1971 - 1981	Utah	301	Surface mapping, drilling, 2D seismic program, bulk sampling
2010	Coalhunter	8	Validation drilling (coring)
2011	Cardero	62	Surface mapping and drilling
2011	Cardero	53	Large diameter (6 inch) bulk sample drilling, 11 seams intersected

Most drilling was vertically oriented, targeting coal seams that were usually dipping between 5° and 20° from horizontal. A 2D seismic program completed in 1975 focused on the mapping of surficial glacial till nearby Nine Mile Creek. Approximately half of the holes drilled on the property were sampled core holes. The rotary holes were completed for the purposes of coal seam correlations and mapping depth of surface weathering or glacial till. The field recording of drill hole depth intervals were later reconciled with the aid of geophysical logs. Eleven angled drill holes were completed by Cardero in 2011 for the purposes of obtaining oriented core samples for detailed geotechnical logging and analyses. Bulk sampling was completed in 1976 by Utah from surface adits and by Cardero in 2011 from vertically oriented large diameter (LD) drill cores.

Cardero is conducting a multi-rig exploration program during 2012, targeted at expanding the measured plus indicated resource base and further defining potentially mineable areas within the previously defined resource areas. Results of this exploration will be incorporated into the geologic model which will be updated for the Feasibility Study.

## 1.8 Sample Preparation, Analysis and Security

The sample data used in this study is restricted to analyses of slim core samples and bulk samples and excludes pre-1971 surface-derived samples.

Field sampling, handling and transport of drill core samples by Coalhunter and Cardero were observed to be in accordance with industry best practice. Norwest believes that Utah used similar methods in their drill core sampling program in the 1970s and 1980s. The Utah samples predominantly went to coal laboratories in

United States whereas the Coalhunter and Cardero samples were sent to certified coal laboratories in both the United States and Canada.

The drill core samples were subject to a standard suite of raw proximate coal analyses that included FSI. The bulk samples were subject to more detailed analyses specifically targeted for the evaluation of the coal's washability characteristics and metallurgical properties. The coal seams that are believed to have sufficient bulk sample analyses for detailed washability and metallurgical characterization are discussed in the Processing Section of this report. Bulk sample analyses for remaining seams are either currently outstanding or are considered low tonnage seams. Metallurgical potential for these seams is limited to evaluation of raw proximate coal quality and FSI.

## **1.9 Data Verification**

Norwest personnel were directly involved in the field sampling and management of Coalhunter and Cardero drilling programs and the relevant Qualified Persons (QPs) conducted site inspections during these exploration campaigns. The Coalhunter twin hole verification drilling program was able to replicate results of the earlier Utah drilling program from the 1970s.

## **1.10 Mineral Processing and Metallurgical Testing**

### **1.10.1 Coal Handling and Preparation Plant Design**

ROM coal will be conveyed or trucked to the central coal handling and coal preparation plant (CHPP & CPP), depending on the mining location of each particular seam. The ROM coal will be stored in multiple dome-covered stockpiles with aggregate capacity of about 350,000t with live reclaim systems. The reclaimed ROM coal is fed to the coal preparation plant and will be screened. Oversize ROM will be fed to a rotary breaker rotary breaker which will destone and size the coal.

The CPP will be single-module operation rated to accept a nominal 1200 tonnes per hour (tph) of raw feed. The CPP will feature parallel, size-specific processes. The plant is intended to be robust in design with ease of maintenance as well as purpose built for northern British Columbia winters. Target coal throughput is 7.2Mtpa at a 68% operating efficiency (yield).

A heavy media bath circuit will wash the 150mm x 10mm stream, followed with a clean coal crusher, *after wetting*, to reduce the top size to pass 50mm or other market specification. This was chosen to avoid the need for a thermal dryer.

Parallel to the heavy media bath will be three additional processes. A large-diameter heavy media cyclone will wash the 10mm x 1mm stream along with reflux classifiers for the 1mm x 0.25mm and two-stage froth flotation for the minus 0.25mm streams. The latter will employ column flotation for the minus 45 micron range of material; this can be bypassed when processing lower value thermal coals.

Each sub-product stream will employ high performance mechanical dewatering centrifuges specific to each particle size group. Pressure filtration will be used on the minus 45 micron material. With the available washability data, total product moisture values for each seam are projected to be below 8% by weight.

The washed coal will be conveyed to a series of three domed stockpiles depending on product type. Emergency overflow stockpiling systems will also be available. Product coal will be conveyed to the barge loader on Williston Lake.

### **1.10.2 Sampling and Testing**

An exploration program was conducted by Cardero. This program included a select number of large diameter (150mm) cores for the purpose of obtaining representative washability and carbonization data. Only one drill-core per seam was obtained. At the time of this report Seams 14 and 15 were being drilled but no laboratory results were available.

Norwest developed a washability study testing protocol to ensure consistent laboratory reporting results. The washability testing program featured a comprehensive attrition regimen prior to conducting any float-sink and flotation testing. Such pretreatment procedures help ensure consistency as well as improving washability prediction results.

### **1.10.3 Seam Characterization**

Samples of each of the major seams collected in the bulk large diameter (LD) core drilling program were assembled as simulated seam product (SSP). These SSPs are small bulk clean coal products resulting from analyses of the washability results. Each seam SSP was analyzed for caking and plasticity, petrographics, and in some cases, carbonization tests. As noted above, primary data for Seams 14 and 15 are not yet available; reporting of these data was derived from secondary sources.

The mined coal from Carbon Creek will likely fall into two main logical groups: medium volatile (mid-vol) and high volatile (high-vol) bituminous coals.

Most of the mid-vol coals seams, i.e. the lower seams 14, 15, 27, 31 and 40, will be marketed as hard coking coals (HCC). While Seam 40 is currently included in this group, the most recent analytical, petrographic and carbonization results indicate this may be a semi-soft coking coal. However, previous Utah washability data from 1976 indicates that Seam 40 is a “black and white” coal with a potential product ash of 6% (ad) and is dissimilar from the current primary data.

These inconsistencies indicate a possible seam correlation error. To resolve this issue, petrographic fingerprint comparisons with other drill cores into Seam 40 are planned. The salient clean coal quality data based on the laboratory results for Seams 14 through 40 are listed in Table 1.4.

The remaining seams above Seam 40 are targeted as semi-soft or pulverized coal injection (PCI) coals. Of particular note are Seams 46 and 47. These mid-vol coals are low ash and may be suitable candidates for a PCI market. The key quality characteristics based on laboratory results of these upper seams can be found in Table 1.5.

**TABLE 1.4 HARD COKING COAL QUALITY CHARACTERISTICS FROM SSP**

Parameter	Basis	Seam				
		40	31	27	15	14
<b>Proximate analysis</b>						
Moisture	ad	0.8%	1.1%	0.7%	1.0%	1.0%
Ash	ad	8.5%	5.0%	6.1%	3.1%	5.4%
Volatile matter	ad	31.3%	27.2%	26.4%	25.6%	23.0%
Volatile matter	dmmf	35.0%	29.1%	28.6%	26.9%	24.8%
Fixed carbon	ad	59.5%	66.8%	66.8%	70.3%	70.6%
Sulphur	ad	1.3%	0.7%	0.8%	0.9%	0.8%
Phosphorus	ad	0.049%	0.036%	0.096%	0.060%	0.125%
<b>Hardness index (HGI)</b>		~55	~60	~68	~69	~71
<b>Caking and Plasticity Tests</b>						
<b>CSN/FSI - Lab Results CSN/FSI</b>		7	6	5 1/2	4 1/2	5 1/2
<b>- Process Simulated</b>		6 1/2	5 1/2	5 1/2	5 1/2	5 1/2
<b>CSN/FSI - Process Simulation adjusted</b>					7	7
<b>Gieseler Plastometer Test</b>						
Max fluidity	ddpm	21	6	5	1.9	3
<b>Dilatometer Test (Ruhr)</b>						
Max contraction	%	20%	22%	22%	23%	22%
Max dilation	%	18%	-12%	-	-	-
<b>Petrographic analysis</b>						
<b>Vitrinite reflectance</b>						
mean maximum, R <sub>0max</sub>	%	0.94%	1.04%	1.16%	?	?
<b>types</b>						
V-8		21%	1%			
V-9		67%	18%			
V-10		12%	65%	12%	1%	
V-11			16%	70%	11%	10%
V-12				18%	87%	77%
V-13					1%	10%
V-14						3%
<b>Composition Balance Index</b>		0.38	0.85	0.83	1.63	1.83
<b>Base – Acid Ratio of Ash</b>		<b>0.16</b>	<b>0.18</b>	<b>0.05</b>	<b>0.35</b>	<b>0.14</b>
<b>Carbonization</b>						
<b>Petrographic Prediction</b>						
DI 30/15 (JIS)		86.2%	93.8%	94.2%		
Stability (ASTM)		31.0%	54.0%	61.0%		
<b>Coke Tests</b>						
CSR		42.3%	53.3%	64.1%		
CRI		36.6%	34.0%	26.3%		
<b>ASTM Coke Tumbler Test</b>						
Stability					48%	54%
Hardness					63.0%	54.0%

**TABLE 1.5 SEMI-SOFT COKING / PCI COAL CHARACTERISTICS**

		Seam									
Parameter	Basis	58B	58A	55	54	52	51A	51	47	46	
<b>Proximate analysis</b>											
Moisture	ad	1.5%	1.1%	1.2%	0.9%	1.3%	1.0%	1.5%	1.0%	0.9%	
Ash	ad	6.0%	4.5%	4.6%	2.9%	6.7%	3.0%	5.8%	5.0%	2.5%	
Volatile matter	ad	30.9%	31.3%	30.6%	29.1%	31.8%	29.2%	30.2%	25.5%	26.5%	
Volatile matter	dmmf	33.7%	33.5%	32.8%	30.5%	35.1%	30.6%	32.9%	27.4%	27.6%	
Fixed carbon	ad ad	61.6%	63.2%	63.6%	67.2%	60.2%	66.8%	62.5%	68.5%	70.1%	
Sulphur	ad	0.8%	0.9%	0.7%	0.8%	1.3%	0.7%	0.8%	1.2%	0.8%	
Phosphorus		0.053%	0.009%	0.088%	0.018%	0.036%	0.017%	0.034%	0.022%	0.005%	
<b>Hardness index (HGI)</b>		~48	~52	~48	~47	~50	~52	~52	~52	~52	
<b>Caking and Plasticity Tests</b>											
<b>CSN/FSI - Lab Results CSN/FSI</b>		3	3	2 1/2	2	3 1/2	2	2 1/2	2	2 1/2	
<b>- Process Simulated Gieseler</b>		3	3 1/2	2 1/2	2 1/2	3 1/2	3 1/2	3	2 1/2	3	
<b>Plastometer Test Max fluidity</b>											
<b>Dilatometer Test (Ruhr)</b>		ddpm									
Max contraction		1.9	0.6	1.7	1.5	2.5	1.0	1.5	0.7	0.5	
Max dilation	%	27%	13%	25%	26%	28%	17%	3%	5%	15%	
	%	-	-	-	-	-	-	-	-	-	
<b>Petrographic analysis</b>											
<b>Vitrinite reflectance</b>											
mean maximum, R <sub>max</sub>	%	0.90%	0.89%	0.94%	0.96%	0.89%	0.91%	0.95%	1.01%	0.99%	
<b>V-types</b>	%										
V-7			6%			10%	2%				
V-8	%	47%	49%	20%	14%	48%	45%	21%	9%	14%	
V-9	%	46%	41%	69%	55%	40%	48%	61%	41%	41%	
V-10	%	7%	4%	11%	31%	2%	5%	18%	34%	33%	
V-11	%								16%	12%	
V-12	%										
<b>Composition Balance Index</b>		%	0.62	0.57	0.7	1.28	0.71	1.17	0.93	1.67	1.35
<b>Base – Acid Ratio of Ash</b>			0.06	0.27	0.07	0.06	0.33	0.07	0.63	0.12	0.14
<b>Carbonization</b>											
<b>Petrographic Prediction</b>											
DI 30/15 (JIS)		89.6%	86.2%	91.4%	91.7%	89.6%	90.4%	92.6%	89.6%	92.0%	
Stability (ASTM)		38.0%	31.0%	43.0%	44.0%	38.0%	40.0%	47.0%	38.0%	45.0%	
<b>Coke Tests</b>											
CSR										1.1%	
CRI										60.8%	

#### 1.10.4 Projected Product Quality

Norwest applied the Carbon Creek washability data collected from the LD cores and other historical sources to its Limn flowsheet simulation software to develop the process design for the CPP and plausible product quality. The target product ash contents were determined by maintaining heavy media densities within practical and industry norms. Most of the coal seams, with the exception of Seam 40, display excellent separation characteristics.

Table 1.6 lists the projected product qualities for the hard coking coal seams.

**TABLE 1.6 HARD COKING COAL TARGET PRODUCT QUALITY**

Seam	Inherent Moisture	Surface Moisture	Total Moisture	Ash (ar)	Ash (ad)	Sulphur (ad)	FSI
14	1.0	6.8	7.7	5.5	6.0	0.72	6-7
15	1.0	5.9	6.8	4.6	5.0	0.84	6-7
27	0.7	5.7	6.4	5.6	6.0	0.77	6-7
31	1.1	5.9	7.1	5.6	6.0	0.67	6-7
40	0.8	6.4	7.1	7.9	8.5	1.24	6-7

Table 1.7 lists the projected product qualities for the candidate PCI, semi-soft coking and/or thermal coal seams.

