REPORT

TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY

Submitted To: ARCTOS ANTHRACITE JOINT VENTURE
148 Fullarton Street, Suite 1600
London, Ontario N6A 5P3 Canada

Submitted By: Golder Associates Inc.
44 Union Boulevard, Suite 300
Lakewood, Colorado 80228 USA

November 28, 2012 **12-135-40007**

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TITLE PAGE

Title of Report

Technical Report on the 2012 Update Arctos Anthracite Project Mine Feasibility Study

Project Location

The Arctos Anthracite Property (Property) is located in northwestern British Columbia, approximately 160 kilometres (km) northeast of Stewart and 300 km northwest of Smithers; see Figure 1.1, Property Location. A British Columbia Railway right-of-way runs between Minaret and the Project. Ground access to the Property is via a connector road from Stewart-Cassiar Highway 37 to the BC Railway sub-grade. The property is accessible by air to a 1,000-metre (m) graveled airstrip built on the sub-grade, which is suitable for landing fixed-wing aircraft.

Author

The author of the report is Golder Associates (Golder-Marston), an employee-owned, global company providing consulting, design, and construction services in earth, environment, and related areas of energy based in Calgary, Alberta, Canada and registered to practice engineering under the Association of Professional Engineers and Geoscientists of Alberta (APEGA) Permit No. P-05122. Golder-Marston's address is at 102, 2535 – 3rd Avenue S.E., Calgary, Alberta, Canada T2A 7W5.

Effective Date of the Report

November 28, 2012

DATE AND SIGNATURE PAGE

I, Edward H. Minnes, P.E., do hereby certify that:

1. I am a Senior Consultant and a Mining Practice Leader of:

   Golder Associates Inc.
   44 Union Blvd, Suite 300,
   Lakewood, CO, USA 80228

2. I graduated with a Bachelor of Applied Science – Mining Engineering, from Queen's University, Kingston, Ontario, in 1984.
3. I am licensed as a professional engineer in Missouri, USA and registered member of the Society for Mining, Metallurgy, and Exploration.
4. I have worked as a mining engineer for a total of 27 years since graduation from Queen's University.
5. I have read the definition of "qualified person" as defined in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am responsible for the preparation of Items 1 through 27 of the technical report titled Technical Report on the Arctos Anthracite Feasibility Study for Arctos Anthracite Joint Venture (Technical Report). I visited this property in October 2004 for two days.
7. I have had prior direct involvement with the property that is the subject of the Technical Report. The nature of my prior involvement is as a mining engineer and consultant during the preparation of previous mine planning and feasibility studies prepared for Gulf Canada Resources, Ltd., the prior owner of the Property.
8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
9. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 28th day of November 2012.

Edward H Minnes

Edward H. Minnes, P.E.
Associate and Mining Practice Leader

Effective Date of Report: November 28, 2012

Signature Date of Report: November 28, 2012

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Item 1 Summary

The Arctos Anthracite Property (Property), formerly known as the Mount Klappan Coal Project, comprises approximately 16,411 hectares (ha) located in northwestern British Columbia that are licensed for coal exploration and development by Arctos Anthracite Joint Venture (Arctos). Gulf Canada Resources Ltd. (Gulf) originally licensed and explored the Property during the 1980s and commenced development of the Arctos Anthracite Project (Project) to explore for and produce anthracite from the Property. Conoco Canada Resources Ltd. (Conoco) later acquired Gulf, and in 2002, Fortune Minerals Ltd., a majority partner in Arctos, purchased the Project from Conoco.

The anthracite deposits at the Property are part of the Klappan Coalfield at the northern end of the Bowser Basin of British Columbia. During the late Jurassic and early Cretaceous periods, the Bowser Basin was filled with sediments deposited from eroding mountains. At the northern end of the Basin, the Klappan Formation was deposited in a deltaic environment that was conducive to peat forming. Buried deeply after millions of years, the ancient peat bogs became anthracite coal. Approximately 1,100 m in thickness, the Klappan Formation contains 33 identified coal horizons of up to 11.8 m in true thickness interbedded with primarily mudstone, siltstone and sandstone. The Klappan Formation and surrounding beds were later deformed during a period of uplifting that caused compression in a northeast-southwest direction and created folds varying from relatively flat to overturned. In some areas of steep folds, reverse faulting has also occurred.

The uplifting and subsequent erosion have resulted in near-surface occurrences and anthracite outcrops at and near the Property, which Gulf grouped into four different exploration sub-areas named Lost-Fox, Hobbit-Broatch, Summit and Skeena. Gulf later released its licenses over the Skeena Area and significant portions of the Summit Area.

Gulf's drilling and sampling programs to delineate resources focused primarily on the Lost-Fox Area. Between 1982 and 1988, Gulf conducted a series of summer field programs and geologic studies. The fieldwork consisted of surveys and trenching to map near-surface anthracite sub-crops, drilling and logging to locate anthracite seams at depth and collection of core samples for analysis, and driving adits to collect bulk samples from two of the thickest seams. In addition, in 1985 and 1986, Gulf excavated a test pit and mined and processed bulk samples from the I Seam for pilot plant analysis and potential customer test shipments. Gulf's major field programs ended in 1988.

Gulf's field and geological work culminated in several mining project feasibility studies of the Lost-Fox Area completed during 1987 – 1990. Gulf staff and consultants including Golder-Marston completed geologic interpretation, resource estimates, open pit mining plans, coal processing and infrastructure plans, and transportation and market studies. Gulf published two major feasibility studies, in 1987 and in 1990, with numerous concept and alternative studies developed during the intervening period. Gulf continued to examine alternative development concepts for the Project through 1994.

In 2002, Fortune acquired the Project and is currently performing geologic, environmental, and mine planning studies to develop the Lost-Fox Area. Fortune has continued this work with a drilling program in the Lost-Fox Area in 2005. As part of the 2002 acquisition due diligence and subsequent block modeling in early 2004 of Gulf's data and geological work, Golder-Marston verified and reported Gulf's resource estimates for the Project under Paper 88-21 of the Geological Survey of Canada, entitled "A Standardized Coal Resource/Reserve Reporting System for Canada" (GSC 88-21).

In 2012, Arctos commissioned Golder-Marston to prepare an update to the 2005 feasibility study to produce anthracite from the Lost-Fox Area of the Project. The title of this study is the "2010 Update of the Mount Klappan Anthracite Project Lost-Fox Area Mine Feasibility Study" (2012 FS). Part of the 2012 FS scope of work was to incorporate new 2005 drilling data, and produce an updated geologic model for use in the 2012 FS.

After a thorough review of the geological data and aerial photographs of the Lost-Fox Area, Golder-Marston concluded that large portions of the area are of a Moderate geology type as defined in GSC 88-21. However, areas of steep dips, overturned structures and significant reverse faults were characterized as Complex geology type. The Measured and Indicated resource estimates were developed applying the different GSC 88-21 standards required for the two geology types.

Resources for the Lost-Fox Area were disclosed in a document titled "Technical Report on the Update to the 2010 Update to the 2005 Lost-Fox Area Feasibility Study." In that report, Marston reported, under GSC 88-21, Measured and Indicated resources of 143.3 Mt, and 15.7 Mt of Inferred resources.

These resources were based on a conceptual pit design with a cut-off strip ratio of 15:1 bcm/tonne of product for a 50 mm x 0 mm sized product with an average ash content of 10 percent on air dried basis (adb).

This Technical Report (Report) presents resource and reserve estimates based on the completed 2012 Feasibility Study. The 2012 FS was based on producing a 10 percent ash product that is standard for the PCI markets. Based on this assumption, the 20:1 conceptual pit developed for the 2012 FS was used to define the limits of in situ resources for the Lost Fox Area. The resource estimates are classified as Measured, Indicated and Inferred according to the CIM Definition Standards on Mineral Resources and Mineral Reserves (CIMDS) prepared by the CIM Standing Committee on Reserve Definitions. These were adopted by the CIM Council on November 14, 2004 and updated November 22, 2010, and are incorporated by reference in National Instrument 43-101 (NI 43-101). For coal resource estimates, the CIMDS incorporates by reference the guidelines of GSC 88-21.

Golder-Marston's Measured and Indicated anthracite resource estimates in the 2012 FS Report are presented in Table 1.1 below. The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce mineral Reserves.

Table 1.1 Lost-Fox Area Estimated Anthracite Resources

In Situ Tonnes (Mt)	
Measured	**Indicated**
172.4	20.4

Note: Conceptual Pit at 20 bcm per 10% Ash, adb Product Tonne Cut-off Strip Ratio

In addition to the measured and indicated resource, there were 12.1 Mt of inferred coal resources identified in the Lost Fox Area.

CIMDS defines Mineral Reserves as "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."

In accordance with CIMDS, Golder-Marston estimated Lost-Fox anthracite reserves based on a 25-year mine plan and associated economic studies. The reserves were estimated within an ultimate pit designed on the economics developed for the 2012 FS. For initial pit designs, Golder-Marston used Lerchs-Grossmann (LG) pit optimization tools, which are a standard in the mining industry. A series of nested pits were developed based on a range of commodity prices and estimated unit costs for mining, processing, and transporting coal to port.

The nested LG pits were then used as a guide to design a series of phased mining pits and develop a mining sequence to maximize NPV over the life of the current project. The reserves within the ultimate pit were used to develop a 25-year mine life at a nominal production rate of 3 million tonnes per annum (Mtpa). The resulting mining sequence and detailed annual production statistics were used to develop detailed operating and infrastructure cost estimates. For a range of assumed anthracite sales prices, annual cash flows were estimated to calculate internal rates of return. At Arctos' estimated price of US$175 per tonne FOBT over the mine life, the pre-tax net present value (NPV) of the project at 8% discount rate is $616 million with an internal rate of return (IRR) of 17%. The ultimate pit is shown in, Figure 15.1, 3 Mtpa Ultimate Pit Design. All dollar values are reported in Canadian Dollars unless otherwise stated.

Lost-Fox Area anthracite reserve estimates are based on the 2012 FS. In accordance with CIMDS, the reserve estimates include adjustments to the in situ coal estimates for mining losses, out of seam dilution, and changes in moisture for run-of-mine (ROM) coal. In order to provide a more thorough understanding of the mine economics, the plant yield and clean coal reserves are included. These Lost-Fox anthracite reserve estimates are shown below in Table 1.2.