**TABLE 1.7 CANDIDATE PCI, SEMI-SOFT COKING & THERMAL COAL TARGET PRODUCT QUALITIES**

Seam	Inherent Moisture	Surface Moisture	Total Moisture	Ash (ar)	Ash (ad)	Sulphur (ad)	FSI
46	1.3	5.6	6.8	2.3	2.5	0.81	3
47	1.0	6.0	6.9	4.7	5.0	1.18	2½
51	1.5	5.3	6.7	5.6	6.0	0.81	3
51a	1.0	4.9	5.9	2.8	3.0	0.71	3½
52	1.3	5.0	6.2	5.6	6.0	1.28	3½
54	0.9	4.7	5.6	2.8	3.0	0.81	2½
55	1.2	4.1	5.3	4.3	4.5	0.68	2½
58a	1.1	5.7	6.7	4.7	5.0	0.91	3½
58b	1.5	4.7	6.1	5.2	5.5	0.83	3

### 1.11 Mineral Resource Estimate – Coal Resources

A resource estimation of the Carbon Creek property was completed in accordance with the procedures and criteria of Geological Survey of Canada (GSC) Paper 88-21 as required by NI 43-101. The coal resources were reported from a MineSight™ software generated 3D block model. Numeric seam identifiers, ore volumes and resource limiting criteria were coded into the 3D block model from gridded surface files representing the extent of the surface and underground coal resource in accordance with GSC Paper 88-21 guidelines and within the Cardero license application areas. The mineral resource estimates for surface and underground moderate geology- type coal reported from the current Carbon Creek geologic model are outlined in Table 1.8. The resource statement is current as of September 20, 2012.

Carbon Creek has an estimated 468Mt of in-place coal resources in the measured and indicated categories plus 232Mt in the inferred category. Table 1.8 breaks these resources into surface and underground tonnes.

**TABLE 1.8 CLASSIFICATION OF RESOURCE – CARBON CREEK PROPERTY – SEPTEMBER 20, 2012**

Deposit Type	ASTM Coal Rank	Measured (Mt)	Indicated (Mt)	Inferred (Mt)
Surface	mvB	197	31	32
Underground	mvB	143	97	199
<b>Total</b>	<b>mvB</b>	<b>468</b>		<b>232</b>

The current resource estimate represents a substantial increase in coal resource tonnes from the Norwest’s PEA estimates (2011). The increase is due to inclusion of additional drill hole data in the resource calculations that was previously not available to Norwest. This data was used to identify an additional 14 seams of economic potential and provided sufficient spatial coverage for the expansion of the resource area to the east of the Carbon Creek and south of Eleven Mile Creek.

### 1.12 Mineral Reserve Estimates

Based on the geological model developed by Norwest a general mining layout was prepared for surface, highwall and underground mining areas. Applying mining parameters, as discussed in Section 16 and economic analysis as discussed in Section 22 of this report, a coal reserve tonnage estimate was developed for each mining method as shown in Table 1.9.

**TABLE 1.9 COAL RESERVES THROUGH YEAR 20 – SEPTEMBER 20, 2012**

Mining Method	ROM Tonnes (millions)	Saleable Tonnes (millions)
Surface	56	38
Highwall	14	7
Underground	52	33
<b>Combined Total</b>	<b>121</b>	<b>78</b>

The accuracy of resource and reserve estimates is, in part, a function of the quality and quantity of available data and of engineering and geological interpretation and judgment. Given the data available at the time this report was prepared, the estimates presented herein are considered reasonable. However, they should be accepted with the understanding that additional data and analysis available subsequent to the date of the estimates may necessitate revision. These revisions may be material. There is no guarantee that all or any part of the estimated resources will be recoverable. **Mineral resources are not mineral reserves and there is no assurance that any of the additional mineral resources in this report that are not already classified as reserves will ultimately be reclassified as proven or probable reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability.**

### 1.13 Mining Methods

The nature of the geology of the Carbon Creek Project lends itself to employing several mining methods to maximize the recovery of the resource and the resultant project economics. The proposed mining methods include underground room and pillar mining with continuous miners, surface contour and area mining using hydraulic excavators and trucks and highwall mining. After a short ramp up period, all mining methods will be employed concurrently throughout the 20 year mine plan.

Surface mining is projected to occur in two areas designated as the Northern Surface Mine and the Central Surface Mine. The Northern Surface Mine is adjacent to Seven Mile Creek on the north side of the Carbon Creek property. The Central Surface Mine is just north of Nine Mile Creek. The underground mining operations are projected to have two sets of portals approximately three kilometers north of Seven Mile Creek and three sets of portals approximately two kilometers south of Seven Mile Creek. Highwall mining will occur throughout the surface mining areas along the outcrops of the various seams after contour mining has taken place.

Surface contour mining will begin first in 2014 simultaneously in the North and Central areas which will allow areas for highwall and underground mining to be developed. Surface contour mining will continue throughout the Life-of-Mine (LOM). Surface area mining will commence in 2016 in both the North and Central areas of the mine and will also continue for the LOM. Highwall mining will also commence in 2016 in both areas of the mine. Underground mining will commence in 2016 in the North area of the lease with one continuous miner (CM) unit operating and ramping up to six CM units by 2019.

ROM production from the Northern Surface Mine, including highwall mining, ranges from 1.1Mtpa to 1.8Mtpa and averages 1.4Mtpa over the mine life. The ROM strip ratio averages 12 to 1. Overburden will be removed using two 22m<sup>3</sup> class excavators and eight 173t class haul trucks operating on a seven day, 20 hour per day schedule. One highwall mining unit will operate producing 450,000tpa. Clean coal production is expected to be hard coking coal except for a small amount of thermal coal produced from the oxidized zone along the crop lines. Clean coal production ranges from 0.6 to 1.3Mtpa and averages 0.9Mtpa over the LOM.

ROM production from the Central Surface Mine, including highwall mining, ranges from 1.4Mtpa to 3.8 Mtpa and averages 2.3Mtpa over the LOM. The ROM strip ratio averages 7 to 1. Overburden will be removed using two 22 cubic meter (m<sup>3</sup>) class excavators and eight 173 tonne class haul trucks operating on a seven day, 20 hour per day schedule. One highwall mining unit will operate producing 450,000 tonnes per year. Clean coal production is expected to be semi-soft coking coal except for a small amount of thermal coal produced from the oxidized zone along the crop lines. Clean coal production ranges from 0.8 to 3.0Mtpa and averages 1.5Mtpa over the LOM.

Production from the underground mine operations is projected from five separate seams. ROM production varies with coal thickness and seam gradient. Underground mining operations are planned to be conducted to a minimum coal seam thickness of 1.2m. Underground mining initiates with Seam 15 in 2016 and expands with Seam 14 in 2018 via separate sets of portals for each seam. The portal locations for Seam 15 and Seam 14 are approximately three kilometers north of Seven Mile Creek. Production starts with one CM unit in 2016 and ramps up to six CM units by 2019. As mining reserves in Seam 15 and Seam 14 are depleted beginning in 2025, CM units are re-located south to the three sets of portals for seams 31, 27 and 40. Provisions for reduced productivity due to the initial low experience levels of the underground mine workforce has been included in the project economics for the first three years of underground mining operations. ROM production, subsequent to the three year ramp up, ranges between 2.6Mtpa to 3.3Mtpa and averages 3.0Mtpa. Clean coal saleable product from the underground mining operations is expected to be hard coking coal and is projected to range from 1.6Mtpa to 2.1Mtpa with an average saleable production rate of 1.9Mtpa.

ROM and clean coal production by area and mining type is summarized in Table 1.10 below.

**TABLE 1.10 LIFE-OF-MINE PRODUCTION BY AREA AND MINING TYPE**

	<b>ROM Tonnes (millions)</b>	<b>Saleable Tonnes (millions)</b>
<b>Northern Surface Mine</b>		
Area Mining	17	11
Contour Mining	5	3
Highwall Mining	5	3
Total Northern Surface Mine	27	17
<b>Central Surface Mine</b>		
Area Mining	27	19
Contour Mining	8	5
Highwall Mining	8	4
Total Central Surface Mine	43	28
Underground Mines	51	33
<b>Combined Total</b>	<b>121</b>	<b>78</b>

#### **1.14 Project Infrastructure**

Coal from the underground mine portals in the north and south of the property will be delivered to the coal processing plant, located at Carbon Inlet, by overland conveyors to two hard coking coal ROM storage domes, each with a capacity of 90 kilotons (Kt). Each of the streams will be fed into a rotary breaker for destoning prior to delivery to the ROM storage domes. Semi soft / PCI ROM from the Northern and Central surface mines as well as the contour mining operations will be trucked to the truck tip, and will be fed into either the single thermal or two semi soft / PCI coal ROM storage domes (capacities of 25Kt and 70Kt respectively), after destoning in a rotary breaker. Provision has been made for emergency ROM stockpile areas in addition to the storage domes.

Following beneficiation, the respective clean coal products will be fed into hard coking, semi soft / PCI and thermal storage domes of 80Kt, 50Kt and 2Kt respectively (or emergency stockpiles) prior to loading onto barges. Product logistics will be controlled from the plant site to ensure that clean coal is fed directly onto trains at Mackenzie without the need for domes or stockpiles at the rail loop.

The administration block, mine dry, maintenance shop and warehouses will be located adjacent to the plant site at Carbon Inlet. Each of the underground mine portals will be serviced by satellite warehouses and personnel facilities.

Power for the mining operation will be fed via a BC Hydro line from the electricity supply facility at the WAC Bennett Dam. Distribution on the mine site will be via a main substation located at the plant site, and further distribution through appropriately located substations at each of the mining operations. Maximum power demand will range from 8 megawatt (MW) at the commencement of the mine to approximately 43MW at full production.

Water for the operation will be sourced from Williston Lake. However, maximum use will be made of water captured from dirty water runoff drains and plant recycle water.

Access to the mine site will be via the Johnson Creek Forestry Service Road which will be upgraded to accommodate the anticipated high volume of personnel transport and material delivery vehicles.

## 1.15 Market Studies and Contracts

### 1.15.1 Market Study

An independent market analysis was prepared and provided by Kobie Koornhoff Associates. A summary of the results and conclusions from the report dated September 17, 2012 are below.

Based on washability testing of coals from the Carbon Creek property, three products have been identified for sale onto the seaborne coal market:

- Carbon Creek HCC, comprising the Lower Seams (Seams 14-40)
- Carbon Creek high volatile metallurgical coal (HV Metcoal), comprising the Upper Seams (Seams 46-63), which would be suitable either as a semi-soft coking coal (SSCC), or for injection into the blast furnace as a PCI
- Carbon Creek thermal coal, comprising oxidized or partially oxidized coal.

The quality characteristics of the three Carbon Creek products were compared to a series of benchmark coals traded internationally, to arrive at appropriate pricelines for each of the three products:

- Carbon Creek HCC is evaluated at a US\$10/t discount to the generally reported coking coal Headline Pricing
- Carbon Creek HV Metcoal is benchmarked on the basis of both the semi-soft and the PCI coals. As a High Vol PCI coal, the price is taken as 85% of the price of the prime Low Volatile PCI coals; as a High Vol SSCC, it is benchmarked at a US\$8/t discount off the price of the major semi-soft coals.
- Carbon Creek Thermal is compared with New South Wales (NSW) thermal coals contracted to the Japanese Power Utilities (JPU); based on heat value differentials, Carbon Creek Thermal is priced at a 12% premium to the NSW thermal coals.

The recent coking coal settlement for the October – December 2012 quarter represents the lowest price since the onset of the quarterly price regime. Only a gradual improvement is expected over the next 12 months as the production cutbacks announced by Australian and US majors start to take effect, and assuming a modest recovery in demand flowing from the stimulus package announced by the Chinese government.

A series of analysts' price forecasts were combined with an independent price outlook to arrive at the following long term price scenarios for the Carbon Creek products:

**TABLE 1.11 LONG TERM PRICE FORECAST**

<b>Carbon Creek Coals – Long Term Price Forecast</b>			
<b>(US\$ per tonne)</b>	<b>Low Case</b>	<b>Base Case</b>	<b>High Case</b>
Hard Coking Coal	165	200	217
High Vol Metcoal	113	137	148
Thermal Coal	96	115	119

## **1.15.2 Contracts**

Cardero has entered into a contract with Ridley Terminals which provides port capacity for Cardero for a portion of the projected coal sold from the Carbon Creek Property. The agreement has a 15 year term from January 1, 2014 to December 31, 2028, with provision to extend the term by three years to December 31, 2031. Contract volume is set at 500,000tpa through 2014, increasing to 900,000tpa in 2015. The agreement with RTI allowed the port authority an option to wait before committing to the contracted tonnage. This commitment has subsequently been provided to Cardero by RTI.