Table 1.2 Lost-Fox Area Anthracite Reserves

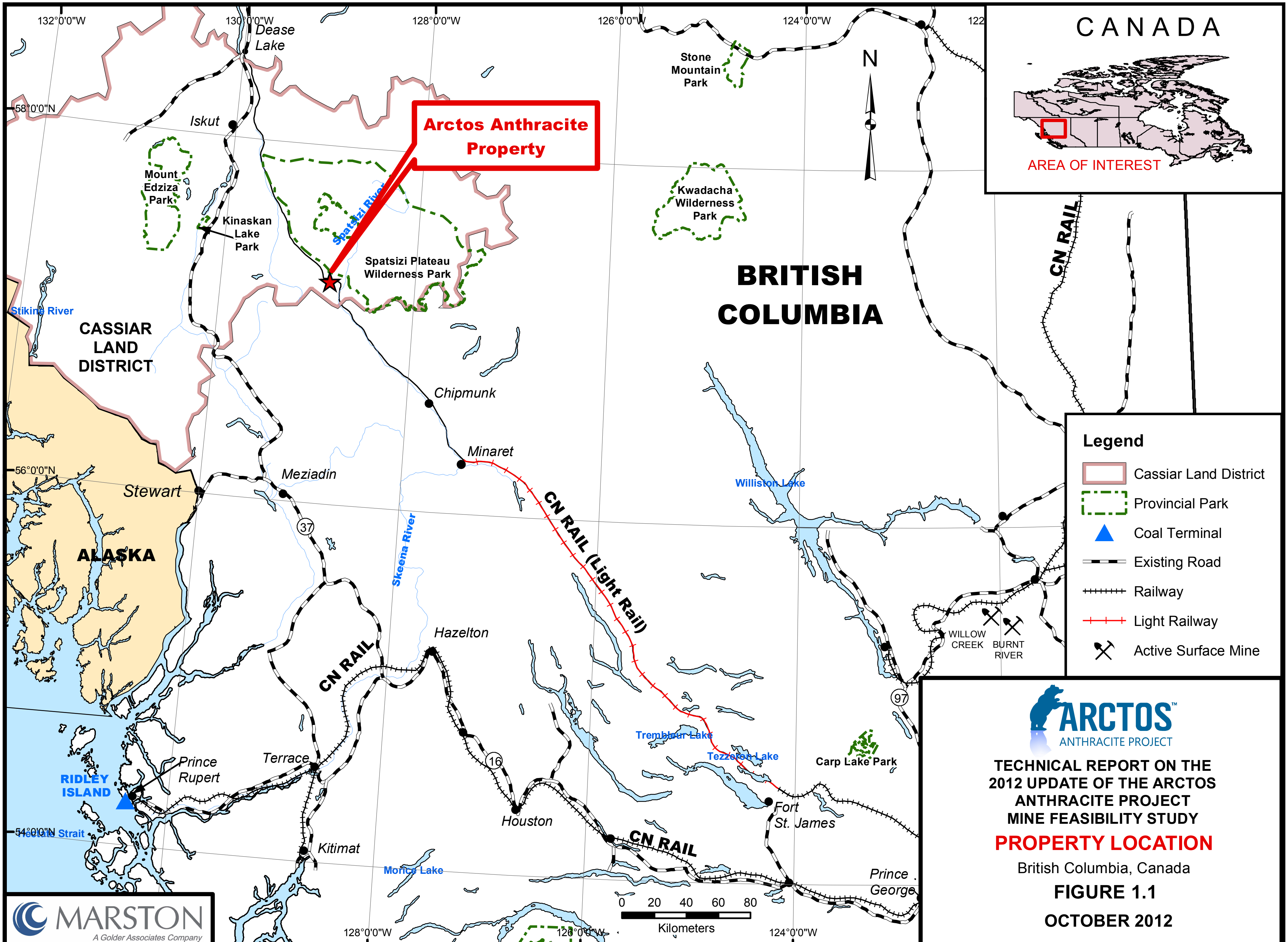
ROM Tonnes (Proven & Probable) (Mt)	Yield %	10% Ash (Adb) Clean Coal Reserves (Mt)			Waste (Mbcm)	Clean Coal Strip Ratio (Bcm/tonne)
		Proven	Probable	Total		
124.9	55.4	64.4	4.8	69.2	780.8	11.3

Based on the 2012 FS, Golder-Marston concludes the following:

1. If favorable markets continue for metallurgical coal the 2012 FS indicates that the Lost-Fox Mine can be a viable mining operation assuming all environmental, permitting and financing hurdles can be overcome.
2. The 2012 FS indicates that the Lost-Fox Mine contain Proven and Probable Reserves of 124.9 million ROM tonnes that, at an average plant yield of 55.4 percent, will produce 69.2 million tonnes of marketable coal at 10 percent ash (adb).
3. The Lost-Fox Area contains Measured and Indicated Resources of 192.8 million tonnes that include the Proven and Probable Reserves.

Recommendations

1. Golder-Marston recommends that Arctos perform a field testing program to identify any sources of ground water, permafrost or other conditions that may impact the stability of the proposed rock placement strategy and perform additional drilling to provide data for testing and stability analysis of the proposed rock storage piles.
2. Golder-Marston recommends that Arctos commence further gathering and examination of geotechnical data in areas of planned ultimate pit walls as well as employ safe mining practices to ensure a greater degree of certainty regarding slope stability. The exposure of permafrost or bentonite may have a negative impact on slope stability and must be taken into account.
3. Arctos should engage in discussions with the federal and provincial government, and other potential users of the rail line for the purposes of investing in the rail facilities to reduce Arctos' share of the capital costs of upgrading the rail.
4. Arctos should commence bulk testing designed to provide further information on large size fraction yields and middlings re-crush yields. Testing should also be performed to confirm the product quality of the 15% ash sinter product and to optimize the yield and economics of the two products.
5. Golder-Marston recommends that Arctos commence with the Project assuming that the strong low-volatile PCI coal market outlook continues and that all permits can be obtained.



TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY

PROPERTY LOCATION

British Columbia, Canada

FIGURE 1.1

OCTOBER 2012

Item 2 Introduction

In 2002 Fortune, a publicly listed natural resource development company based in London, Ontario, purchased certain properties containing significant anthracite resources in northwestern British Columbia from Conoco, the successor to Gulf. In 2011, Fortune entered into a joint venture agreement with POSCO Canada (POSCAN), a Canadian subsidiary of the world's third-largest steelmaker, South Korean-based Pohang Iron and Steel Company (Posco). The partnership is known as the Arctos Anthracite Joint Venture (Arctos); Fortune is an 80% owner and POSCO Canada is a 20% owner. Collectively, the Lost-Fox Area and adjacent anthracite-bearing exploration areas comprise the Arctos Anthracite Project (Project).

Arctos commissioned Golder-Marston to develop a mining feasibility study (2012 FS) to produce anthracite from the Lost-Fox Area, which Gulf had explored and studied extensively from 1982 – 1990. The 2012 FS included:

- A comprehensive review of Gulf's geological data and coal seam interpretations within the Lost-Fox Area
- The development of an updated geologic model incorporating additional drilling performed in 2005
- In-pit resource estimates for a conceptual pit design at a maximum strip ratio of 20:1 bcm/tonne
- The development of a life of mine plan from an economically based ultimate pit designed to produce 3.0 Mtpa of 10% ash (adb) clean coal
- The associated infrastructure required to support the project

This Report presents the conceptual in-pit anthracite resource and reserves estimates for the 2012 FS. All of the work described in this Report is based on information provided by Arctos, vendors and other technical sources and references outlined in Item 27. This includes primarily the Gulf Geological Reports and Appendices produced each year from 1982 to 1988; Gulf aerial photographs produced around 1985; Fortune's electronic databases of Gulf's drill holes; the data collected during the 2005 drilling program completed by Fortune, trench, mapping and analytical data; the geologic cross sections developed by Gulf for its feasibility studies; Gulf geotechnical reports; rail road and road evaluations performed by various individuals or corporations; and cost information from various vendors and manufacturers. Long-term price estimates for metallurgical grade coal and US-Canadian exchange rates were provided by Arctos.

Additional supporting information was provided by third parties and reviewed by Golder-Marston. These sources are described below.

CDG Engineers Inc. (CDG) provided Golder-Marston with onsite infrastructure specifications and designs to meet a nominal 3 Mtpa clean coal production rate. These facilities included the work camp complex, water and power distribution systems, maintenance and administrative buildings, and coal handling facilities. CDG also provided capital cost estimates for these infrastructure items. CDG is a full service, multidisciplinary engineering professional services organization with experience in civil, structural, mechanical, and electrical engineering as well as architecture.

Golder-Marston relied on Terracon Geotechnique for a preliminary analysis of the ultimate pit slope stability. Terracon is a geotechnical engineering company located in Calgary, Alberta with extensive experience in the area of geotechnical engineering and geosciences.

Golder relied on Taggart Global LLC for the design of the coal preparation plant. Taggart Global LLC is an international engineering and construction company with expertise in turnkey design, supply, construction and commissioning of coal preparation plants and material handling systems.

Edward H. Minnes, P.E. (Missouri), the Qualified Person responsible for the preparation of this Report, visited the Property in October 2004. He observed the site, Gulf's exploration activities including drill hole, trench and adit locations, and Gulf's test pit. He also worked in modeling the Lost-Fox coal seams in 1987 in preparation for mine design and planning as part of Gulf's 1987 feasibility study. Mr. Minnes spent considerable time directing and working on the development of the 2004 resource estimate, the 2005 FS, 2007 pre-feasibility study for supplying a combination of thermal and metallurgical coal products, the 2008 and 2010 FS Updates, and the 2012 FS through all stages of data verification, estimation of resources and reserves, infrastructure development, costing and production of the final report.

Golder-Marston commissioned John K. (Kip) Alderman to devise a method for estimating plant yield for sample data points without washability. Kip Alderman is president of Advanced Coal Technology in Castle Rock, Colorado. Kip is a graduate of West Virginia University and has worked on coal preparation projects around the world since 1975. He has numerous published works on a wide range of topics in coal preparation, including a book on coal preparation published by the Coal Preparation Society of America. Kip is a past president of the Coal Preparation Society of America and is a professional member of SME (Society for Mining, Metallurgy, and Exploration).

Item 3 Reliance on Other Experts

For this Report, Golder-Marston has relied on the following information concerning legal, environmental, political or other relevant issues and factors.

Arctos provided all information on its coal lease, coal licenses and Property boundary, and also on its current environmental and other work related to the Property. This information applies to all portions of this Report that reference the Property. In Item 4, Golder-Marston relied specifically on Fortune's 2005 Annual Reclamation Report on Permit C-160 to the BC Ministry of Mines and Energy and information supplied by Fortune regarding additional acquisitions in 2005.

All information in this Report related to acquisitions and transfers of Property ownership are also based on Arctos' statements, public news announcements, and similar records. This information applies primarily to Items 1 and 6.

Arctos provided a long-term projected coal price of $175 USD per tonne and a long-term exchange rate projection of US$1.00 = C$0.95 to be used in the 2012 FS.

Item 4 Property Description and Location

The Arctos Anthracite Property (Property) consists of approximately 16,411 ha of contiguous coal licenses located in the Bulkley-Cassiar District of northwestern British Columbia, Canada between 57°06'N and 57°23'N latitudes and 128°37'W and 129°15'W longitudes, see Figure 1.1, Property Location. The Property is near the northern extremity of the Skeena Mountains at the headwaters of the northerly flowing Little Klappan River, Klappan and Spatsizi rivers, as well as the southerly flowing Nass and Skeena rivers.