## **1.16 Environmental Studies, Permitting, and Social or Community Impact**

### **1.16.1 Safety and Health**

Cardero commits to the application, fostering and continual development of a safety culture for all employees, consultants and contractors, the tracking and reporting of health and safety performance measures and progress towards the development of corporate and operation-specific Health and Safety Management System, to be established throughout mine development and operations, consistent with the OHSAS 18001 standard. The H&S policy has been applied to all field activities undertaken during the 3-year exploration drilling program, and elements of a more comprehensive and widely-applied corporate H&S program have, and continue to, evolve, as the Project expands in scope.

### **1.16.2 Environment, Permitting & Sustainable Development**

Cardero will develop corporate and operation-specific Environmental Management Systems throughout mine development and operations, consistent with the ISO 14001 standard; and apply the appropriate standards of environmental performance consistent with Mining Association of British Columbia Environmental Principles and the Mining Association of Canada's Toward Sustainable Mining elements.

Production at the proposed Carbon Creek Metallurgical Coal Mine will exceed 250,000tpa and will therefore be regulated under the *BC Environmental Assessment Act (BCEAA)*. Additionally, large resource projects are subject to regulation by several provincial regulatory programs including those administered by the Ministry of Energy and Mines (MEM), and the Ministry of Environment (MOE). Depending on the type of operation and potential impacts on natural resources or infrastructure, coordination with the federal agency responsible for completing Environmental Assessments (EA) – specifically, the Canadian Environmental Assessment Agency (CEAA) under the *Canadian Environmental Assessment Act* - will also likely be required. If the project fails to qualify for exemption under the new *Designated Project Regulations* there may be requirements for permitting by one or more of the federal agencies. Applicable federal statutes that may trigger the need for permits include: the *Fisheries Act* (Fisheries and Oceans Canada (DFO)) the *Migratory Birds Act*, the *Navigable Waters Protection Act* and the *Explosives Act* (Natural Resources Canada). The *BCEAA* and *CEAA* processes were initiated with the submission and acceptance of a Project Description. This process will ultimately conclude with the issuance of an Environmental Assessment Certificate (EAC) that will allow the project to move forward to obtain permits from other regulatory agencies as set out below.

The key component of the Carbon Creek EA process is the collection of environmental baseline data within the Carbon Creek Project area, as required by the pre-application EA process. Programs initiated to-date include:

- Fisheries and wildlife monitoring
- Long-term water and sediment quality sampling and analysis
- Long-term monitoring programs for baseline climate, air/noise, and hydrology
- Hydrogeological studies

- Socioeconomic studies
- Paleontological and archaeological studies (an Archaeological Overview Assessment (AOA) has been completed; an Archaeological Impact Assessment (AIA) is now in progress).

The Carbon Creek Project Description has been completed and accepted (i.e., a Section 10 Order was issued by EAO on May 9<sup>th</sup>, 2012), and a first draft Application Information Requirements (AIR) for an EAC application was submitted on July 5<sup>th</sup>, 2012. Completion of the AIR - subsequent to further review by a technical Working Group and public consultation - is anticipated by Q4 of 2012, followed by the submission of an effects assessment report (Q1 2013), and submission of the final EAC Application by June 2013.

Cardero is placing special emphasis on the evaluation of a number of potential environmental effects, based on several criteria (e.g., similar issues in the same geographical area, other coal mines, etc.), specifically:

- Potential ecological effects of selenium, sulphate and nitrate on aquatic biota
- Effects of mining activities on local bull trout (a blue-listed species) populations
- Metal leaching/acid rock drainage potential from ore
- Human health impacts of coal dust
- Archaeological concerns
- Habitat displacement impacts on large ungulates.

As part of the EA, a closure and reclamation plan will be developed, in order to assure the long-term sustainability of the property. Moreover, when Carbon Creek begins active operations, an Environmental Management Plan (EMP) will be developed as the mine is constructed and begins to operate. In addition to completing the EA process, other permits must be obtained. While the EA process may allow for 'concurrent' processing of approvals with the EA, this does not occur until later in the EA process. Some of the key permits include:

- *Mines Act* permit (MEM) - to include details of mining and reclamation plans, as well as provisions for environmental protection. The permit will also require posting of appropriate financial securities to cover reclamation and closure costs.
- *Environmental Management Act* for waste water discharges combined with the *Waste Management Act*, (MOE; Environmental Protection Division). Air quality impacts and associated approvals are regulated under the *Environmental Management Act* and the corresponding *Waste Discharge Regulations*. A permit issued under the *Environmental Management Act* incorporates enforceable standards that apply to the coal mining industry.
- *Water Act* (MOE; Water Stewardship Division) - water license approval to divert and use surface water will allow the license holder to divert water for the project.
- *Fisheries Act (S. 37) (DFO)* - based upon the use of a transportation route within Williston Lake, and potential impact to fish habitat in the Lake and tributaries of Williston Lake including Carbon Creek, a federal permit under the Act could be required for the project. The need for this permit would trigger federal involvement in the EA process.

The certification and permitting schedule, which will encompass most of the project permits required, is anticipated to be as follows:

Environmental Assessment Certificate (EAC)

Submission of EA report/application to the EAO and CEAA	June 2013
Review by EAO and CEAA	June 2013– May 2014
Decision from Minister of Environment	June 2014

Permitting

Submission of applications for construction-phase permits and associated permits	June 2013
Submission of applications for operational and closure-phase permits and associated mine and effluent permits	December 2013
Construction-phase permit issuance	February 2014
Operational-phase permits issuance	August 2014

### **1.17 Community and Stakeholder Consultation**

Cardero will establish mutually-beneficial relationships with the communities in which it operates; maintain knowledge of, and sensitivity to, the needs of neighboring communities and local cultures, in particular, First Nations; consult with communities to develop a process to manage communications, activities and address local concerns; and, apply a local preference hiring policy.

In conjunction with other EA activities, Cardero has undertaken extensive consultation and engagement with provincial and federal government representatives, First Nations and local community stakeholders. Consultations with local and regional First Nations (FN) groups are required as part of the EA process. The level of consultation will vary depending upon whether the lands are within, or have any impacts on, traditional territories identified under Treaty 8 (or other FN groups), or if the project is outside of these lands and covered under Aboriginal Rights and Title requirements. Successful FN consultation provides the groundwork for obtaining a social license for the project to operate. Therefore, consultation with FNs similar to those discussions with other stakeholders will be required.

### **1.18 Capital and Operating Costs**

#### **1.18.1 Capital**

Assumptions regarding capital expenditures are detailed in Section 21 of this report. All dollar values throughout this report are in US\$. Capital required to bring the project to full production total \$475M and include coal handling, coal preparation, train loadout facilities, surface facilities, site access and power, and mine development and contingency. Capital requirements to first production total \$217M. All major surface and underground mining equipment is assumed to be leased with varying terms for underground and surface mining equipment. The total value of the mining equipment being leased is \$180M. Annual lease payments at full production total \$27M and \$19M for surface equipment and underground equipment respectively for the duration of the respective five and three year terms. All equipment is assumed to be purchased at the end of the lease term for the stated residual value. Replacement equipment is assumed to be leased under the same terms.

Total capital excluding leased equipment is \$839M over the LOM. Lease payments for mining equipment total \$338M over the LOM.

### 1.18.2 Manpower

Manpower requirements to operate and maintain the surface and underground mines and coal processing plant are shown in Table 1.12.

**TABLE 1.12 MANPOWER REQUIREMENTS –  
SURFACE MINE AND UNDERGROUND MINE AT STEADY STATE**

Area	Hourly Workers	Management	Totals
Mine Management and Administration	0	41	<b>41</b>
Surface Mine	244	36	<b>280</b>
Underground Mine	397	91	<b>488</b>
Prep Plant	58	9	<b>67</b>
<b>Totals</b>	<b>699</b>	<b>177</b>	<b>876</b>

### 1.18.3 Operating Costs

Operating costs have been estimated for the surface, highwall and underground mines based on required equipment hours, labour hours and materials and supplies and estimated contract rates as applicable to each mining method. These costs are shown in Table 1.13 on a unit basis for each mine and the CHPP.

**TABLE 1.13 CASH OPERATING COSTS**

Cost Area	\$/ROM tonne	\$/Clean tonne
Surface Mining – Northern Area	51	75
Surface Mining – Central Area	33	48
Highwall Mining	17	42
Underground Mining	44	69
Coal Handling & Prep	4	
Sub-Total (Includes equipment lease payments)		61
Indirect Costs		13
<b>Total Cash Costs</b>		<b>74</b>

### 1.18.4 Economic Analysis

Norwest prepared an economic model in US\$ that captures direct costs, including labor, equipment, materials, production taxes and royalties. Indirect costs including corporate overhead, mineral tax and property tax were added to the model along with depreciation of purchased equipment and facilities. A cash flow calculation was prepared on an after tax basis using an average FOB price of \$174 per saleable tonne and an average clean coal production of 4.1Mtpa. Clean coal production increases from 0.75Mtpa to 3.5Mtpa over the first five years of production and then averages 4.4Mtpa, ranging from 2.7Mt to 5.2Mt, for the remaining mine life of 15years.

Pre-production cash outflows total \$243M over the estimated two year initial development and construction period. Production begins in Q4 2014 with coal being sold in 2015. Construction continues through 2015 with additional cash outflow of \$210M for a total of \$453M through complete development and construction.

Cash flow is positive beginning in 2016 and payback occurs approximately 7 years after the initial cash outflow. After payback and providing for the net profits interest, cash flow averages \$145M per year for a total net cash flow of \$2.1B over the LOM for Cardero's 75% interest.

The internal rate of return (IRR) for Cardero's 75% interest in the Carbon Creek Joint Venture is approximately 24%. Net present values (NPV) at 8%, 10% and 12% are shown in the Table 1.14.

**TABLE 1.14 NPV RESULTS CARDERO'S 75% INTEREST (\$M)**

<b>Interest Rate</b>	<b>8%</b>	<b>10%</b>	<b>12%</b>
NPV	\$633	\$466	\$338

The internal rate of return for the entire property is approximately 27%. Net present values at 8%, 10% and 12% are shown in Table 1.15.

**TABLE 1.15 NPV RESULTS 100% INTEREST (\$M)**

<b>Interest Rate</b>	<b>8%</b>	<b>10%</b>	<b>12%</b>
NPV	\$878	\$658	\$492

### 1.18.5 Sensitivity Analysis

Sensitivity of the economics regarding coal sales price, direct mining costs capital expenditures and equipment leasing were evaluated. The results are summarized in Table 1.16.

**TABLE 1.16 SENSITIVITY ANALYSIS (\$M)**

	<b>IRR</b>	<b>NPV at 8%</b>	<b>NPV at 10%</b>	<b>NPV at 12%</b>
<b>Base Case Pricing</b>	24%	\$633	\$466	\$338
<b>High Case Pricing</b>	27%	\$819	\$616	\$462
<b>Low Case Pricing</b>	13%	\$192	\$99	\$31
<b>10% Increase in Direct Mining Costs</b>	22%	\$551	\$397	\$281
<b>10% Increase in Capital Costs</b>	22%	\$605	\$438	\$312
<b>Buy vs Lease Equipment</b>	22%	\$620	\$447	\$315

Table 1.17 summarizes the key results of this report.

**TABLE 1.17 CARBON CREEK PROJECT KEY PARAMETERS**

Resource Measured & Indicated	Mt	468
Resource Inferred	Mt	232
Underground Reserve Tonnes	Mt	51
Mean Plant Recovery	%	64%
Underground Clean Coal Tonnes	Mt	33
Surface Mineable Tonnes	Mt	70
Mean Plant Recovery	%	65%
Surface Clean Coal Tonnes	Mt	45
<b>Total Clean Coal Tonnes Produced</b>	<b>Mt</b>	<b>78</b>
Surface Mining Minimum Seam Thickness	M	0.6
Surface Mining Average Strip Ratio – Northern Surface Mine	Ratio	12:1
Surface Mining Average Strip Ratio – Central Surface Mine	Ratio	7:1
Underground Mining Minimum Seam Thickness	M	1.2
Underground Mining Overall Extraction	%	53
Full Production Rate Clean Coal per Year (2016-2034)	Mt/yr	4.1
Capital Costs to First Production – (With Equipment Leasing)	M\$	\$217
Capital Costs to Full Development	M\$	\$475
Sustaining Capital LOM	M\$	\$364
Value of Leased Equipment	M\$	\$180
Northern Surface Mine OPEX ROM Basis	\$/t	51
Central Surface Mine OPEX ROM Basis	\$/t	33
Highwall Mining OPEX ROM Basis	\$/t	17
Underground Mine OPEX ROM Basis	\$/t	44
Northern Surface Mine OPEX Clean Coal Basis	\$/t	75
Central Surface Mine OPEX Clean Coal Basis	\$/t	48
Highwall Mining OPEX Clean Coal Basis	\$/t	42
Underground Mine OPEX Clean Coal Basis	\$/t	69
Processing OPEX	\$/t	4
Average direct mine costs (incl. equipment lease) Clean Coal Basis	\$/t	61
Haul, Rail & Port Costs	\$/t	37
FOB Cost	\$/T	98
FOB Price Long-Term Base Case	\$/t	174
Gross Revenue LOM	M\$	13,620
Operating Costs LOM	M\$	9,001
Pre-Tax Operating Cash Flow LOM	M\$	4,619
Post-Tax NPV 8 (75% Basis)	M\$	633
Internal Rate of Return (75% Basis)	%	24
Post-Tax NPV 8 (100% Basis)	M\$	878
Internal Rate of Return (100% Basis)	%	27
<b>Total Undiscounted Post-Tax Cash Flow (75% Basis)</b>	<b>M\$</b>	<b>2,133</b>

### 1.19 Significant Factors and Risks

The exploration and future mining operation does not utilize unique technologies that might be subject to challenge by third parties. However, the project will need to work its way through the EA process, as well as other permitting processes. FN consultation is a critical element of the project development that requires a great deal of commitment, so that consensus among parties is reached to support the long-term sustainability of the project. Based upon information provided by Cardero, engagement has been initiated to obtain FN support for early project activities (i.e., exploration program). This engagement continues. FN members are

employed in the ongoing exploration program, and there is a plan to involve FN members in environmental monitoring and other future activities. Also, hiring and training miners, particularly underground miners, will be challenging given the tight labor market in the region. Environmental considerations will need to be comprehensively addressed during the EA process; water quality is likely to be a focus of study. Additionally, direct and indirect impacts to wildlife populations will be an important issue addressed during the EA process. None of these issues appear to represent insurmountable hurdles, and given a pro-active approach with good process management, the project should be able to advance beyond this PFS to the Feasibility stage of investigation.

## **1.20 Interpretation and Conclusions**

### **1.20.1 Conclusions**

Based on the results of this PFS, Norwest has reached the following conclusions:

- There are sufficient mineable tonnes of various grades of metallurgical and thermal coal in the Carbon Creek resource area to produce approximately 4.1Mtpa saleable coal for a 20 year period.
- No fatal flaws have been identified at this stage of project development.
- Pre-production capital costs, estimated at \$217M will be required to bring this project into production. Additional capital estimated at a total of \$475M will be required to bring the project to full production. Sustaining capital of \$364M will be required over the remaining life of the mine.
- Operating costs per tonne of clean coal average \$74.
- At the base price scenario for the various products averaging \$174, this Project will generate positive cash flows and achieve an IRR on investment of 24%.

## **1.21 Recommendations**

### **1.21.1 Development Drilling**

The results of the 2012 drilling program should be included in the geological database and a new geological model produced for the Feasibility Study.

### **1.21.2 Mine Planning Refinement**

Additional refinement of the geologic model along with a detailed mine plan is recommended and will yield a revised and more accurate recoverable reserve base. This work should be completed at the Feasibility level of project evaluation. Optimum production plans and methods should be analyzed. One example for further study is to examine the applicability of underground longwall mining rather than room and pillar mining.

### **1.21.3 CHPP Design and Construction**

Prior to proceeding with the project for detailed design and construction, Norwest recommends that additional studies be performed to better characterize the coals to ensure proper equipment design. The best available information and best practices were implemented in the design of the system, although additional information will supplement the database for final design.

Additional studies and recommended data include:

- Washability study with large diameter cores collected during 2012 field program.
- Further metallurgical characterization of main seams and potential blends.
- Materials characteristics tests for the projected refuse materials.
- Environmental loads including temperature ranges, wind load, and expected snow and rain precipitation are being collected and when the results are available they should be used for additional detailed design.

### **1.22 Geotechnical Studies**

Geotechnical sampling and detailed core logging have been conducted in the 2011 drilling program and continues with the 2012 drilling program. The data is being used to develop a current rock mechanics database. This data should be used to further refine the mine plans for both surface and underground mines.

A full investigation of the foundation material around the plant and surface facilities area as well as the waste impoundment area is required. Anecdotal information was used in this design study using best practices and information from similar projects in the area, although site construction will require further studies. Detailed geotechnical data is being collected as part of the 2012 field program.

### **1.23 Water Supply – Hydrology**

Additional work on the property should include well completions and pump tests for defining groundwater characteristics and establishing monitor wells for baseline permitting data.

A water recovery and aquifer study will be required prior to project implementation. For this study, it was assumed that a sufficient supply will be available.

This PFS includes general assumptions with regard to surface water management plans and structures. A surface water management plan will need to be developed using site specific data relative to precipitation, ground water interception from mining, mine plans, surrounding topography and drainages.

### ***Carbon Creek – Proposed Work***

During the fiscal year ending October 31, 2013, the Company proposes, subject to financing, to continue to work on the Feasibility Study for Carbon Creek, including undertaking a large diameter and geotechnical drilling program and coal quality testing. In addition, the Company will continue to seek to negotiate agreements with respect to the required infrastructure for development and mining at Carbon Creek, including transportation, loading facilities, power, as well as continuing with negotiations with applicable First Nations regarding impact benefit agreements. The Company will also continue the work required to move forward through the environmental assessment process.

### **Sheini Hills Iron Ore Project, Ghana**

Information in this AIF regarding Sheini is based on information provided by the Sheini Report. The following is from the summary section of the Sheini Report and the detailed disclosure in the Sheini Report is incorporated into this AIF by reference. Readers are encouraged to review the entire Sheini Report, which is filed on SEDAR at [www.sedar.com](http://www.sedar.com). Note – in the following summary “Cardero” refers to Cardero Ghana.

## **1.1 Location**

The Sheini Hills Iron Project is located in the Zabzugu-Tatale District in the Northern Region of the Republic of Ghana. The project area is situated in the eastern part of the Northern Region, close to the border with Togo and approximately 400 km north of Accra. Tamale, Ghana's second largest city, with a population of approximately 360,000, lies 170 km west of the project area. Access to site from Tamale is by a paved road as far as Yendi and then by a series of all-weather roads. The terrane of the Sheini project area is characterized by a series of steep ridges surrounded by slightly undulating, semi-open savannah woodland.

## **1.2 Property Description and Ownership**

The project area consists of three contiguous prospecting licences, which define a cumulative licence area of 397.5 km<sup>2</sup>. The prospecting licences were issued to and are held by Emmaland Resources Ltd ("Emmaland"). Cardero Ghana has entered into three separate joint ventures with Emmaland (effective as of 12 December 2011) to explore and, if warranted, develop the lands subject to the prospecting licences.

## **1.3 Data Quality**

As part of its work, SRK verified that the data provided by Cardero is sufficiently robust for use in deriving a Mineral Resource Estimate. This included viewing drillholes at the core shed in order to check the quality of logging, along with cross-checking assay certificates against the database. Cardero has conducted what is considered to be industry best practice in relation to the QAQC checks and has developed a systematic process in which duplicates, blank material, and standard reference materials are inserted into the sample stream at regular intervals.

## **1.4 Geology and Mineralization**

Iron mineralization at Sheini occurs as primary Ironstone (banded and granular types with local hardcap development) and as Detrital iron deposits (located on plains, peripheral to the Ironstone deposits). Primary iron mineralization identified at Sheini, being classed as a "Rapitan-type iron formation", predominantly comprises bladed hematite with lesser iron hydroxides (goethite and limonite) confined to interbedded banded iron formation and granular iron formation at the base of the Late Precambrian – Early Phanerozoic Buem Formation. The Ironstone package and adjacent footwall and hanging wall lithologies have been subjected to ductile deformation resulting in a series of broadly N-S trending asymmetric inclined fold structures, offset by a series of NNE-SSW trending, and later E-W to ENE-WSW trending, brittle faults. The iron mineralization is sedimentary in origin, and extends to a total of approximately 8.6 km along strike, up to 1.2 km across strike and to depths of up to 300 m from surface.

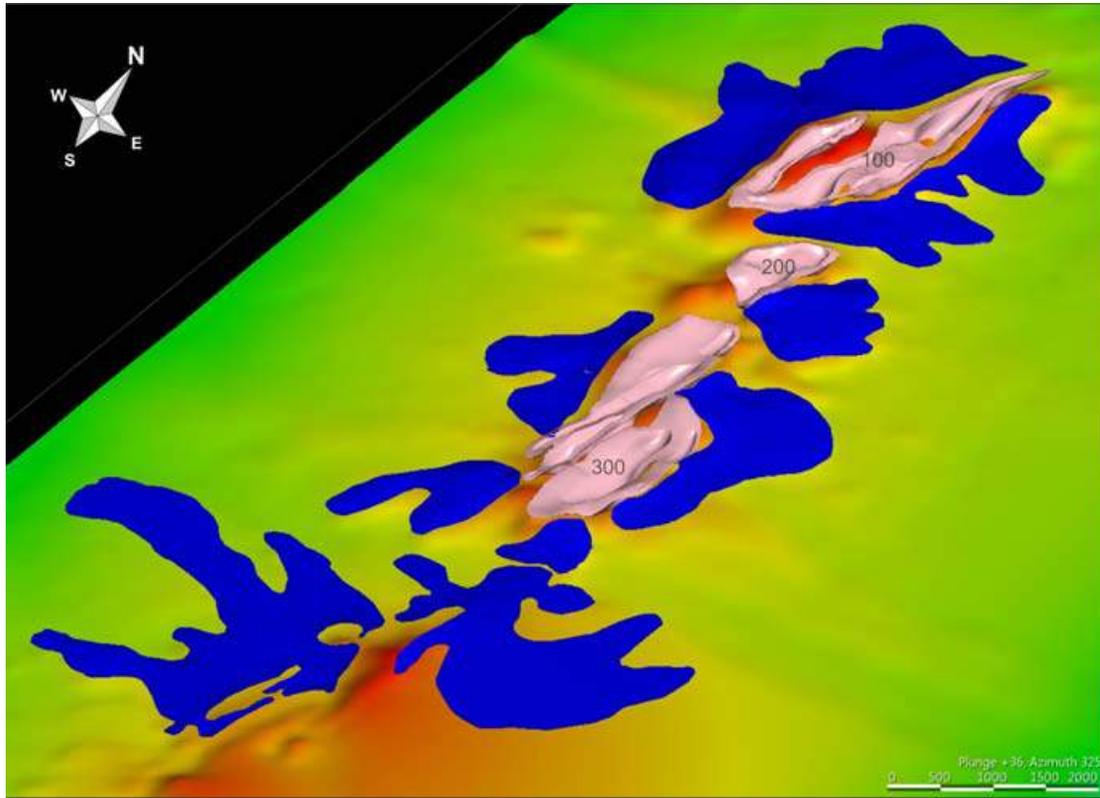
## **1.5 Geological Model**

Geological modelling was conducted in 3D Geomodeller software, using logged Ironstone (which groups together both banded and granular iron formation) as an explicit control on model geometry. Fresh Ironstone was modelled within three spatially distinct domains – north zone (zone 100), central zone (zone 200) and south zone (zone 300), all of which lie within the Sheini Central licence. Geological mapping, sectional interpretations (by both Cardero and SRK geologists) and both downhole and surface structural measurements were used to help model the geometry of the orebody between drillholes on and between sections.

In addition to primary Ironstone mineralization, re-deposited Detrital material forms extensive flat-lying platforms adjacent to N-S trending ridges throughout the project area. Detrital wireframes were generated in Leapfrog Mining software.

Surficial weathered Ironstone or Hardcap wireframes were generated in CAE Datamine Studio 3 software and based on logging in Cardero’s lithological drillhole log.

Figure ES 1 shows the modelled Ironstone and Detritals.



*Figure ES 1: Oblique view (36° towards 325°) of the Detrital wireframes (blue) with Ironstone domains 100-300 (pink) overlain on the topography survey. (Source: SRK)*

## 1.6 Mineral Resource Estimate

A 4 m composite file was used in a geostatistical study (variography and Quantitative Kriging Neighbourhood Analysis – “QKNA”) that enabled Ordinary Kriging (“OK”) to be used as the main interpolation method. Due to the current structural interpretation of the Sheini Hills Iron Project, which incorporates a series of asymmetric fold structures, SRK adopted the ‘Unfold’ technique to enable the drillhole file to be converted into a flat plane, with the aim of improving on the quality of the geostatistical results. Unfolding was not considered necessary for the Detrital and Hardcap domains. The results of the variography and the QKNA were utilized to determine the most appropriate search parameters.

The interpolated block model was validated through visual checks and a comparison of the mean input composite and output model grades. SRK is confident that the interpolated block grades are a reasonable reflection of the available sample data on both global and local scales.

## 1.7 Mineral Resource Statement

The Mineral Resource Statement generated by SRK has been restricted to all classified material falling within the Whittle shell representing the optimisation parameters outlined above and above a cut-off grade of 15% Fe. This represents the material which SRK considers has reasonable prospect for eventual economic extraction

potential based on the Whittle optimisation analysis. Table ES 1 shows the resulting Mineral Resource Statement for Sheini Hills.

Mineral Resources were estimated in conformity with generally accepted CIM Estimation of Mineral Resource and Mineral Reserve Best Practices Guidelines. It has an effective date of 7 January 2013. **The Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. The Mineral Resources discussed herein may be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic, political and other factors. There is insufficient information available to assess the extent of which the Mineral Resources may be affected by these factors.**

In total, and including the Ironstone, Detrital material and Hardcap, SRK has reported an Inferred Mineral Resource of 1.3 billion tonnes (Bt), with mean grades of 33.8% Fe, 6.0% Al<sub>2</sub>O<sub>3</sub>, 37.3% SiO<sub>2</sub> and 0.27% P. The resource statement has reported above a cut-off grade of 15% Fe and within an optimized pit shell. The optimized pit used to constrain this estimate has a strip ratio of 0.93 (waste tonnes : ore tonnes).