Arctos' coal licenses are listed in Table 4.1, Arctos Anthracite Project Coal Licenses. Although ground control surveys have tied the Property to the NAD27 UTM grid, Golder-Marston is not aware of a legal survey of the Property boundary.

Figure 4.1, Project Exploration and Coal License Areas, shows the project exploration and coal license areas considered for the 2012 FS.

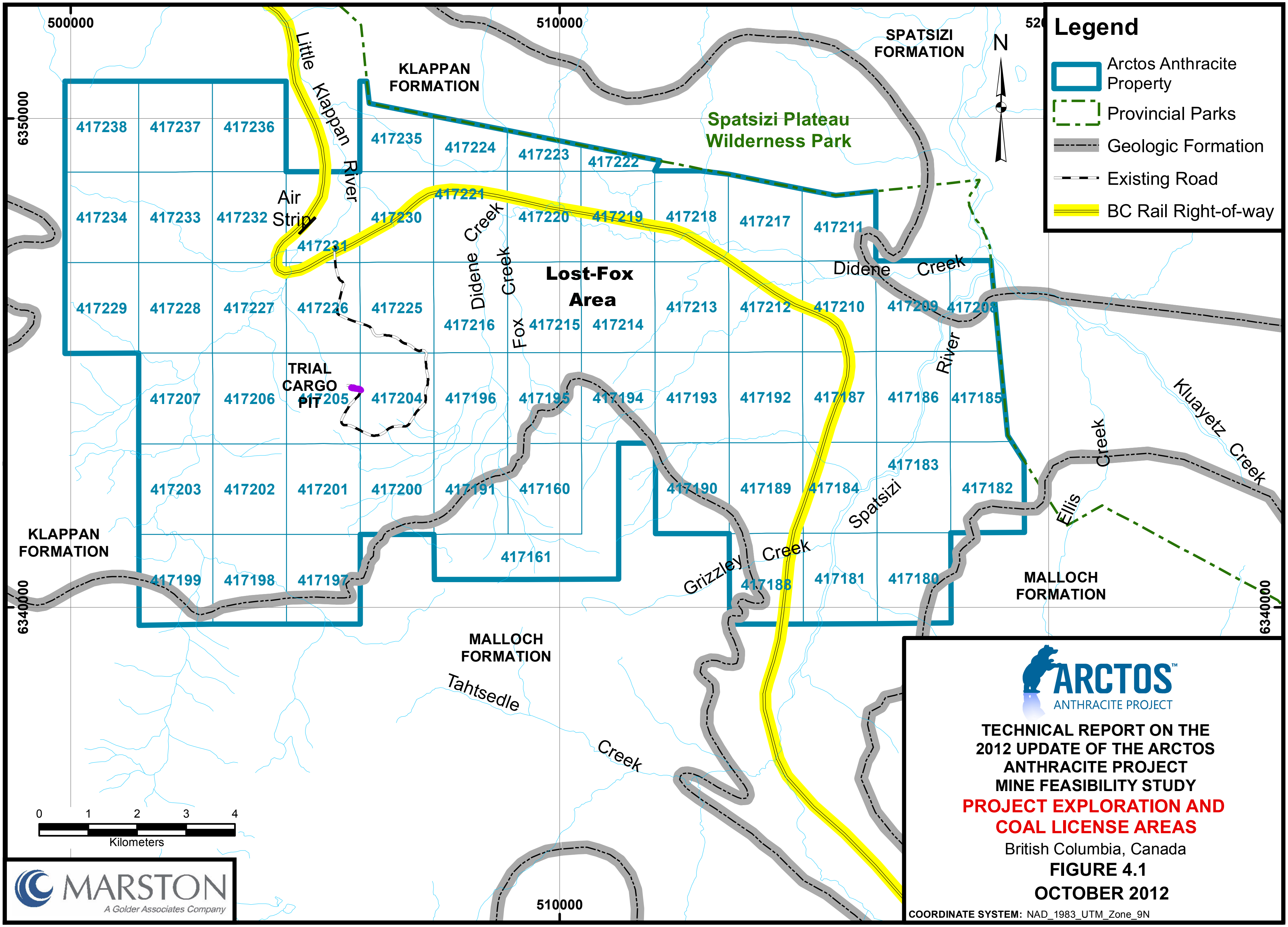
In addition to Crown royalties on coal production, all tonnes sold from the Property are subject to a production royalty of $1.00 per tonne payable to ConocoPhillips. No other encumbrances on the Property have been reported to Golder-Marston.

Arctos' environmental liabilities known to be associated with the Property are for reclamation of about 6 ha of haul road that Gulf used to transport mined coal from a test pit to a process plant site. Arctos intends to use this road for further work at the Property. As of November 2005, Fortune has incurred additional liability of $189,900 for activities associated with collecting baseline environmental data and exploration drilling. Reportedly, all disturbed areas associated with Gulf's 1981 – 1988 work, with the exception of the aforementioned laydown area and haul road, were satisfactorily reclaimed prior to Fortune's acquisition of the Property. This work included drill hole, trench and adit sites, bulk test pit and rock storage pile, coal processing site and coal haulage and access roads, except as described above. In addition, oil and gas companies have actively explored areas within the Property, and BC Rail established a rail grade on the Property. Arctos requires permits to conduct further exploration work and to develop and mine the Property. These include permits, licenses, and approvals from the BC Ministry of Energy and Mines, BC Ministry of Sustainable Resource Management, BC Ministry of Water, Land and Air Protection, BC Ministry of Forests, BC Ministry of Health Services and regional and local agencies.

Table 4.1 Arctos Anthracite Project Coal Licenses

Lease/License #	BCGS Mapsheet	Area (ha)
417160	104H026	281
417161	104H026	491
417180	104H017	281
417181	104H017	281
417182	104H027	276
417183	104H027	281
417184	104H027	281
417185	104H027	205
417186	104H027	280
417187	104H027	280
417188	104H017	281
417189	104H027	281
417190	104H026	281
417191	104H026	281
417192	104H027	280
417193	104H026	280
417194	104H026	280
417195	104H026	280
417196	104H026	280
417197	104H016	281
417198	104H016	281
417199	104H016	281
417200	104H026	281
417201	104H026	281
417202	104H026	281
417203	104H026	281
417204	104H026	280
417205	104H026	280
417206	104H026	280
417207	104H026	280
417208	104H027	173
417209	104H027	280
417210	104H027	280
417211	104H027	211
417212	104H027	280
417213	104H026	280
417214	104H026	280
417215	104H026	280
417216	104H026	280
417217	104H027	247
417218	104H026	279
417219	104H026	280
417220	104H026	280
417221	104H026	280
417222	104H026	58
417223	104H026	104
417224	104H026	149
417225	104H026	280
417226	104H026	280
417227	104H026	280

Lease/License #	BCGS Mapsheet	Area (ha)
417228	104H026	280
417229	104H025	280
417230	104H026	280
417231	104H026	280
417232	104H026	280
417233	104H026	280
417234	104H025	280
417235	104H026	202
417236	104H026	280
417237	104H026	280
417238	104H025	280
	Total	**16,411**


Legend
Arctos Anthracite Property
Provincial Parks
Geologic Formation
Existing Road
BC Rail Right-of-way
N
500000
510000
6350000
6340000
KLAPPAN FORMATION
SPATSIZI FORMATION
MALLOCH FORMATION
Spatsizi Plateau Wilderness Park
Lost-Fox Area
TRIAL CARGO PIT
Air Strip
Little Klappan River
Didene Creek
Fox Creek
River
Klusyetz Creek
Ellis Creek
Spatsizi
Grizzley Creek
Tahtsedle Creek
417238
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Kilometers
MARSTON
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ARCTOS
ANTHRACITE PROJECT
TECHNICAL REPORT ON THE
2012 UPDATE OF THE ARCTOS
ANTHRACITE PROJECT
MINE FEASIBILITY STUDY
PROJECT EXPLORATION AND
COAL LICENSE AREAS
British Columbia, Canada
FIGURE 4.1
OCTOBER 2012
COORDINATE SYSTEM: NAD_1983_UTM_Zone_9N

Item 5 Accessibility, Climate, Local Resources, Infrastructure, and Physiography

The Property may be accessed by vehicle or aircraft. Gulf constructed a gravel road about 150 km in length from the Stewart-Cassiar Highway (Provincial Highway 37) to the Property. See Figure 5.1, Proposed Mine Access.

About 125 km of the road is constructed on a BC Rail right-of-way and sub-grade that was constructed in the early 1970s, but was never utilized as a railway. Gulf also refurbished a 1,000-m graveled airstrip on the Property, which was initially constructed for the railway project, which was refurbished again during the summer of 2004 by an oil and gas company exploring in the area. Arctos has surface rights to the Property by virtue of its coal licenses.

The Property has a sub-arctic highland/cold forest climate that is characterized by relatively short summers and long, severe winters with precipitation occurring throughout the year. Mean temperatures during the summers vary between 6°C and 10°C; winter temperatures generally vary between -5°C and -20°C. Precipitation averages 300 millimetres (mm) to 400 mm per year. Generally, over half the precipitation is rainfall occurring in summer and early fall. The remainder is snow during winter and spring, with maximum snow accumulation of about 1.5 m each year. To date, operating seasons for exploration generally begin regionally after the spring thaw and break-up of river ice, and end once significant snowfall requires maintenance to keep the Property access road clear of snow. For mining, operating seasons may be year-round.

The nearest community to the Property is Iskut, which is approximately 100 km to the northwest and situated on Highway 37. Larger towns include Stewart, Terrace and Smithers, which are 150 km to 300 km south of the Property, and Prince George, which is 530 km southeast of the Property. The nearest large city, Vancouver, is approximately 930 km south of the Property. Transport to the Property is by commercial airline to Smithers, B.C. or Terrace, B.C. and then by charter plane or vehicle to the site.

The BC Rail right-of-way traverses the Property near its northeastern boundary. See Figure 1.1, Property Location. The right-of-way connects Fort St. James to the southeast with Dease Lake to the northwest. Rail is installed on the right-of-way from Fort St. James to Minaret, B.C., which is about 150 km southeast of the Property. A 57-km section from Minaret to Chipmunk had rail on it until a few years ago. Other than the access road to the site and the airstrip, no other significant infrastructure is located on the Property.

The Property is located at the northern end of the Skeena Mountain Range in British Columbia's Northern Boreal Mountains Ecoprovince. The local terrain is mountainous, with topography changing from 1,100 m in valley floors to over 2,200 m along mountain and ridge crests. The Property drains to the Klappan and Spatsizi watersheds. Vegetation consists of willow-birch shrub lands in low valleys with muskeg and black spruce in low, poorly drained areas. Lower mountain slopes have stands of white spruce and sub-alpine fir with the tree line occurring at approximately 1,500 m elevation. Above the tree line, alpine grasslands and dwarf shrubs prevail in flatter areas, while peaks are barren rock with patches of lichen, moss and other mat-vegetation.