**Table ES 1: Mineral Resource Statement for the Sheini Hills Iron Ore Project Reported above a 15% Fe cut-off and within an optimized pit shell**

<b>Zone</b>	<b>Resource Category</b>	<b>Tonnes (Mt)</b>	<b>Fe %</b>	<b>Al<sub>2</sub>O<sub>3</sub> %</b>	<b>SiO<sub>2</sub> %</b>	<b>P %</b>
Ironstone Sheini Central - North	Inferred	349.2	37.6	4.4	34.3	0.26
Ironstone Sheini Central - Centre	Inferred	111.1	34.6	5.2	38.0	0.28
Ironstone Sheini Central - South	Inferred	581.0	33.9	5.4	37.2	0.36
Ironstone Hardcap	Inferred	4.1	36.5	8.5	32.3	0.09
<b>Ironstone Total</b>	<b>Inferred</b>	<b>1,045</b>	<b>35.2</b>	<b>5.1</b>	<b>36.3</b>	<b>0.32</b>
Detritals	Inferred	266.9	28.2	9.5	41.1	0.09
<b>TOTAL</b>	<b>Inferred</b>	<b>1,312</b>	<b>33.8</b>	<b>6.0</b>	<b>37.3</b>	<b>0.27</b>

Notes:

(1) Mineral Resources which are not Mineral Reserves have no demonstrated economic viability

(2) The effective date of the Mineral Resource is 7 January 2013

(3) The Mineral Resource Estimate for the Sheini deposit was constrained within lithological solids and within a Lerchs-Grossman optimized pit shell defined by the following assumptions; pig iron flow sheet; metal price of USD400/t; slope angles of 53° in the Ironstone and Detrital material; a mining recovery of 95.0%; a mining dilution of 5.0%; a base case mining cost of USD2.50/t; process operating costs of USD2.50/t ore USD4.50/t ore in the Ironstone and Detrital respectively; Ironstone processing recovery of 100%; Detrital processing recovery of 25%; reductant costs of USD0.58/t%Fe and other concentrate costs of USD33.33/t; smelting costs were separated into power and other costs and were estimated at USD27.50/t and USD51.00/t, respectively; 90% assumed product grade

*(4) Mineral Resources for the Sheini Hills deposit have been classified according to the “CIM Standards on Mineral Resources and Reserves: Definitions and Guidelines (December 2005)” by Howard Baker (MAusIMM(CP)), an independent Qualified Person as defined in NI 43-101.*

## **1.8 Metallurgical Testwork**

SRK has initiated and reviewed a certain amount of metallurgical testwork on samples collected from the deposit so as to determine whether or not the material has potential to be used to produce a saleable product and so enable it to report the above Mineral Resource Estimate.

Mineralogical investigations conducted as part of the SRK supervised testwork programme indicate the presence of haematite and quartz as the dominant mineral species in the Ironstone unit. Scanning Electron Microscopy (“SEM”) analysis indicated that the haematite is present as very fine plate-like particles, with a face diameter of the order of 5-10 µm, cemented in a silicate matrix.

As a consequence of the very fine haematite grain size, no significant upgrading was able to be achieved by conventional separation processes including gravity separation at coarser sizes together with magnetic separation at finer sizes. Additional testwork including flotation (both “direct” for haematite recovery, and “reverse” for silica rejection) and selective flocculation did not suggest any potential for significant separation and upgrading.

In parallel with the SRK supervised programme, Cardero [CMTL] has conducted some metallurgical testwork at its in-house facility. The first test result reported to SRK was a smelting test using Cardero’s in-house smelting technology. This test was conducted on a sample of Ironstone with a head grade of 37% Fe. The smelting test resulted in the production of a pig iron product of reasonable quality, although the P content was high. The economic analysis provided by Cardero for the smelting test suggested that the process would generate a positive operating margin; the magnitude of which would be enhanced if the smelting process was fed with material of a higher grade than the global run of mine ore.

Subsequent testwork results provided to SRK consisted of a “magnetising roast” test conducted on the Ironstone sample. The principle behind this process is to convert the haematite to magnetite by roasting the ore under reducing conditions, and then to separate the magnetite by conventional Low Intensity Magnetic Separation (“LIMS”). This testwork resulted in the upgrading of the roasted material from 37% Fe to just under 50% Fe, with a corresponding reduction in silica content.

In summary, the Ironstone does not respond to conventional separation processes due to the fine, and finely disseminated, nature of the haematite mineralization, although the Detrital material does show some potential for conventional processing. Given the very fine liberation size of the haematite, even if a high degree of liberation can be achieved, such as by converting the haematite to magnetite, most physical separation processes are very inefficient and non-selective at such a fine liberation size. While direct smelting is a potential option from a technical viewpoint, any upgrading that could be achieved prior to smelting would improve the economics of the smelting process.

SRK’s conclusions, based on the above, are that while there is potential for the mineralization identified to be used to generate a saleable product, this will not be via a conventional flow sheet and further testwork will be required to prove this.

## 1.9 Conclusions and Recommendations

The primary aim of this report was to generate a Mineral Resource Estimate for the Sheini Hills iron asset owned by Cardero using all available and valid data. Qualified Person Howard Baker (MAusIMM(CP)) believes the aim has been achieved and that the project has met the original objectives.

It is the opinion of SRK that the quantity and quality of available data is sufficient to generate Inferred resources and that the Mineral Resource Statement has been classified in accordance with the Guidelines of NI43-101 and accompanying documents 43-101.F1 and 43-101.CP. It has an effective date of 7 January 2013.

In total, and including the Ironstone, Detrital material and Hardcap, SRK has reported an Inferred Mineral Resource of 1.3 Bt, with mean grades of 33.8% Fe, 6.0% Al<sub>2</sub>O<sub>3</sub>, 37.3% SiO<sub>2</sub> and 0.27% P. The resource statement has reported above a cut-off grade of 15% Fe and within an optimized pit shell. The optimized pit used to constrain this estimate has a strip ratio of 0.93 (waste tonnes : ore tonnes).

The Mineral Resource Statement generated by SRK has been restricted to all classified material falling within the Whittle shell representing a metal price of USD400/t following the assumption that the raw, unbeneficiated Ironstone is smelted together with beneficiated Detrital material to produce a high phosphorous pig iron product, this being the flow sheet most supported by the metallurgical testwork completed to date. This represents the material which SRK considers has reasonable prospect for eventual economic extraction.

SRK recommends to Cardero that it makes additional metallurgical testwork its priority to confirm the technical viability of one of the process routes being studied and the nature of the products that will be produced. Furthermore, and with the benefit of future metallurgical data, SRK recommends that Cardero then undertakes a Preliminary Economic Assessment (PEA) to determine the potential economics of the project, inclusive of a market study to ensure that the envisaged product meets market requirements, prior to undertaking any additional resource definition drilling.

SRK recommends the following work programme be undertaken:

*Phase I:* Additional metallurgical test work in order to finalize the processing flowsheet. Product specification will be a critical factor in determining the future direction of the project, whether it is production of a commercially saleable concentrate or hot metal / pig iron products.

*Phase II:* On completion of the metallurgical test work, a PEA is recommended to assess the economics of the project.

*Phase III:* Contingent on positive PEA results, additional drilling will be required to test multiple targets to the south (18,000 m drilling over 24 km strike length) and extensive drilling will be required to move Inferred Mineral Resources to the Indicated and Measured categories.

Phase I detailed metallurgical work will be completed during Quarter 1, 2013. Cardero has allocated a budget of CAD300,000 to complete this work which SRK deems appropriate. Several samples are currently being shipped from Ghana to CMTL.

Detrital samples from four reverse circulation samples will be combined into one 220 kg sample. Ironstone samples will comprise three separate metallurgical tests.

A series of tests will be run on metallurgical samples each following the basic principles of the magnetizing roast flow sheet. Conditions in each stage of the flow sheet will be varied to determine the optimal

combination. Coarse grind size will be tested at 4.0 mm, 2.0 mm and 0.25 mm. Magnetising roast will be varied according to two temperatures (900°C or 1100°C) and various rotary hearth furnace residence times.

Grade and recovery will be analysed to determine the optimal concentrate which will be used as feedstock for bench-scale box-furnace melt tests, to simulate the pig iron that could be produced in an electric arc furnace.

SRK considers the planned testwork appropriate.

### ***Sheini – Proposed Work***

During the fiscal year ending October 31, 2013, the Company proposes, subject to financing, to carry out the recommended metallurgical testing. Depending upon the results obtained, the Company will assess the appropriate next steps with respect to the project.

### ***Qualified Person(s) and Quality Control/Quality Assurance***

EurGeol Keith Henderson PGeo, Cardero's Executive Vice President and a qualified person as defined by NI 43-101, has supervised the preparation of the scientific and technical information that forms the basis for the mineral property disclosure in this AIF and has approved the disclosure herein. Mr. Henderson is not independent of the Company, as he is an employee and holds incentive stock options.

Howard Baker B.Sc., M.Sc., MAusIMM (CP) a Principal Geologist (Mining Geology) with SRK Consulting (UK) Ltd., has acted as the Qualified Person, as defined in NI 43-101, for the Sheini Report and, in particular, the resource estimate contained therein. Mr. Baker has 18 years practical experience in the mining industry with the previous 10 years focussed on iron ore mining, exploration and mineral resource estimation. Mr. Baker worked as a Senior Mine Geologist at the BHP Billiton, Yarrie Operation in the Pilbara region of Western Australia and as a Specialist Resource Geologist for Rio Tinto Iron Ore, also in Pilbara region of Western Australia. Following this, Mr Baker has worked as a Principal Geologist for SRK on numerous iron ore deposits including those in West and Central Africa, Sweden, Finland, Canada, Portugal and Armenia.

Larry Henchel, P.G., John Lewis, P.E., and Larry Messinger QP(MMSA) (all of Norwest Corporation), each of whom is a qualified person as defined by National Instrument 43-101, are each responsible for portions of the Carbon Creek Report.

John Lewis, P.E. is Manager of Underground Mining with Norwest Corporation in Salt Lake City, USA. Mr. Lewis has 18 years' experience in the coal mining industry with expertise gathered from US mining operations in the areas of longwall mining, continuous mining, pillar retreat with MRS, mine ventilation, mine safety and health regulations, project management, short and long-term planning and mine budgeting.

Larry Messinger, QP(MMSA) is a Senior Project Manager at Norwest Corporation and has over 35 years in the mining and energy industries with experience in project management, project evaluation and development, surface coal mine planning and operations, strategic planning, and market analysis. He has performed pre-feasibility studies for coal properties in Mongolia, South America and Mexico.

Larry Henchel, P.G. is Vice President Geologic Services of Norwest Corporation and has over 25 years' experience in surface and underground coal mining geology, specializing in exploration and evaluation of coal and mineral properties. He has held positions in operating mines as well as participating in regional exploration projects. He is skilled in computerized modeling and reserve analysis of single and multi-seam coal deposits and has worked on projects in numerous countries, including the United States, Canada, India, South America, the Middle East, Mongolia and Southern Africa.

## DIVIDENDS

There are no restrictions which prevent the Company from paying dividends. The Company has not paid any dividends in the last three financial years. The Company has no present intention of paying any dividends, as it anticipates that all available funds will be invested to finance the growth of its business. The directors of Cardero will determine if and when dividends should be declared and paid in the future, based on the Company's financial position at the relevant time.

## DESCRIPTION OF CAPITAL STRUCTURE

### General Description of Capital Structure

The authorized capital of Cardero is an unlimited number of Common Shares, of which 107,624,048 were issued and outstanding as of January 28, 2013. In addition, 8,766,143 Common Shares have been reserved for issuance pursuant stock options granted to directors, officers, employees and consultants of the Company, and a further 2,305,648 Common Shares have been reserved for issuance pursuant to share purchase warrants previously issued.

The holders of Common Shares are entitled to receive notice of and attend all meetings of shareholders, with each Common Share held entitling the holder to one vote on any resolution to be passed at such shareholder meetings. The holders of Common Shares are entitled to dividends if, as and when declared by the board of directors of Cardero. The Common Shares are entitled, upon liquidation, dissolution or winding up of Cardero, to receive the remaining assets of Cardero available for distribution to shareholders.

## MARKET FOR SECURITIES

The Common Shares are listed and posted for trading on the TSE (symbol "CDU"), on the NYSE-MKT (symbol "CDY"), and on the Frankfurt Stock Exchange (symbol "CR5").

### Trading Price and Volume

The following table provides information as to the high, low and closing prices of the Common Shares on the TSE during the 12 months of the most recently completed financial year and the 3 months since the most recent financial year end, as well as the volume of shares traded for each month:

#### Toronto Stock Exchange

<i>Month</i>	<i>High</i> (\$)	<i>Low</i> (\$)	<i>Close</i> (\$)	<i>Volume</i>
January 1 to 28, 2013	0.48	0.40	0.43	1,876,071
December, 2012	0.47	0.39	0.42	2,189,865
November, 2012	0.57	0.455	0.465	1,687,633
October, 2012	0.73	0.53	0.55	2,447,454
September, 2012	0.88	0.70	0.70	1,601,061
August, 2012	0.90	0.78	0.79	686,415
July, 2012	1.00	0.81	0.89	1,596,586
June, 2012	1.00	0.72	1.00	2,314,723
May, 2012	0.95	0.66	0.72	2,612,759
April, 2012	1.16	0.83	0.90	3,131,611
March, 2012	1.36	1.04	1.16	5,365,930
February, 2012	1.51	1.21	1.21	5,753,603

<i>Month</i>	<i>High</i> (\$)	<i>Low</i> (\$)	<i>Close</i> (\$)	<i>Volume</i>
January, 2012	1.56	1.02	1.44	9,119,865
December, 2011	1.24	0.89	1.02	2,545,519
November, 2011	1.31	0.96	1.10	4,755,469

### ESCROWED SECURITIES

There are no securities of the Company subject to escrow.