On-site infrastructure proposed in the 2012 FS includes personnel camp facilities, security and first-aid facilities, mine dry, mine shops, warehouse, preventative maintenance facilities, ready line, fueling facilities, coal processing and handling facilities, explosives magazine, main office, main water supply and distribution, sewage disposal, power supply and air strip. The main facilities are shown on Figure 5.2, Mine Facilities Area Layout and Location Plan.

The Lost-Fox Mine will require significant off-site infrastructure to facilitate the efficient transport of coal to the Ridley Terminal at Prince Rupert, B.C. Efficient transport of the coal by rail will require significant upgrades to the existing rail infrastructure from the mine to Fort St. James. The northern section of the proposed rail line, which is controlled by BC Rail, is approximately 153 km in length and runs from the mine at milepost 370 to just north of Minaret at milepost 275. This section requires substantial work including the construction or refurbishing of several bridges. Grade work was completed for the majority of this section but ballast, ties and track were never installed on the 98 km running from Chipmunk to the mine. The remaining 57 km from Chipmunk to Minaret was never used commercially and required upgrading to become serviceable. The track and ties on this portion of the roadbed were removed several years ago. The proposed upgrades to the track and rail bed are shown in Figure 5.3, Rail Transportation Route.

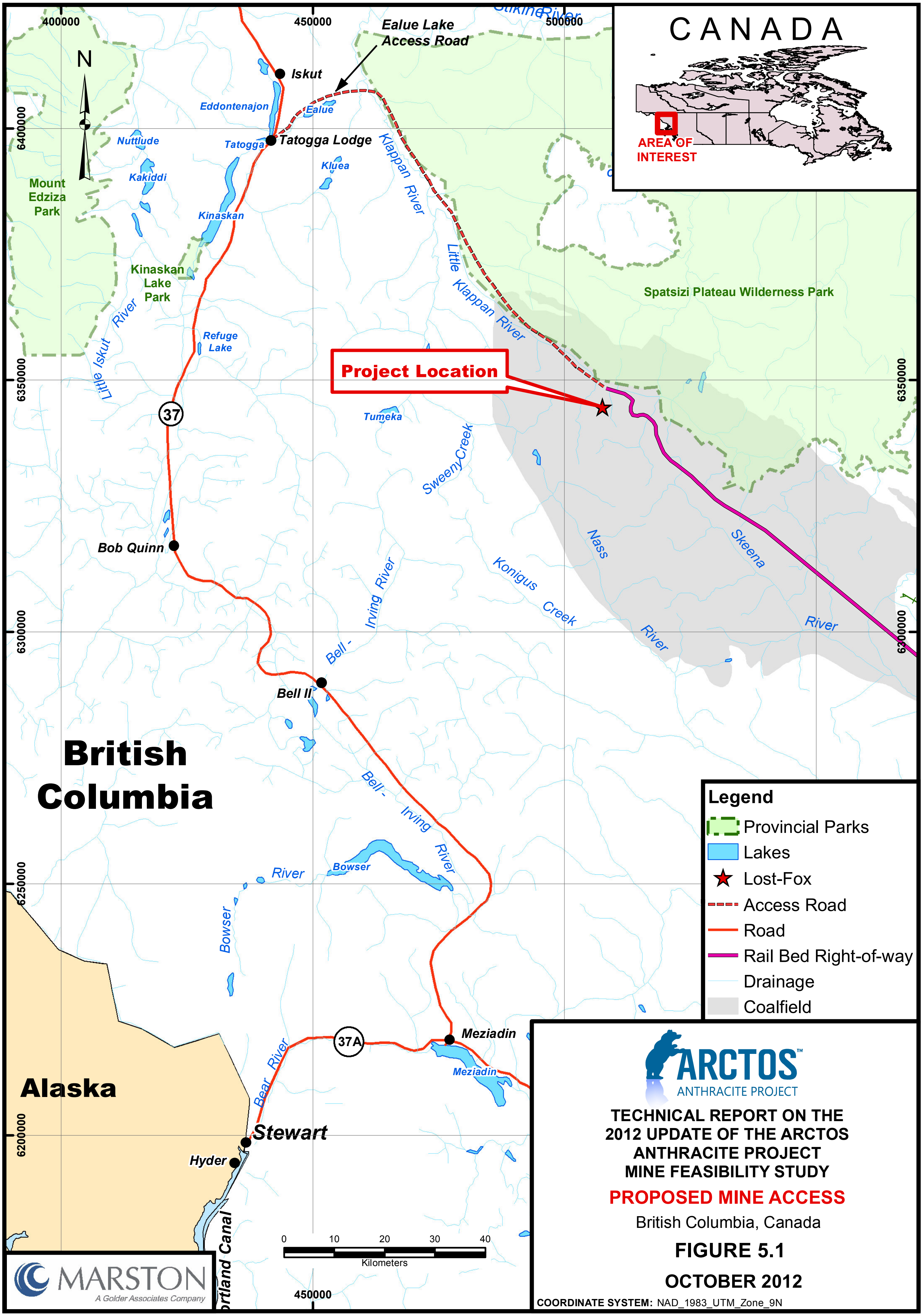
The southern section of rail is operated by CN Railway and runs from milepost 275 to Fort St. James – a distance of approximately 322 km. This section was built in the 1970s with light rail and has seen little use. In order to make this section of rail serviceable, the light rail will need to be replaced and slopes, ditches, culverts, ties, ballast and bridges will need to be fixed or replaced.

The total cost of the railroad infrastructure is estimated at C$330 million. The 2012 FS is based on the assumption that Arctos is the 100 percent equity owner of the Project and the costs are included in the capital for the project.

Water sources include several rivers located on the Property including the Little Klappan River and the Didene Creek. Groundwater sources are plentiful and recharged due to the significant precipitation in the area. The proposed water source in the 2012 FS is a fresh water reservoir with a capacity of approximately 600,000 cubic metres. The reservoir will be charged with water from precipitation and runoff, and the remainder sourced from the Little Klappan River.

Mining personnel are expected to be recruited primarily from First Nation members living in the region, and from nearby towns such as Stewart, Terrace, and Smithers. The mine facilities will include a work camp and airstrip, which will attract and facilitate labour from a wider geographic region.

Coal rejects will consist of coarse rejects and filtered fines, which will be stored near the processing plant site in a designated coal rejects storage area. Mine rock and overburden from mining operations will be hauled to rock storage piles and in-pit fill. See Figure 5.4, Pit Status Map End of Year 25.



CANADA
AREA OF INTEREST
Ealue Lake Access Road
Iskut
Eddontenajon
Ealue
Tatogga
Tatogga Lodge
Nuttlude
Kakiddi
Kluea
Klappan River
Mount Edziza Park
Kinaskan
Kinaskan Lake Park
Little Klappan River
Spatsizi Plateau Wilderness Park
Little Iskut River
Refuge Lake
Project Location
37
Tumeka
Sweeny Creek
Bob Quinn
Nass
Skeena River
Konigus Creek
Irving River
River
Bell - Irving River
Bell II
British Columbia
Bowser
Bowser River
Legend
Provincial Parks
Lakes
Lost-Fox
Access Road
Road
Rail Bed Right-of-way
Drainage
Coalfield
Meziadin
37A
Bear River
Alaska
Stewart
Hyder
Portland Canal
0 10 20 30 40
Kilometers
400000
450000
500000
6400000
6350000
6300000
6250000
6200000
MARSTON
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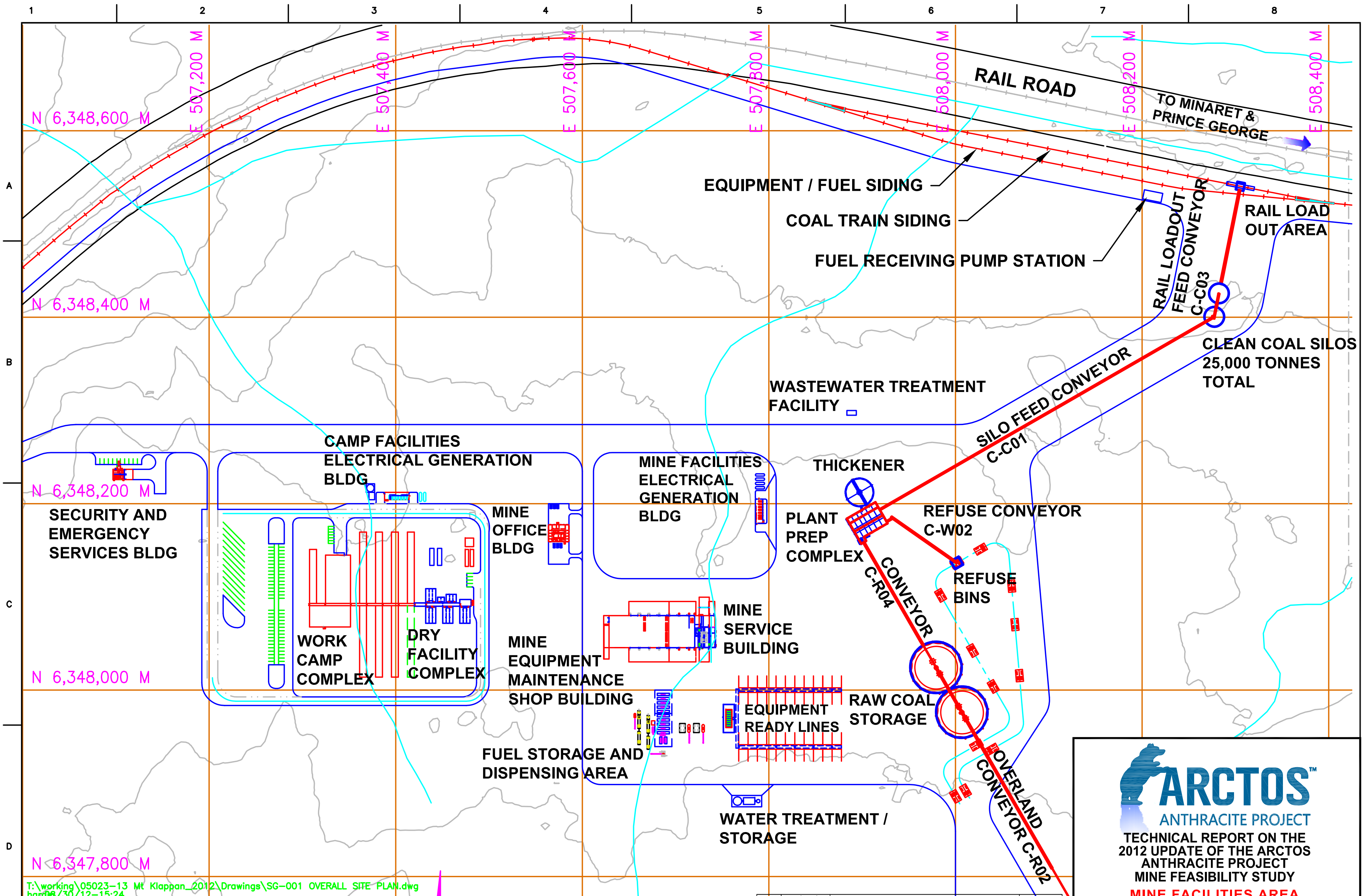
ARCTOS
ANTHRACITE PROJECT
TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY
PROPOSED MINE ACCESS
British Columbia, Canada
FIGURE 5.1
OCTOBER 2012
COORDINATE SYSTEM: NAD_1983_UTM_Zone_9N



MARSTON
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CDG ENGINEERS
CDG Engineers Architects Planners Inc.

PLAN - MINE FACILITIES AREA

0 50 100

REV.	DATE	DESCRIPTION	APPROVED
L	11/08/12	REVISED > TECHNICAL REPORT NOV. 2012	MPS
K	08/30/12	REVISED > MINE FEASIBILITY STUDY 2012	MPS
J	07/24/12	MOVED FACILITED CLOSER TO RAIL	MPS
I	10/20/10	REVISED – RESTORED OLC/RAIL LOADOUT	MPS
H	06/03/08	DELETED – OLC/RAIL LOADOUT	MPS

ARCTOS™ ANTHRACITE PROJECT

TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY

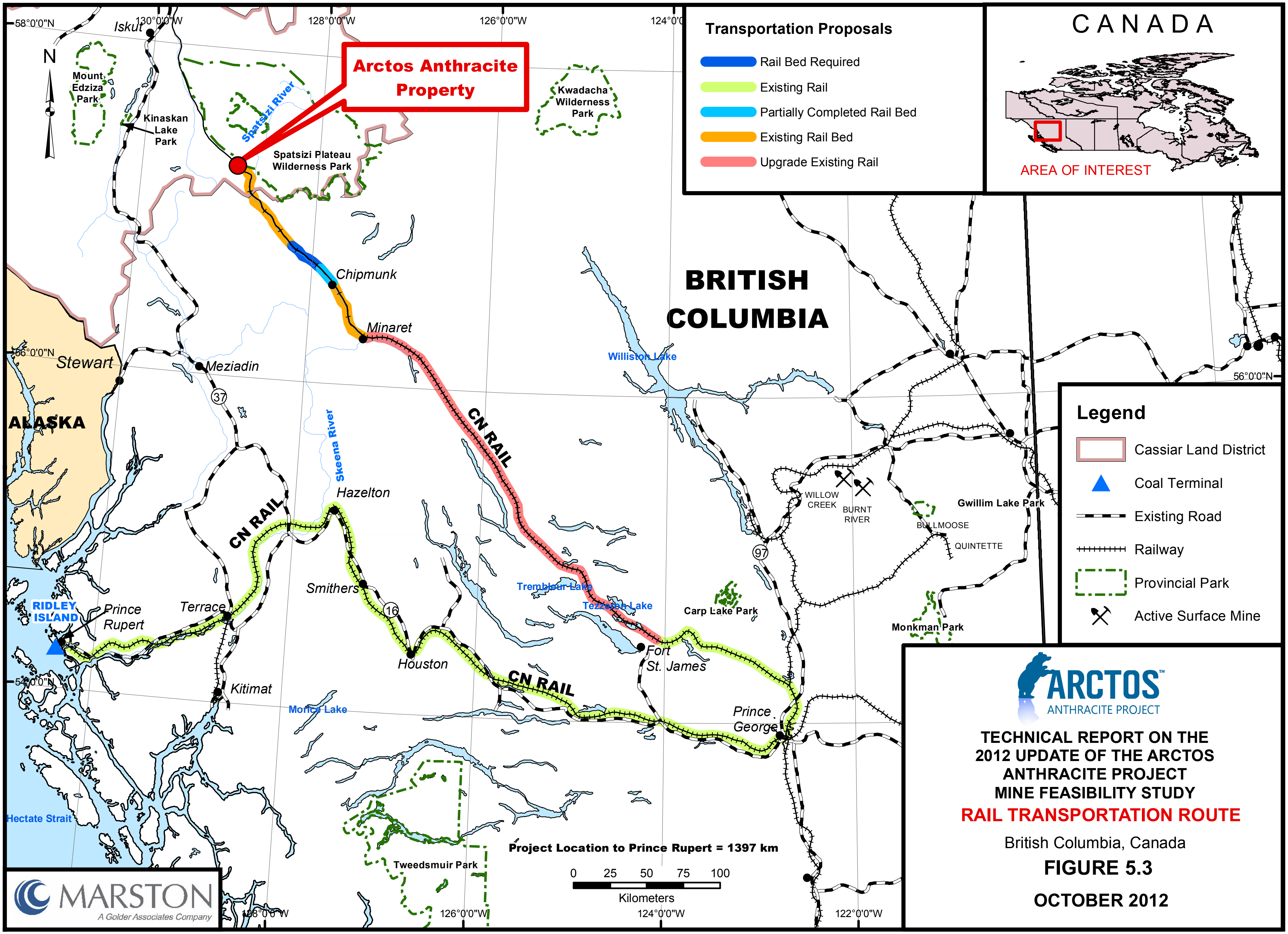
MINE FACILITIES AREA LAYOUT AND LOCATION PLAN

British Columbia, Canada

FIGURE 5.2

OCTOBER 2012

proj\klappan_feasibility\GIS\basemaps\Rail trans route 8x11.mxd



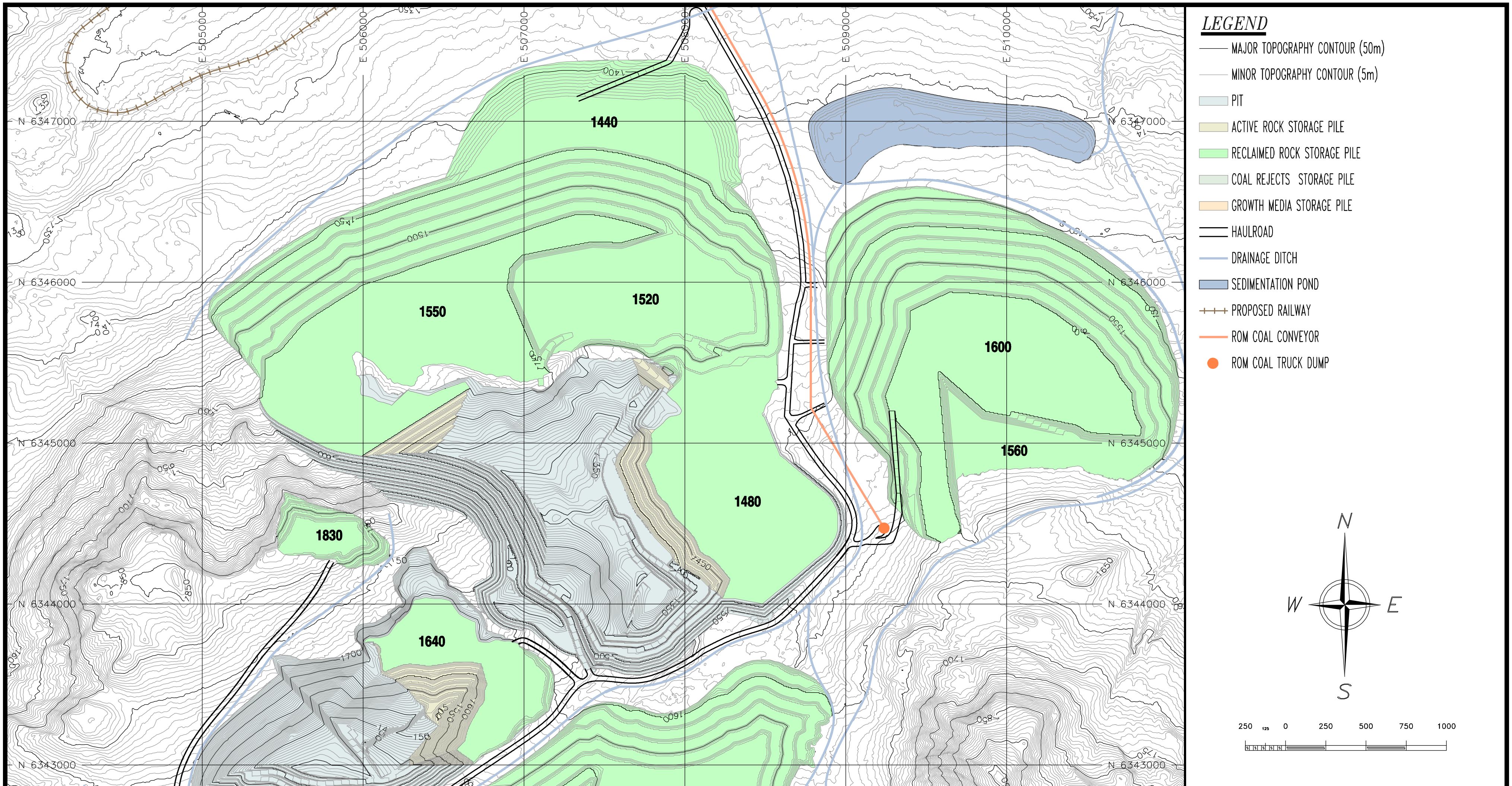
TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY

RAIL TRANSPORTATION ROUTE

British Columbia, Canada

FIGURE 5.3

OCTOBER 2012



ARCTOS™ ANTHRACITE PROJECT

PROJECT
TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTRHRACITE PROJECT MINE FEASIBILITY STUDY

TITLE
PIT STATUS MAP END OF YEAR 25

BRITISH COLUMBIA, CANADA

MARSTON A Golder Associates Company	PROJECT No. 1213540007		DATE	07-Nov-12
	DESIGN	LH	SCALE	AS DRAWN
	GIS	WJS		
	CHECK	TM	**FIGURE 5.4**	
	REVIEW	RM		

COORDINATE SYSTEM: NAD 1983 UTM ZONE 9 NORTH METERS

Item 6 History

In 1901, V.H. Dupont reported a coal outcrop near the Arctos Anthracite Property (Property) in a Canadian government railway survey report. From 1903 to 1913, prospectors and promoters performed relatively intensive exploration and sampling work about 30 km to 35 km southeast in the Groundhog Coalfield. The Geological Survey of Canada (GSC) issued reports on the area in 1912 and 1914 based on work conducted in 1911 and 1912 by G.S. Malloch. Malloch's work was subsequently followed by GSC Reports in 1950 (Buckham and Latour) and 1979 (Richards and Gilchrist). Most recently, the GSC's C.A. Evenchick, G.M. Green and others have performed numerous studies and mapping of the Bowser Basin from 1985 to the present.

Mining companies again became actively interested in the Groundhog Coalfield in 1966 when Coastal Coal Ltd. acquired licenses and conducted exploration until the end of 1968. A second joint venture group consisting of National Coal Corp, Quintana Mineral Development and Placer Development Co. explored the area in 1970. In 1978, Esso Resources Ltd. and Petrofina Ltd. acquired the first licenses at the Property. Esso and Petrofina allowed the licenses to lapse in 1980. In 1981, based on Esso's report from a summer geological mapping program, Gulf acquired its first licenses for the Property.