### DIRECTORS AND EXECUTIVE OFFICERS

#### Name, Occupation and Security Holding

The names, positions or offices held with Cardero, province/state and country of residence, and principal occupation over the last five years of the Directors and executive officers of Cardero are as follows:

<b>Name, Position and Province/State and Country of Residence<sup>(1)</sup></b>	<b>Principal Occupation During the Past 5 Years<sup>(1)</sup></b>	<b>Period of Service as an Executive Officer or Director<sup>(2)</sup></b>
<b>Michael Hunter<sup>(5)</sup></b> President, Chief Executive Officer and Director British Columbia, Canada	Businessman; Director, President & CEO of Cardero Coal since June 2008; co-founder of First Coal Corporation, director to 2008	President since June 1, 2011  Chief Executive Officer since November 9, 2011  Director since September 13, 2012
<b>Hendrik Van Alphen</b> Managing Director British Columbia, Canada	Businessman; President of Cardero, 2000 to June 1, 2011; Chief Executive Officer of Cardero, 2001 to November 9, 2011	Director since April 19, 1999  President from April 10, 2000 to June 1, 2011  Chief Executive Officer from May 14, 2001 to November 9, 2011
<b>Leonard Harris<sup>(3)(4)(5)(6)</sup></b> Director Colorado, USA	Independent consultant to the mining industry, 1992 to present.	Since February 25, 2000
<b>Stephan A. Fitch<sup>(3)(4)(5)(6)</sup></b> Director London, England	Businessman; Managing Director, IAG Holdings Limited (private investment company) 2003 to present; previously Partner, International Asset Group Ltd. (private merchant and investment banking firm) 1995 to 2003.	Since May 31, 2006
<b>Paul Matysek<sup>(4)</sup></b> Director British Columbia, Canada	Businessman; former President and CEO and a co-founder of Energy Metals Corporation; former President and Chief Executive Officer of Potash One Inc.; director of Lithium One Inc., Nevada Copper Corp. and a number of other natural resource companies.	Since September 13, 2012

Name, Position and Province/State and Country of Residence <sup>(1)</sup>	Principal Occupation During the Past 5 Years <sup>(1)</sup>	Period of Service as an Executive Officer or Director <sup>(2)</sup>
<b>Ryan Dunfield</b> <sup>(3)(6)</sup> Director British Columbia, Canada	Vice President with the Vancouver, BC private equity group Second City Capital Partners, and its affiliate, Gibralt Capital Corporation.	Since September 13, 2012
<b>Lawrence W. Talbot</b> Vice-President and General Counsel British Columbia, Canada	Barrister and Solicitor; Owner, Lawrence W. Talbot Law Corporation (law firm) since May, 2006; previously Partner, Gowling Lafleur Henderson LLP (law firm) since April 2000.	Vice-President & General Counsel since July 1, 2006  Director from April 17, 2003 to September 13, 2012
<b>Blaine Bailey, CGA</b> Chief Financial Officer British Columbia, Canada	Businessman, CGA; CFO of Cardero Coal since July 2008; Principal of Promaid Services Ltd. from September 2002 to January 2011	Since November 9, 2011
<b>Keith Henderson, EurGeol</b> Executive Vice President British Columbia, Canada	Geologist; Vice President, Exploration of Cardero, April 1, 2007 to November 9, 2011; President, Dorato Resources Inc., December 1, 2008 to October, 2011; Senior Project Geologist, Anglo American (Exploration) Canada Ltd., 2002 to March 31, 2007	Executive Vice President since November 9, 2011
<b>Angus Christie</b> Chief Operating Officer British Columbia, Canada	Mining Professional; previously Manager, Strategy and Resources for Anglo Coal (Peace River Coal) from 2008 to May, 2012.	Chief Operating Officer since June 1, 2012
<b>Glenn Hoffman</b> CEO and President of Cardero Iron Ore Company Ltd. South Carolina, USA	Metallurgist; CEO and President of Cardero Iron Ore Company Ltd. (subsidiary) since August, 2007; previously, several positions, including Manager of Research and Development, with Midrex Technologies, Inc. (private process engineering and technology company)	Since August 23, 2007

**Notes:**

1. The information as to place of residence and principal occupation, not being within the knowledge of Cardero, has been furnished by the respective Directors and executive officers individually.
2. All directorships expire at the next Annual General Meeting of the shareholders of Cardero. All officers hold office at the pleasure of the Board.
3. Denotes member of the Audit Committee.
4. Denotes member of the Compensation Committee.
5. Denotes member of the Sustainable Development Committee.
6. Denotes member of the Corporate Governance and Nominating Committee

Cardero does not currently have any board committees other than the Audit Committee, the Compensation Committee, the Corporate Governance and Nominating Committee and the Sustainable Development Committee.

As at January 28, 2013, Cardero's Directors and executive officers, as a group, beneficially hold a total of 4,996,281 Common Shares, directly or indirectly, representing 4.64% of the 107,624,048 issued Common

Shares. Cardero's Directors and executive officers, as a group, also hold the following incentive stock options to purchase up to the following numbers of Common Shares until the dates shown:

Number of Options to Purchase Common Shares	Exercise Price per Common Share	Expiry Date
40,000 <sup>(1)</sup>	\$0.0625	June 1, 2013
80,000 <sup>(1)</sup>	\$0.15625	June 1, 2013
240,000 <sup>(1)</sup>	\$0.3125	June 1, 2013
240,000 <sup>(1)</sup>	\$0.0625	June 1, 2013
80,000 <sup>(1)</sup>	\$0.3125	June 1, 2013
60,000 <sup>(1)</sup>	\$0.375	June 1, 2013
400,000 <sup>(1)</sup>	\$0.375	June 1, 2013
136,000 <sup>(1)</sup>	\$0.4375	June 1, 2013
20,000 <sup>(1)</sup>	\$0.15625	June 1, 2013
885,000	\$1.10	November 9, 2013
450,000	\$1.51	January 26, 2014
442,000	\$1.61	March 23, 2014
2,085,000	\$0.78	September 27, 2014

(1) Options issued in exchange for former Coalhunter options.

#### Cease Trade Orders, Bankruptcies, Penalties or Sanctions

1. Except as noted below, no director or executive officer of Cardero is, as at the date of this AIF, or was within ten years before the date of this AIF, a director, chief executive officer or chief financial officer of any company (including Cardero) that:

- (a) was subject to an order that was issued while the Director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer:
  - (i) Paul Matysek, a director of Cardero, was a director of Mandalay Resources Corporation when a cease trade order was issued against it on February 9, 2004 for failure to file material change reports, a technical report and quarterly and year-end reports in the form required under the Securities Act and the Rules (British Columbia). On January 4, 2005, the British Columbia Securities Commission revoked the cease trade order, as Mandalay Resources had filed the required documentation. A cease trade order was issued against Mandalay Resources Corporation on June 30, 2004 by the Alberta Stock Exchange for failure to file certain required financial information. On February 1, 2005, the cease trade order was revoked as the required records were filed. Paul Matysek resigned as a director of Mandalay Resources Corporation on November 17, 2005;
  - (ii) Blaine Bailey, the Chief Financial Officer of Cardero, was Chief Financial Officer of Qumana Software Inc. (formerly, Thoughtshare Communications Inc.) which was subject to cease trade orders issued by the British Columbia Securities Commission ("BCSC") and the Alberta Securities Commission ("ASC") in September and October 2003, respectively, for failing to file financial statements. The required financial statements were subsequently filed and revocation orders from the BCSC and the ASC were issued in August, 2005. Qumana Software Inc. was subject to cease trade

orders issued by the BCSC and the ASC in August 2007 and January 2008, respectively, for failing to file financial statements; and

- (iii) Blaine Bailey, the Chief Financial Officer of Cardero, was Chief Financial Officer of Gulfside Minerals Ltd. which was subject to a cease trade order issued by the BCSC for failing to file a NI 43-101 compliant technical report within the required time period. The technical report was subsequently filed and the cease trade order was revoked; or
- (b) was subject to an order that was issued after the Director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer.

For the purposes hereof, the term “order” means:

- (a) a cease trade order;
- (b) an order similar to a cease trade order; or
- (c) an order that denied the relevant company access to any exemption under securities legislation,

that was in effect for a period of more than 30 consecutive days.

- 2. Except as noted below, no director or executive officer of Cardero, or a shareholder holding a sufficient number of securities of Cardero to affect materially the control of Cardero:
  - (a) is, as at the date of this AIF, or has been within the ten years before the date of this AIF, a director or executive officer of any company (including Cardero) that, while such person was acting in such capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver-manager or trustee appointed to hold its assets:
    - (i) Blaine Bailey, the Chief Financial Officer of Cardero, was Chief Financial Officer of Golden Arch Resources Ltd., a company that was listed on the TSX Venture Exchange and placed into receivership on October 25, 2009; or
  - (b) has, within ten years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or has a receiver, receiver manager or trustee appointed to hold the assets of the Director, executive officer or shareholder.
- 3. No Director or executive officer of Cardero, or a shareholder holding a sufficient number of securities of Cardero to affect materially the control of Cardero, has been subject to:
  - (a) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or
  - (b) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor making an investment decision.

### **Conflicts of Interest**

Certain Directors and executive officers of Cardero are directors, officers and/or shareholders of other private and publicly listed companies, including companies that engage in mineral exploration and development. To the extent that such other companies may participate in or be affected by ventures involving Cardero, these

Directors and executive officers of Cardero may have conflicting interests in negotiating, settling and approving the terms of such ventures. Conflicts of interest affecting the Directors and executive officers of Cardero will be governed by Cardero's "Code of Business Conduct and Ethics", the Articles of Cardero and the provisions of the BCBCA and other applicable laws. In the event that such a conflict of interest arises at a meeting of the Directors, a Director affected by the conflict must disclose the nature and extent of his interest and abstain from voting for or against matters concerning the matter in respect of which the conflict arises. Directors and executive officers are required to disclose any conflicts or potential conflicts to the board of Directors as soon as they become aware of them. In accordance with the requirements of the NYSE-MKT Company Guide, transactions involving a conflict of interest or related party transactions are required to be approved by Cardero's Audit Committee or a comparable body of the Board of Directors.

### **PROMOTERS**

Cardero does not presently have, and has not within the last two completed financial years had, any promoters.

### **LEGAL PROCEEDINGS AND REGULATORY ACTIONS**

#### **Legal Proceedings**

The Company is not currently, and has not since November 1, 2011 (being the commencement of the Company's last competed financial year) been, a party to any legal proceedings, nor is any of the Company's properties presently, or has, since November 1, 2011 (being the commencement of the Company's last competed financial year), any of the Company's properties been, subject to any legal proceedings except as follows:

1. On November 15, 2012, Carbon Mountain Drilling and Water Services Ltd. of Prince George, British Columbia ("Carbon Mountain"), filed a notice of civil claim in the Supreme Court of British Columbia against Cardero Coal seeking payment for certain drilling services rendered in 2011 in the amount of \$770,393.48 plus damages for breach of contract and interest. On January 10, 2013 Cardero Coal filed a response to the civil claim disputing liability and the amount claimed and a counterclaim seeking damages for negligence, breach of contract and other relief. Carbon Mountain has not yet filed an answer to the counterclaim. No documents have been exchanged and no discoveries have been held. A trial date has not been set.

#### **Regulatory Actions**

There have not been any:

1. penalties or sanctions imposed against Cardero by a court relating to securities legislation or by a securities regulatory authority during the financial year ended October 31, 2012;
2. other penalties or sanctions imposed against Cardero by a court relating to securities legislation or by a securities regulatory authority that would likely be considered important to a reasonable investor making an investment decision; or
3. settlement agreements entered into by Cardero before a court relating to securities legislation or with a securities regulatory authority during the financial year ended October 31, 2012.

#### **Interest of Management and Others in Material Transactions**

No:

1. Director or executive officer of the Company;
2. any person or company that is the direct or indirect beneficial owner of, or who exercises control or direction over, more than 10% of the Common Shares; or

3. any associate or affiliate of any of the persons or companies referred to in paragraphs 1 or 2;

has, during any of the financial years ended October 31, 2010, 2011 or 2012, or during the current financial year, had any material interest, direct or indirect, in any transaction that has materially affected, or will materially affect, the Company, other than:

- (a) On November 29, 2011, Cardero closed a non-brokered private placement of 8,029,750 units. The units were sold at \$0.95 per unit, and each unit consisted of one Common Share and one-half of a share purchase warrant, with one whole warrant being exercisable to purchase an additional Common Share at a price of \$1.25 for 12 months from closing. Michael Hunter, President and CEO, purchased an aggregate of 205,740 units; Hendrik Van Alphen, Managing Director, purchased an aggregate of 580,000 units; Lawrence Talbot, Vice-President and General Counsel, purchased an aggregate of 105,000 units; and Keith Henderson, Executive Vice President, purchased an aggregate of 121,000 units. Such purchases were upon the identical terms and conditions as the other subscribers in the placement.
- (b) On December 20, 2012, Cardero closed the first tranche of a non-brokered private placement of 7,966,794 shares at a price of \$0.45 each. Michael Hunter, President, CEO and Director purchased 67,222 Common Shares, Lawrence W. Talbot, Vice-President and General Counsel, purchased 97,777 Common Shares, the spouse of Blaine Bailey, the Chief Financial Officer, purchased 48,888 Common Shares, Angus Christie, Chief Operating Officer, purchased 42,777 Common Shares and Leonard Harris, Director, purchased 44,444 Common Shares. Such purchases were upon the identical terms and conditions as the other subscribers in the placement.