By 1987, Gulf had extended the Property to nearly 52,000 ha divided into four contiguous exploration areas named Summit, Lost-Fox, Hobbit-Broatch and Skeena. Between 1981 and 1988, Gulf conducted annual exploration programs to refine its knowledge of the regional geology, seam occurrences and physical characteristics, and quality attributes of the anthracite resources. These programs were comprehensive and included rotary and diamond core drilling, adits, trenching and outcrop sampling, and quality testing.

In 1985 and 1986, Gulf developed a trial cargo pit and constructed a pilot processing plant for bulk testing and to produce sample shipments for potential customers. Sample shipments of various anthracite products were hauled by truck to Stewart and shipped via ocean bulk carriers to customers worldwide. The trial cargo pit was developed in the I Seam at the peak of Lost Ridge in the Lost-Fox Area. Mined anthracite was hauled to the pilot plant located near the Property access road.

Through the end of 1987, Gulf also performed numerous environmental studies in support of Stage I and Stage II Environmental Assessments submitted for regulatory review.

By late 1990 Gulf had completed several iterations of preliminary assessments, pre-feasibility and feasibility studies. A 1982 study was performed of production from the Hobbit-Broatch Area. All later studies focused on the Lost-Fox Area, which became Gulf's primary target for open pit mining. In February 1992, Gulf surrendered licenses for all units comprising the Skeena Area, significant portions of the Nass and Summit Areas and for relatively slight boundary adjustments in the Lost-Fox and Hobbit-Broatch Areas. The Property currently consists of contiguous coal licenses over 16,411 ha, see Item 4 and Table 4.1.

In 1994, Gulf performed its last major technical study, which was an analysis of producing a single anthracite product for use in steelmaking.

In July 2001, Conoco acquired the Property through its acquisition of Gulf. In November 2001, Conoco and Phillips Petroleum Co. announced a merger that was completed in August 2002. In the interim, Fortune acquired the Property from Conoco Canada Ltd., a Conoco subsidiary.

Since acquiring the Property in 2002, Fortune has conducted several site visits to the Property and has commenced fieldwork related to environmental applications. In October 2004, Fortune applied to the British Columbia Environmental Assessment Office for a review and permit to mine at the Property. Fortune completed a field exploration and testing program in 2005, the results of which have been included in the 2012 FS.

Exploration Work

In total, Gulf issued 13 reports detailing exploration activities and results on the Arctos Anthracite Property between 1981 and 1988, see Item 23, References. Each of the exploration programs included various mapping, drilling, and sampling efforts, see Table 6.1, Arctos Anthracite Project Exploration History.

Table 6.1 Arctos Anthracite Project Exploration History

Description	Year							
	1982	1983	1984	1985	1986	1986	1987	2005
Geological Mapping	✓	✓	✓	✓	✓	✓	✓	
Cartography	✓	✓	✓	✓	✓	✓	✓	
Aerial Photography	✓		✓					
LiDar Survey								✓
Outcrop Sampling	✓				✓	✓		
Trenching - Mechanical, Hand	✓	✓	✓	✓	✓	✓	✓	
Diamond Drilling	✓	✓	✓	✓	✓	✓	✓	✓
Stratigraphic Logging	✓	✓	✓	✓	✓	✓	✓	✓
Geophysical Logging	✓	✓	✓	✓	✓	✓	✓	✓
Adits		✓			✓			
Trial Pit and Test Shipments				✓	✓			
Paleontology - Sedimentology	✓	✓	✓	✓	✓	✓	✓	
Flora And Fauna Identification				✓	✓	✓	✓	
Fault and Cleavage Study					✓	✓		
Bentonite Study					✓	✓	✓	

Gulf's exploration work commenced in all areas with geologic mapping at 1:10,000 scale. In the Lost-Fox Area, ground control surveys established control points in 1984 and 1985, and aerial photography, orthophotographs and topographic mapping were produced at 1:5,000 and 1:2,000 scales. All geologic mapping, drilling, sampling and other exploration work was tied into a local system of survey control, which was later translated to the UTM coordinate system (North American Datum of 1983, Zone 9).

Gulf's exploration drilling programs included the compilation of detailed drillers' logs of lithology and geophysical logging of nearly all drill holes. Geophysical logs included gamma ray, neutron, sidewall density, caliper, focused beam resistivity, and directional deviation in some angled drill holes.

Gulf also conducted detailed studies of flora and fauna fossils to age the rocks and aid in understanding the stratigraphic sequence and the paleoenvironment of deposition, and analyses of bentonite layers to provide markers to aid in seam correlation.

In total, Gulf's exploration on the Property included 159 diamond drill holes with nearly 25 km of drilling, see Table 6.2, Exploration Activities by Year and Area. An additional 1.5 km of drill data was obtained from rotary drill holes and 3.7 km of trench data.

By 1984, the majority of Gulf's fieldwork was focused on the Lost-Fox Area; see Table 6.2. In the Lost-Fox Area, Gulf's programs were designed to collect sufficient data to establish the geologic controls and extent of the anthracite resources sufficient to support mining project feasibility studies. In other exploration areas, the geologic fieldwork was exploratory in nature and designed to extend Gulf's knowledge of regional structures and seam correlation to determine better the extent of potential anthracite resources.

Table 6.2 Exploration Activities by Year and Area

Exploration Work	Year									Totals	Area		
	1981	1982	1983	1984	1985	1986	1987	1988	2005		Lost-Fox (LF)	Hobbit-Broatch (HB)	Summit
Adits													
Quantity						4				4	4		
Tonnes						*				*	*		
Diamond Drill Holes													
Quantity (HQ Size)		7	3	8	34	38	34	29	12	165	154	9	2
Total Meters		1,286	541	1,507	6,164	5,550	4,931	4,756	2,109	26,844	25,182	1,339	323
Quantity (AIX Size)			6							6	6		
Total Meters			126							126	126		
Rotary Drill Holes													
Quantity				17	6					23	23		
Total Meters				897	620					1,517	1,517		
Mechanical Trenches													
Quantity				128			53	29		210	170	40	
Total Meters				1,298			700	306		2,304	1,814	490	
Hand Trenches													
Quantity	24	50	93	94	45	35	13	3		357	184	55	118
Total Meters	89	284	527	751	178	95	58	17		1,999	862	252	885
Measured Sections													
Quantity				13	19	6	25	1		64	28		8
Total Meters				2,736	3,347	745	1,951	39		8,818	2,793		562
Geological Mapping													
1:2000 Scale						LF	LF	LF		1986-1988	1986-1988		
1:2500 Scale				HB,LF	LF					1984-1985	1984-1985	1984	
1:5000 Scale			HB	HB,LF	LF	LF	LF	LF,S		1984-1988	1984-1988	1983-1984	1988
1:10000 Scale	HB,LF	HB,LF	HB,LF					S		1981-1988	1981-1983	1981-1983	1988

*to be determined

Historical Resource Estimates

Gulf's exploration programs culminated with estimates of anthracite resources in each of the exploration areas. In the Lost-Fox and Hobbit-Broatch areas, Gulf implemented a local mine grid and developed geologic cross sections through the deposits in those areas. Coal seams were interpreted on the sections and together with drill hole true thickness and apparent specific gravity data, the Gulf geologists used the sections to estimate Measured, Indicated and Inferred resources by seam in these areas.

In June 2002, as part of Fortune's acquisition process, Marston Canada Ltd. (Marston) completed a due diligence review of Gulf's statements of the anthracite resources in each of the exploration areas and concluded that Gulf's estimates were reasonable. See Marston Canada Ltd., "Due Diligence Review of Mount Klappan Anthracite Resources," June 2002 (2002 Review). Gulf's resource estimates were prepared prior to GSC 88-21 and therefore do not comply with the standards of CIMDS or NI 43-101. However, Gulf's estimates do conform to the generally accepted predecessor to Paper 88-21, which is Energy, Mines and Resources Report ER79-9, "Coal Resources and Reserves of Canada," and were determined using a methodology that was standard industry practice at the time of Gulf's estimates.

In early 2004, Marston created solids and block models of Gulf's geological cross sections to verify Gulf's resource estimates and perform preliminary open pit designs. Although Gulf's resource estimates were substantially verified as a result of this work, Marston recommended a more thorough review and revision of certain areas of the previous geological interpretation and correlation work prior to performing the mine planning required as part of a feasibility study.

As part of the 2002 Review and the July 2004 block modeling and verification work, Marston re-stated Gulf's resource estimates using the formats specified in GSC 88-21, see Table 6.3, Mount Klappan Resource Estimates in GSC 88-21 Format from 2004 Block Model of Gulf Data. The resource estimates of "Immediate Interest" on Table 6.3 are the in-pit anthracite resources estimated for Gulf's 1990 feasibility study and reflect an average clean coal strip ratio of 8.5 bcm of mine rock per product tonne. Cut-off ratios for Gulf's 1990 pits were not reported, but are estimated to be between 12 bcm/tonne and 15 bcm/tonne.

In 2012 Golder-Marston, per the scope of the 2012 feasibility study (FS), incorporated the 2005 drilling results and completed a thorough review under the supervision of a senior geologist of the previous geological interpretations. In some cases, the prior geological interpretations were revised. The updated geological interpretations were then used to create the seam solids and block model for the updated 2012 resource estimates and optimized pit design.

Table 6.3 Mount Klappan Resource Estimates in GSC 88-21 Format from 2004 Block Model of Gulf Data

Mining Method/ Area	ASTM Coal Rank	Resource of Immediate Interest (Mt, adb)			Resource of Future Interest (Mt, adb)		
		Measured	Indicated	Inferred	Measured	Indicated	Inferred
Surface							
Lost-Fox	Anthracite	40.5	10.9	0.8	16.8	24.6	22.7
Hobbit-Broatch	Anthracite					3.4	64.6
Summit	Anthracite						2.4
Underground							
Lost-Fox	Anthracite				16.8	24.6	22.7
Hobbit-Broatch	Anthracite					3.4	64.6
Summit	Anthracite						2.4
Non-Conventional							
Lost-Fox	Anthracite				33.7	49.3	45.4
Hobbit-Broatch	Anthracite					6.8	129.2
Summit	Anthracite						4.8
Sterilized		There are no sterilized resources of immediate or future interest					

The historical and 2005 Marston reporting of resource estimates for the Lost-Fox Area has been superseded by the estimates presented in Item 19 of this Report.

As of November 2004, the CIMDS reporting format replaces the GSC 88-21 format. The key differences are that CIMDS does not recognize the “Immediate Interest,” “Future Interest,” “Surface,” “Underground,” and “Non-Conventional” categories, nor the “Speculative Resources” classification. Under NI 43-101, resource estimates classified other than CIMDS’ “Measured,” “Indicated” and “Inferred” may be reported as possible deposits.

Historical Production

In 1984 – 1985 Gulf mined 21,000 tonnes of coal from a test pit in the Hobbit-Broatch Area. In 1985 and 1986, Gulf mined about 200,000 tonnes of coal from the I Seam trial cargo pit on Lost Ridge. This coal was processed in a pilot plant equipped with a heavy media bath and water-only cyclones. The products were hauled by truck to the port at Stewart, B.C. and shipped via ocean vessels to potential overseas customers.

Item 7 Geological Setting and Mineralization

Regional Geology

The regional geology of the Arctos Anthracite area has been the subject of numerous geological studies, including coal, oil and gas exploration, British Columbia and Canadian Geological Survey studies (Evenchick et al) and university degree theses, and it is reasonably well understood. The geology is well described by Innis, MacLeod and Swanbergson in their report for Gulf (Gulf 1988).

The anthracite deposits at the Property are part of significant coal measures within the Bowser Basin; see Figure 7.1, Regional Geology. This ancient basin formed and filled with sediments eroded from surrounding high land during the late Jurassic to early Cretaceous periods. Two distinct areas containing coal are recognized: the Klappan Coalfield in the northwest (Koo, 1986) and the Groundhog Coalfield in the southeastern end of the coal measures (Malloch, 1912, Innis et al, 1988).

The Bowser Basin formed during and after a period of mountain building associated with the Columbian and Pacific Orogens. As shown in Figure 7.1, the basin is part of a large-scale geological structure that exists from the British Columbia coastline and inland for more than 450 km to the east, past Williston Lake in northeastern British Columbia. This structure shows a general northwest-southeast trend caused by tectonic forces acting in a northeast-southwest direction. These forces created uplift of the Coastal Plutonic Complex and the Omineca Crystalline Belt, which compressed the intervening Bowser Basin and the sediments within it.

Under this compression, the Beirnes Syncline formed in the Bowser Basin. This significant geologic structure occurs 10 km southwest of the Property. With a core of massive conglomerates, this syncline acted as a buttress against which the sediments to the southwest and northeast were compressed by the tectonic forces acting in a southwest-northeast direction. This buttress caused weaker beds east and west of the syncline to fold and overturn. See Richards and Gilchrist, 1979. Where these folds occur, they are overturned eastward to the east of the syncline and westward to the west of the syncline (Innis, 1988). This eastward folding is evident in the structure of the Klappan Coalfield.

The southern end of the Beirnes Syncline plunges to the north so that the syncline forms a basinal structure. The Groundhog Coalfield strata are brought to the surface by the reversal of plunge in the south. The Groundhog Coalfield strata have not been correlated with Klappan strata. There may be a depositional link between the Klappan and Groundhog strata; however, they are believed to be separate coalfields.

Local Geology

This general description of the Klappan Coalfield and Lost-Fox Area geology is based on Gulf fieldwork and the Gulf 1988 report, Golder-Marston's evaluation of the drilling and trenching documentation, its staff field visits to the Property, and review of documentation and the annual geology reports prepared by Gulf. Golder-Marston has used the stratigraphy as described in Gulf

1988 and has not changed any of the stratigraphic sequence proposed in that report. Golder-Marston has reinterpreted some drill hole seam correlations or seam identifications, and the changes conform to the Gulf 1988 stratigraphic sequence. The Gulf 1988 report is quoted and paraphrased in this description of the general stratigraphy. The contribution of the report authors and Gulf is acknowledged.

Stratigraphy

At the Property, the anthracite resources are contained in the Klappan Formation, which is composed of mudstone, siltstone, sandstone and some conglomerate and 33 anthracite seams that were deposited in a cyclic deltaic shoreline sequence. The Klappan Formation is approximately 1,100 metres thick and the anthracite seams occur in the central 600 metres of the formation. A stratigraphic column of the coal bearing section, showing the Klappan Formation and the location and thickness of the coal seams and the lithologic units between them, is shown in Figure 7.2, Generalized Stratigraphic Column.

The Klappan Formation sediments are interpreted to have been deposited in a regional, shallow gradient, stable coastal delta (Gulf 1988). The environments of deposition cycled between fluvio-deltaic and marine. The coal seam deposition is an extreme of the cycles, with an average of 20 to 30 metres of mudstone, siltstone and sandstone separating the coal seams. The interburden lithology generally consists of laminated mudstone, siltstone and fine-grained sandstone. Occasional deposition of coarse sandstone and conglomerate occurs. A relatively continuous coarse sandstone/conglomerate commonly occurs below the I Seam in the Klappan Coalfield. This generally averages 10 metres in thickness and is likely to be hard thus requiring particular consideration in mine planning and operations.

Seven distinct marker horizons occur in the Klappan Formation and are very useful for stratigraphic correlation. These marker horizons are indicated in Figure 7.2, Generalized Stratigraphic Column. The two most distinctive markers in drill core and geophysical logs are thin layers of bentonite, one of which occurs above the I Seam and one between the N and O seams.

The Klappan Formation is part of the Bowser Lake Group. It is underlain by the Spatsizi Formation and overlain by the Malloch Formation; see Figure 7.2, Generalized Stratigraphic Column. Gulf extensively mapped the formations throughout the Property; see Figure 7.3, Local Geology Map. There is some debate as to the proper nomenclature of the formations and sequences but Golder-Marston has chosen to name the Spatsizi Formation as lying directly under the Klappan Formation. As shown in Figure 7.3, the Spatsizi Formation, which is the oldest, subcrops in the northeast and to the south is overlain by the Klappan Formation coal measures, which are in turn overlain by the Malloch Formation. The Spatsizi Formation also protrudes through the Klappan Formation in the northwest of the map area due to an anticline or anticlinorium with a regional northwest-southeast axis. Similarly, the Klappan Formation protrudes through the Malloch sediments in the east, southeast and southwest of the map area, again due to the presence of anticlinal structures above which the Malloch Formation has been eroded.

Because the entire Klappan Formation sequence is present, coal seams have been identified throughout the central part of the Property over most of its east-west extent. Three areas of interest have been identified. The areas of most interest are the Lost-Fox and Hobbit Broatch.

The coal seams outcrop or subcrop throughout the Lost-Fox Area. The coal sequence considered for mining in the Lost-Fox Area is the upper 400 metres of the coal measures with the lowest seam being the GU Seam. The seams of primary interest, which are the thickest and contain the majority of the coal are the PH, H, I, K, KL, L, and M seams. Of these, the best seams are the H, I, K and KL which make up approximately 80 percent of the coal resource.

The coal seam outcrop traces over the Lost-Fox Area are shown in Figure 7.4, Modeled Coal Seam Outcrops. The H Seam outcrop and subcrop reflects the broad synclinal and anticlinal geological structure prevalent in the Lost-Fox Area. The trace of the H Seam outcrop and subcrop, which effectively follows the northwestern outline of the potential mining pits, indicates that to the northwest seams below the H Seam will come to the sub-surface. The overall dip of the sequence of mineable seams trends to the southeast under the Malloch Formation.

Structural Geology

The Klappan Formation sequence of generally weaker rocks was compressed into a series of folds with northwest-southeast axes. Northeast of the Beirnes Syncline and prevalent in the Arctos Anthracite Area, the folds tend to be overturned to the northeast. Where the rocks were folded beyond the breaking point, stress was relieved along reverse/thrust fault planes. In places, reverse and thrust faulting occurs at the axes of folds where the stress is greatest; thrust faults may also occur on the fold limbs. The series of folds are separated by flat-lying zones that are structurally relatively undisturbed.

In the Lost-Fox Area, this structural style is clearly illustrated by the attitude of the coal and rock beds. A photograph provided in Gulf's Mount Klappan documentation shows the cliff face of Lost Ridge, looking to the southeast and on which is evident a major fold and steeply dipping beds that form a central geological structure of the Area.

The components of this structure are shown on Figure 7.5, Geological Section with Observed Outcrop Information. In this figure, the face of Lost Ridge is compared to a geologic cross section oriented northeast-southwest and located in the approximate area of Lost Ridge. The section is cut looking southeast, as that of the photograph, and shows an overturned synclinal fold pair. On the photograph at the top of Figure 7.5, the bedding planes have been highlighted in red. The overturned anticlinal structure between the synclines can be clearly seen at the right center of the plate and on the cross section. Two outcrop areas of shallow dipping beds at the lower left of the plate are part of the southeast dipping limb of the large syncline. A number of trenches and core holes confirm the structure. A reverse fault with an upthrow to the northeast occurs in the lower limb of the lower syncline. The Gulf trial cargo site location, which was not yet excavated at the date of the photograph, is the flat area at the right center of the cliff top. The trial cargo was taken from the flat area of I Seam under shallow overburden.

The geologic structure of the Lost-Fox Area was interpreted using Gulf's previous work including maps and cross sections, stereographic aerial photographs, orthophotographs, and the mapping, drilling, and trenching exploration carried out by Gulf. See Figure 7.6, Typical Geological Cross Section. This section illustrates the interpreted geological structure, the coal seams in the Lost-Fox Area and the geology type designations. The Lost-Fox Area includes broad areas of Moderate geology type that are separated by relatively narrow zones of Complex geology type. The Complex zones are associated with the steeply dipping strata of overturned folds and in one area with a fault system and overthrust block.