#### **TRANSFER AGENT AND REGISTRAR**

Cardero's transfer agent and registrar is Computershare Investor Services Inc. Transfers may be effected at, and registration facilities are maintained at:

1. in British Columbia, 3<sup>rd</sup> Floor, 510 Burrard Street, Vancouver, British Columbia, V6C 3B9; and
2. in Ontario, 100 University Avenue, 11<sup>th</sup> Floor, Toronto, Ontario M5J 2Y1.

#### **MATERIAL CONTRACTS**

Other than in the ordinary course of the Company's business of mineral property evaluation, acquisition and divestiture and exploration, including raising the funding therefor, there are no material contracts that have been entered into by the Company since November 1, 2011 (being the commencement of the Company's most recently completed financial year) that are still in effect and that require filing under Section 12.2 of National Instrument 51-102.

#### **NAMES AND INTERESTS OF EXPERTS**

##### **Names and Interests of Experts**

The following are the persons or companies:

1. who were named as having prepared or certified a statement, report or valuation described or included in a filing, or referred to in a filing, made under National Instrument 51-102 by Cardero during, or relating to, the fiscal year ending October 31, 2012, being Cardero's most recently completed financial year; and

2. whose profession or business gives authority to the statement, report or valuation made by the person or company:

- (a) PricewaterhouseCoopers LLP, Chartered Accountants (“PWC”), provided an auditor’s report dated January 28, 2013 in respect of the Company’s consolidated financial statements for the years ended October 31, 2011 and 2012 and incorporated by reference into this AIF. PWC is independent in accordance with the auditors’ rules of professional conduct in British Columbia;
- (b) Smythe Ratcliffe LLP, Chartered Accountants provided an auditor’s report dated January 26, 2012 in respect of the Company’s consolidated financial statements for the years ended October 31, 2011 and 2010 and incorporated by reference into the Company’s AIF dated January 26, 2012. Smythe Ratcliffe LLP is independent in accordance with the auditors’ rules of professional conduct in British Columbia;
- (c) Each of Lawrence D. Henchel, P.G., John Lewis, P.E., and Larry Messinger QP(MMSA), all of Norwest Corporation, is responsible for the preparation of one or more sections of the Carbon Creek Report incorporated by reference into this AIF. Each of them is independent of the Company and neither holds more than 1% of the Common Shares;
- (d) Keith J. Henderson, EurGeol, PGeo, is responsible for the preparation of the technical report dated January 18, 2012 entitled “Technical Report, Sheini Hills Iron Project, Ghana, Africa” and incorporated by reference into the Company’s AIF dated January 26, 2012. Mr. Henderson is not independent of the Company, as he is the Executive Vice President, and holds Common Shares and incentive stock options;
- (e) Howard Baker, B.Sc., M.Sc., MAusIMM (CP) of SRK Consulting (UK) Limited, is responsible for the preparation of the Sheini Report incorporated by reference into this AIF. Mr. Baker is independent of the Company and does not hold more than 1% of the Common Shares;
- (f) Each of Gary M. Stubblefield and Lawrence D. Henchel, PG, both of Norwest Corporation, is responsible for the preparation of one or more sections of the technical report dated December 6, 2011 entitled “Technical Report, Carbon Creek Coal Property, British Columbia, Canada” incorporated by reference into the Company’s AIF dated January 26, 2012. Each of them is independent of the Company and neither holds more than 1% of the Common Shares;
- (g) Each of Michael Johnson, PGeo, and Darrell Farrow, Pr. Sci. Nat., both of SRK Consulting (Canada) Inc., is responsible for the preparation of one or more sections of:
  - (i) the technical report dated January 27, 2012, effective January 19, 2012, entitled “Technical Report on the Longnose Ilmenite Project, Minnesota, USA” prepared by SRK Consulting (Canada) Inc.; and
  - (ii) the technical report dated January 27, 2012, effective January 19, 2012, entitled "Technical Report on the Titac Ilmenite Exploration Project, Minnesota, USA" prepared by SRK Consulting (Canada) Inc.

and incorporated by reference into the Company’s AIF January 26, 2012. Each of them is independent of the Company and none of them holds more than 1% of the Common Shares.

## **ADDITIONAL INFORMATION**

### **Audit Committee Information**

Under National Instrument 52-110 – Audit Committees (“NI 52-110”), companies that are required to file an Annual Information Form are required to provide certain disclosure with respect to their audit committee, including the text of the audit committee’s charter, the composition of the audit committee and the fees paid to the external auditor. This information with respect to Cardero is provided in Schedule “A”.

### **Additional Information**

Additional information relating to Cardero may be found on SEDAR at [www.sedar.com](http://www.sedar.com).

Additional information, including Directors’ and officers’ remuneration and indebtedness, principal holders of Cardero’s securities and securities authorized for issuance under equity compensation plans, if applicable, is contained in the Information Circular. Additional financial information is available in the Financial Statements and MD&A.

A copy of this AIF, the Information Circular, the Financial Statements and the MD&A, together with any interim financial statements from the past financial year, may be found on the SEDAR website at [www.sedar.com](http://www.sedar.com) or be obtained upon request from the Secretary of Cardero. A reasonable fee for copying may be charged if the request is made by a person who is not a registered security holder of Cardero.

## Schedule "A"

### Audit Committee Information

#### The Audit Committee's Charter

The following is the text of the current Charter for Cardero's Audit Committee:

## **"CARDERO RESOURCE CORP. AUDIT COMMITTEE CHARTER**

(Adopted by the Board of Directors on December 16, 2004)

### **ARTICLE 1 - PURPOSE**

The overall purpose of the Audit Committee (the "Committee") is to:

- (a) ensure that the management of Cardero Resource Corp. (the "Company") has designed and implemented an effective system of internal financial controls for reviewing and reporting on the Company's financial statements;
- (b) oversee, review and report on the integrity of the Company's financial disclosure and reporting;
- (c) review the Company's compliance with regulatory and statutory requirements as they relate to financial statements, taxation matters and disclosure of material facts; and
- (d) be directly responsible for:
  - (i) the selection of a firm of external auditors to be proposed for election as the external auditors of the Company,
  - (ii) the oversight of the work of the Company's external auditors, and
  - (iii) subject to the grant by the shareholders of the authority to do so, if required, fixing the compensation of the external auditors of the Company.

### **ARTICLE 2 - COMPOSITION, PROCEDURES AND ORGANIZATION**

- 2.1 The Committee will consist of at least three members of the Board of Directors (the "Board"), all of whom will be "independent" and "unrelated directors" of the Company within the meaning of all applicable legal and regulatory requirements (except in the circumstances, and only to the extent, permitted by all applicable legal and regulatory requirements).
- 2.2 All of the members of the Committee will be "financially literate", at least one member of the Committee will have accounting or related financial expertise (i.e. able to analyze and interpret a full set of financial statements, including the notes thereto, in accordance with generally accepted accounting principles) and at least one member of the Committee will be a "financial expert" within the meaning of the rules and forms adopted by the Securities and Exchange Commission (except in the circumstances, and only to the extent, permitted by all applicable legal and regulatory requirements).
- 2.3 The Board, at its organizational meeting held in conjunction with each annual general meeting of the shareholders, will appoint the members of the Committee for the ensuing

- year. The Board may at any time remove or replace any member of the Committee and may fill any vacancy in the Committee.
- 2.4 Unless the Board has appointed a chair of the Committee, the members of the Committee will elect a chair from among their number.
- 2.5 The Committee will select an individual to act as secretary for the Committee, who will be either:
- (a) a member of the Committee other than the chair, or
  - (b) another individual who is not a member of the management of the Company.
- 2.6 The quorum for meetings will be a majority of the members of the Committee, present in person or by telephone or other telecommunication device that permits all persons participating in the meeting to speak and to hear each other. Decisions by the Committee will be by the affirmative vote of a majority of the members of the Committee, or by consent resolutions in writing signed by each member of the Committee.
- 2.7 The Committee will have access to such officers and employees of the Company and to the Company's external auditors, and to such information respecting the Company, as it considers to be necessary or advisable in order to perform its duties and responsibilities.
- 2.8 Meetings of the Committee will be conducted as follows:
- (a) the Committee will meet:
    - (i) at least four times annually, and
    - (ii) may meet as many additional times:
      - A. as deemed necessary or appropriate by the Committee,
      - B. upon request by any member of the Committee, the Chief Executive Officer, the Chief Financial Officer or the external auditors,
- in each case at such times and at such locations as may be determined by the Committee or the chair of the Committee. Except in respect of a regularly scheduled meeting of the Committee, notice of such meeting, together with a proposed agenda, will be delivered to each member of the Committee not less than forty-eight (48) hours prior to the proposed meeting time (which notice may be waived by all of the members of the Committee); and
- (b) the external auditors and management representatives will be invited to attend as necessary in the discretion of the Committee.
- 2.9 The internal accounting staff, any external accounting consultant(s) and the external auditors will have a direct line of communication to the Committee through its chair and may bypass management if deemed necessary. The Committee, through its chair, may contact directly any employee in, or consultant of, the Company as it deems necessary, and any employee of, or consultant to, the Company may bring before the Committee any matter involving questionable, illegal or improper financial practices or transactions.

- 2.10 The Committee may, in its sole discretion, retain, at the expense of the Company, such legal, financial or other advisors or consultants as it may deem necessary or advisable in order to properly and fully perform its duties and responsibilities hereunder.

**ARTICLE 3 - DUTIES AND RESPONSIBILITIES**

- 3.1 The overall duties and responsibilities of the Committee will be as follows:

- (a) be directly responsible for:
  - (i) the selection of a firm of external auditors to be proposed for election as the external auditors of the Company,
  - (ii) the oversight of the work of the Company's external auditors, and
  - (iii) subject to the grant by the shareholders of the authority to do so, if required, fixing the compensation of the external auditors of the Company;
- (b) to review with the management of the Company (and, in the case of the annual audited statements, with the external auditors) the annual audited consolidated and unaudited consolidated quarterly financial statements, including the notes thereto, to ensure that such statements present fairly the financial position of the Company and the results of its operations and, if appropriate, to recommend to the Board as to the approval of any such financial statements;
- (c) to assist the Board in the discharge of its responsibilities relating to the Company's accounting principles, reporting practices and internal controls and its approval of the Company's annual and quarterly consolidated financial statements;
- (d) to establish and maintain a direct line of communication with the Company's internal accounting staff and any external accounting consultant(s) and assess their performance;
- (e) to ensure that the management of the Company has designed, implemented and is maintaining an effective and appropriate system of internal financial controls; and
- (f) to report regularly to the Board on the fulfilment of its duties and responsibilities.

- 3.2 The duties and responsibilities of the Committee as they relate to the external auditors will be as follows:

- (a) to select a firm of external auditors to be proposed by management of the Company to the shareholders for election by the shareholders as the external auditors for the Company, and to verify the independence of such proposed external auditors;
- (b) to review and approve the fee, scope and timing of the annual and any other audit performed by the external auditors;
- (c) to review and evaluate the qualifications, performance and independence of the lead partner of the external auditors of the Company;
- (d) to discuss with management of the Company the timing and process for implementing the rotation of the lead audit partner and the reviewing partners of the external auditors of the Company;

- (e) to obtain confirmation from the external auditors of the Company that they will report directly to the Committee;
- (f) to obtain confirmation from the external auditors of the company that they will report in a timely matter to the Committee all critical accounting policies and practices to be used, all alternative accounting policies and practices, the ramifications of each of such accounting policies and practices and the accounting policy and practice preferred by the external auditors of the Company, for the financial information of the Company within applicable generally accepted accounting principles (“GAAP”) which have been discussed with management of the Company and will provide a copy of all material written communications between the external auditors of the Company and management of the Company including, without limitation, any management letter or schedule of unadjusted differences;
- (g) obtain confirmation from the external auditors of the Company that they will ensure that all reports filed under the United States Securities Exchange Act of 1934, as amended, which contain financial statements required to be prepared in accordance with Canadian GAAP and/or are reconciled to, United States GAAP, reflect all material correcting adjustments identified by the external auditors of the Company;
- (h) to review and approve the Company’s hiring policies regarding partners, employees and former partners and employees of the present and any former external auditors of the Company;
- (i) to review and pre-approve all non-audit services to be provided to the Company (or any of its subsidiaries) by the external auditors, provided that such pre-approval authority may be delegated by the Committee to any member of the Committee who is “independent” and “unrelated” on the condition that any such pre-approval must be presented to the Committee at its first schedule meeting following any such approval;
- (j) review the audit plan of the external auditors prior to the commencement of the audit;
- (k) to review with the external auditors, upon completion of their annual audit:
  - (i) the contents of their report,
  - (ii) the scope and quality of the audit work performed,
  - (iii) the adequacy of the Company's financial and accounting personnel,
  - (iv) the co-operation received from the Company's personnel and any external consultants during the audit,
  - (v) the scope and nature of the internal resources used,
  - (vi) any significant transactions outside of the normal business of the Company,

- (vii) any significant proposed adjustments and recommendations for improving internal accounting controls, accounting principles or management systems, and
  - (viii) the non-audit services provided by the external auditors during the year under audit;
  - (l) to discuss with the external auditors not just the acceptability, but also the quality, of the Company's accounting principles; and
  - (m) to implement structures and procedures to ensure that the Committee meets the external auditors on a regular basis in the absence of management.
- 3.3 The duties and responsibilities of the Committee as they relate to the internal control procedures of the Company are to:
- (a) review the appropriateness and effectiveness of the Company's policies and business practices which impact on the financial integrity of the Company, including those relating to internal accounting, the use of and services provided by any external accounting consultant(s), insurance, information services and systems and financial controls, management reporting and risk management, and to ensure that the Company maintains:
    - (i) the necessary books, records and accounts in reasonable detail to accurately and fairly reflect the Company's financial transactions,
    - (ii) effective internal control systems, and
    - (iii) adequate processes for assessing the risk of material misstatement of the financial statements and for detecting control weaknesses or fraud;
  - (b) establish procedures for:
    - (i) the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters, and
    - (ii) the confidential, anonymous submission by employees or any external consultants of the Company of concerns regarding questionable accounting or auditing matters;
  - (c) to periodically review this policy and recommend to the Board any changes which the Committee may deem appropriate;
  - (d) review any unresolved issues between management and the external auditors that could affect the financial reporting or internal controls of the Company;
  - (e) periodically review the Company's financial and auditing procedures and the extent to which recommendations made by the internal accounting staff, by any external accounting consultant(s) or by the external auditors have been implemented;
  - (f) assist in the preparation of any internal control report by management, which provides that management of the Company is responsible for establishing and maintaining an adequate control structure and procedures for financial reporting

by the Company, assessing the effectiveness of such control structure and procedures, and ensuring that the external auditors of the Company attest to, and report on, the assessment of such control structure and procedures by management of the Company;

- (g) assist the Chief Executive Officer and the Chief Financial Officer of the Company in their assessment of the effectiveness of the Company's internal control over financial reporting and in determining whether there has been any material change in the Company's internal control over financial reporting which has materially affected or could materially affect such internal control subsequent to the date of the evaluation; and
- (h) assist the Chief Executive Officer and the Chief Financial Officer of the Company in identifying and addressing any significant deficiencies or material weaknesses in the design or operation of the Company's internal control over financial information and any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

3.4 The Committee is also charged with the responsibility to:

- (a) review the Company's quarterly statements of earnings, including the impact of unusual items and changes in accounting principles and estimates and report to the Board with respect thereto;
- (b) review and approve the financial sections of:
  - (i) the annual report to shareholders;
  - (ii) the annual information form (if any);
  - (iii) any quarterly or annual management discussion and analysis;
  - (iv) prospectuses; and
  - (v) other public reports requiring approval by the Board,and report to the Board with respect thereto including, without limitation, as to the approval (or otherwise) thereof by the Board;
- (c) review regulatory filings and decisions as they relate to the Company's consolidated annual and interim financial statements, including any press releases with respect thereto;
- (d) ensure that the Company discloses in the periodic reports of the Company, as appropriate, whether at least one member of the Committee is a "financial expert" within the meaning of the rules and forms adopted by the Securities and Exchange Commission;
- (e) ensure that all non-audit services approved by or on behalf of the Committee are disclosed in the periodic reports of the Company;
- (f) ensure that each annual report and, to the extent required by any applicable legal or regulatory requirement, any quarterly report of the Company includes disclosure with respect to all material off-balance sheet transactions,

arrangements, obligations (including contingent obligations) and other relationships of the Company with unconsolidated entities which may have a current or future effect on the Company in accordance with all applicable legal and regulatory requirements;

- (g) ensure that all financial statements and other financial information, including pro forma financial information, included in any report filed by the Company with any regulatory authority or contained in any public disclosure or press release of the Company is presented in a manner which does not contain a material misstatement or omission and reconciles the pro forma information contained therein to Canadian GAAP, and if appropriate, reconciles such pro forma information contained therein to United States GAAP, and which otherwise complies with all applicable legal and regulatory requirements;
- (h) review the appropriateness of the policies and procedures used in the preparation of the Company's consolidated financial statements and other required disclosure documents, and consider recommendations for any material change to such policies;
- (i) review and report on the integrity of the Company's consolidated financial statements;
- (j) review the minutes of any audit committee meeting of any subsidiaries of the Company;
- (k) review with management, the external auditors and, if necessary, with legal counsel, any litigation, claim or other contingency, including tax assessments that could have a material effect upon the financial position or operating results of the Company and the manner in which such matters have been disclosed in the consolidated financial statements;
- (l) review the Company's compliance with regulatory and statutory requirements as they relate to financial statements, tax matters and disclosure of material facts; and
- (m) develop a calendar of activities to be undertaken by the Committee for each ensuing year and to submit the calendar in the appropriate format to the Board within a reasonable time following each annual general meeting of shareholders.

3.5 The Committee shall have the authority to determine:

- (a) subject to the grant by the shareholders of the authority to do so, if required, the compensation to be received by the external auditors of the Company in connection with all audit services, and non-audit services, to be performed by the auditors;
- (b) the compensation to be received by any legal, financial or other advisors or consultants engaged by the Committee to assist it in performing its duties and responsibilities hereunder; and
- (c) the appropriate funding for the ordinary administrative expenses of the Committee.

**ARTICLE 4 – GENERAL**

- 4.1 The Committee will:
- (a) prepare any report or other disclosure, including any recommendation of the Committee, required by any applicable legal or regulatory requirement to be included in the annual proxy or information circular of the Company;
  - (b) review this Charter at least annually and recommend any changes herein to the Board;
  - (c) report the activities of the Committee to the Board on a regular basis and make such recommendations thereto as the Committee may deem necessary or appropriate; and
  - (d) prepare and review with the Board an annual performance evaluation of the Committee, which performance evaluation must compare the performance of the Committee with the requirements of this Charter and be conducted in such manner as the Committee deems appropriate. Such report to the Board may be in such form as the Committee determines, which may include being in the form of an oral report by the chair of the Committee or by another member of the Committee designated by the Committee to make such report.
- 4.2 No member of the Committee will receive any compensation from the Company, other than fees for being a director of the Company, or a member of a committee of the Board.
- 4.3 In addition to the foregoing, the Committee will perform such other duties as may be assigned to it by the Board from time to time or as may be required by any applicable stock exchanges, regulatory authorities or legislation.”

**Composition of the Audit Committee**

Cardero’s Audit Committee is made up of the following directors:

<u>Name</u>	<u>Independent (Y/N)</u>	<u>Status</u>
Leonard Harris	Independent	Financially Literate
Ryan Dunfield	Independent	Financially Literate
Stephan Fitch	Independent	Financially Literate

**Relevant Education And Experience**

The experience and education of each member of the Audit Committee that is relevant to the performance of his responsibilities as a member of the Audit Committee is as follows:

Leonard Harris: Mr. Harris is a professional engineer with Metallurgy diploma and 50 years’ experience in all aspects of mineral processing and mining operations worldwide, a significant part of which has been in South America. Mr. Harris spent 16 years with Cerro de Pasco Corporation before joining Newmont Mining Corporation, where he served as President and General Manager of Newmont Peru Limited and Vice-President and General Manager of Newmont Latin America. Mr. Harris was General Manager (involved in construction and operation) of the Minera Yanacocha gold mine in Peru. Since 1995, Mr. Harris has been a consultant and director of several small capitalized mining companies including Glamis Gold Ltd., Solitario

Resources Inc., Alamos Gold Inc., Corriente Resources Inc., Endeavour Silver Corp. and Cardero. In such roles, he has had extensive experience with the review and understanding of the accounting principles relevant to the financial statements of public natural resource companies, including companies comparable to Cardero.

*Stephan Fitch:* Stephan Fitch is a co-founder and a managing director of the London based International Asset Group, Ltd. (IAGL), a private company which specializes in international merchant banking activities. He has been involved in a broad range of international corporate finance/investment banking activities for over 18 years specializing primarily in start-up, venture capital and small-capitalized public companies. Prior to joining IAGL, Mr. Fitch was co-founder and Executive Vice President of New World Capital, Inc. New World was established in 1992 and was involved in corporate finance and investment banking activities throughout Europe and the US. The firm's activities included the raising of capital from European institutional investors for small-capitalized US public companies, corporate restructuring, technology transfers between U.S. high tech companies and European conglomerates and, numerous M & A/strategic advisory projects. During this time, he assisted with the purchase and management of Eastern Securities, a fully licensed, NASD member, and New York City based broker/dealer. Prior to joining New World, Mr. Fitch co-founded in 1986, Somerset Partners Ltd., a Denver based partnership specializing in M & A activities. From 1984 to 1986, Mr. Fitch worked as an assistant research analyst for Cambridge Research and Management Group, a registered commodities trading advisor, based in Century City, California. In 1984, Mr. Fitch earned a Bachelor of Arts degree from the University of California, Los Angeles in Political Science with a specialization in International Relations. In connection with these activities, Mr. Fitch has had extensive experience in reviewing, interpreting and assessing financial statements and the underlying accounting principles, and has been involved in the development and analysis of internal controls and procedures for financial reporting.

*Ryan Dunfield:* Mr. Dunfield is Vice President with the Vancouver, B.C. private equity group Second City Capital Partners, and its affiliate, Gibralt Capital Corporation. Mr. Dunfield is heavily involved with the acquisition and divestiture of portfolio companies within the resource sector. Previous to Second City Capital Partners, Mr. Dunfield worked in the debt capital markets, with exposure to corporate banking, leveraged finance and loan syndications. Mr. Dunfield received a Bachelor of Economics and Finance from the University of Calgary. In such roles, Mr. Dunfield has had extensive experience in reviewing and analysing financial statements, including with respect to many companies involved in the mineral exploration field.

### **Reliance on Certain Exemptions**

At no time since November 1, 2011, being the commencement of Cardero's most recently completed financial year, has the Company relied on the exemptions in the following sections of MI 52-110:

1. Section 2.4 (De Minimis Non-audit Services);
2. Section 3.2 (Initial Public Offerings);
3. Section 3.3(2) (Controlled Companies);
4. Section 3.4 (Events Outside Control of Member);
5. Section 3.5 (Death, Disability or Resignation of Audit Committee Member);
6. Section 3.6 (Temporary Exemption for Limited and Exceptional Circumstances);
7. Section 3.8 (Acquisition of Financial Literacy); or
8. an exemption from MI 52-110, in whole or in part, granted under Part 8 of MI 52-110.

### **Audit Committee Oversight**

At no time since November 1, 2011, being the commencement of Cardero's most recently completed financial year, was a recommendation of the Audit Committee to nominate or compensate an external auditor not adopted by the Board.

### Pre-Approval Policies and Procedures

The Audit Committee is authorized by the Board to review the performance of Cardero's external auditors and approve in advance provision of services other than auditing and to consider the independence of the external auditors, including reviewing the range of services provided in the context of all consulting services bought by Cardero. The Chairman of the Audit Committee is authorized to approve, in advance, any non-audit services or additional work which the Chairman deems as necessary and is required to notify the other members of the Audit Committee of such non-audit or additional work.

### External Auditor Service Fees (By Category)

The aggregate fees billed by the Company's external auditors in each of the last two fiscal years for professional services rendered are as follows:

Financial Year Ending	Audit Fees <sup>(1)</sup>	Audit Related Fees <sup>(2)</sup>	Tax Fees <sup>(3)</sup>	All Other Fees <sup>(4)</sup>
October 31, 2012	\$206,000	\$25,500 <sup>(5)</sup>	\$43,275	Nil
October 31, 2011	\$152,000	\$50,000 <sup>(5)</sup>	\$8,000	\$77,000 <sup>(6)</sup>

(1) The aggregate audit fees billed for the audit of the financial statements for the fiscal year indicated, including with respect to the audit of the Company's internal control over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act of 2002.

(2) The aggregate fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the Company's financial statements which are not included under the heading "Audit Fees".

(3) The aggregate fees billed for professional services rendered for tax compliance, tax advice and tax planning. The work performed in each year was assistance in the preparation and review of Cardero's tax returns.

(4) The aggregate fees billed for products and services other than as set out under the headings "Audit Fees", "Audit Related Fees" and "Tax Fees".

(5) The services rendered are in connection with the review of the Company's quarterly financial statements and of its Form 40F and AIF disclosure documents and management discussion and analysis for the fiscal years indicated.

(6) The services rendered are in connection with the consideration of consolidating accounting issues (2011 - \$30,000), plan of arrangement (2011 - \$17,000) and the sale of the Pampa de Pongo property in Peru (2011 - \$30,000).