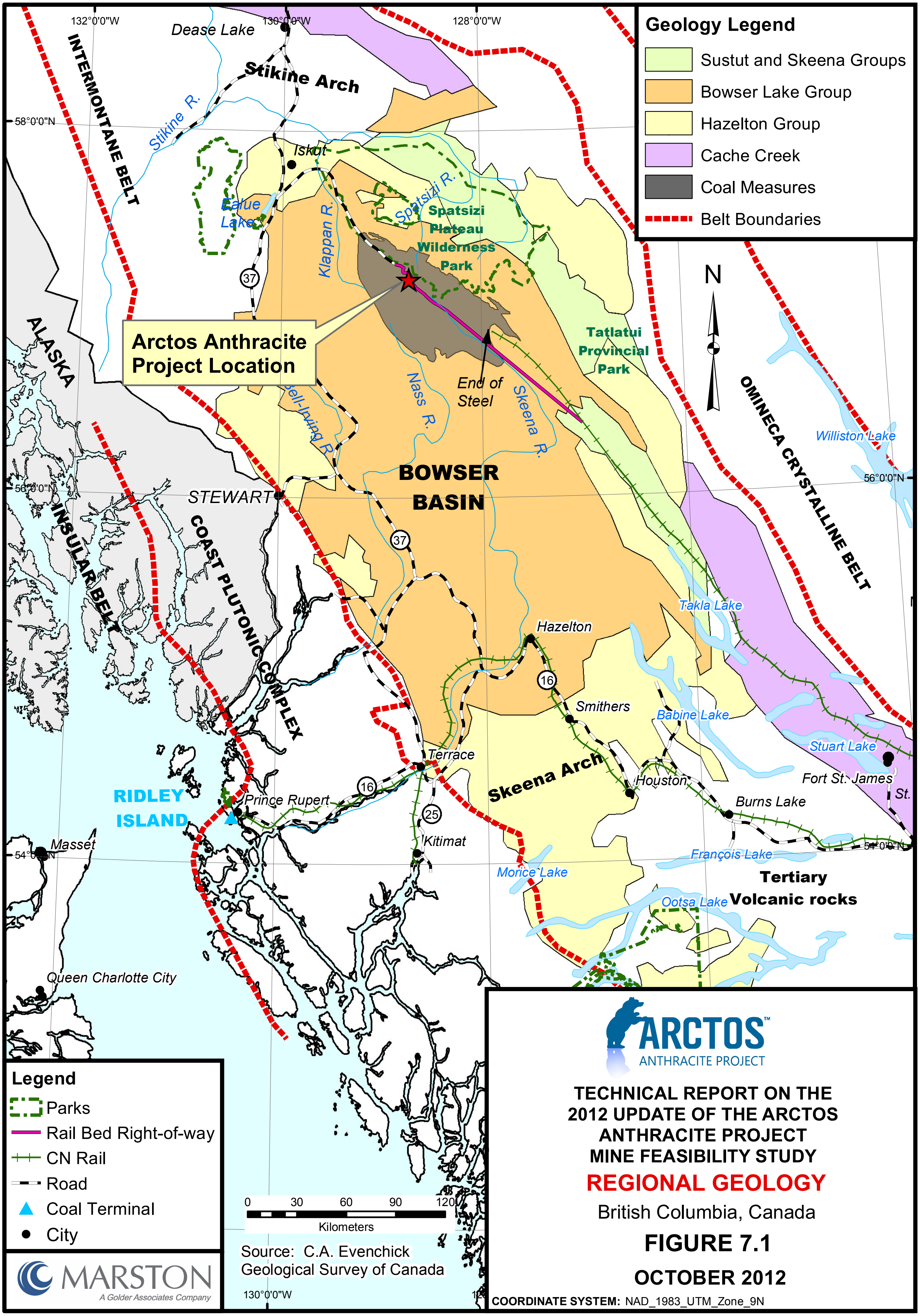
Mineralization

Anthracite seams are encountered on the Arctos Anthracite Property. Anthracite is the highest-rank coal under international coal classification standards. Anthracite on the Property occurs in 33 identified seams with individual seam true thickness of up to 11 metres; 28 of the seams have an average true thickness of at least 0.50 metres and contain at least 50 percent coal, see Figure 7.2, Generalized Stratigraphic Column.

The anthracite deposits are geologically controlled by the size of the depositional basin, the depositional environment, and post-depositional events such as uplift and compression, and erosion. Anthracite seams of some number and with varying thicknesses and depths are likely to underlay the entire Property area of about 16,411 ha. Gulf geologists and others have discovered seam outcrops and Klappan Formation rocks in all exploration areas on the Property. Multiple seams have been discovered at depths of up to 250 metres through drilling in the Lost-Fox and Hobbit-Broatch Areas.

The anthracite seams are relatively continuous across the Lost-Fox Area, which has had the most exploration to date. Discontinuities are due primarily to geologic structures such as faulting or changes in depositional environment that constrained or prevented peat formation.

Environment of deposition also affects the in situ characteristics of the anthracite and is directly related to the amount and composition of partings, which are rock bands within the seams. For most seams on the Property, partings must be removed from the mined anthracite through processing to produce a marketable product.



TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY

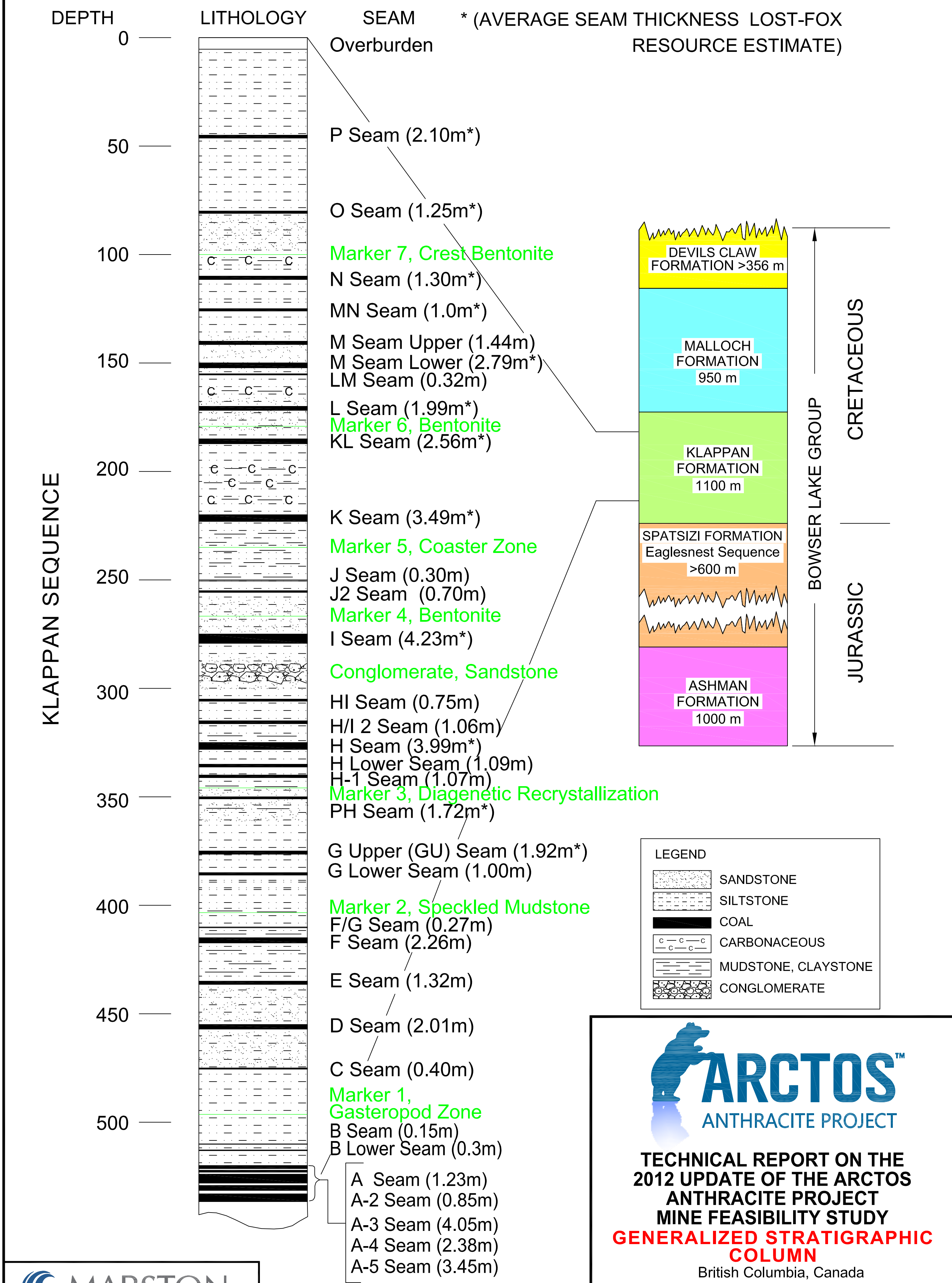
REGIONAL GEOLOGY

British Columbia, Canada

FIGURE 7.1

OCTOBER 2012

COORDINATE SYSTEM: NAD_1983_UTM_Zone_9N



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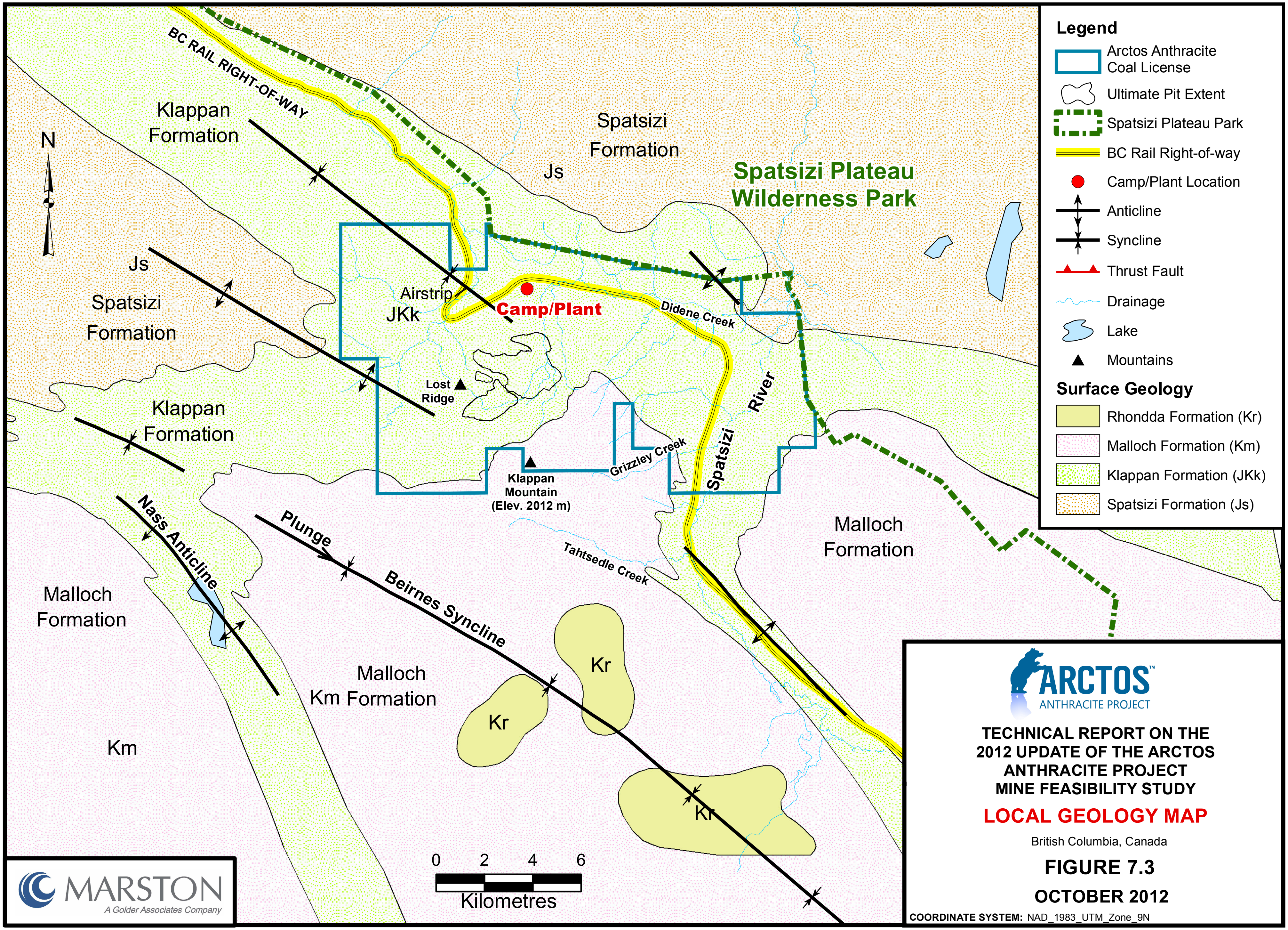
GENERALIZED STRATIGRAPHIC COLUMN

British Columbia, Canada

FIGURE 7.2

OCTOBER 2012



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TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY

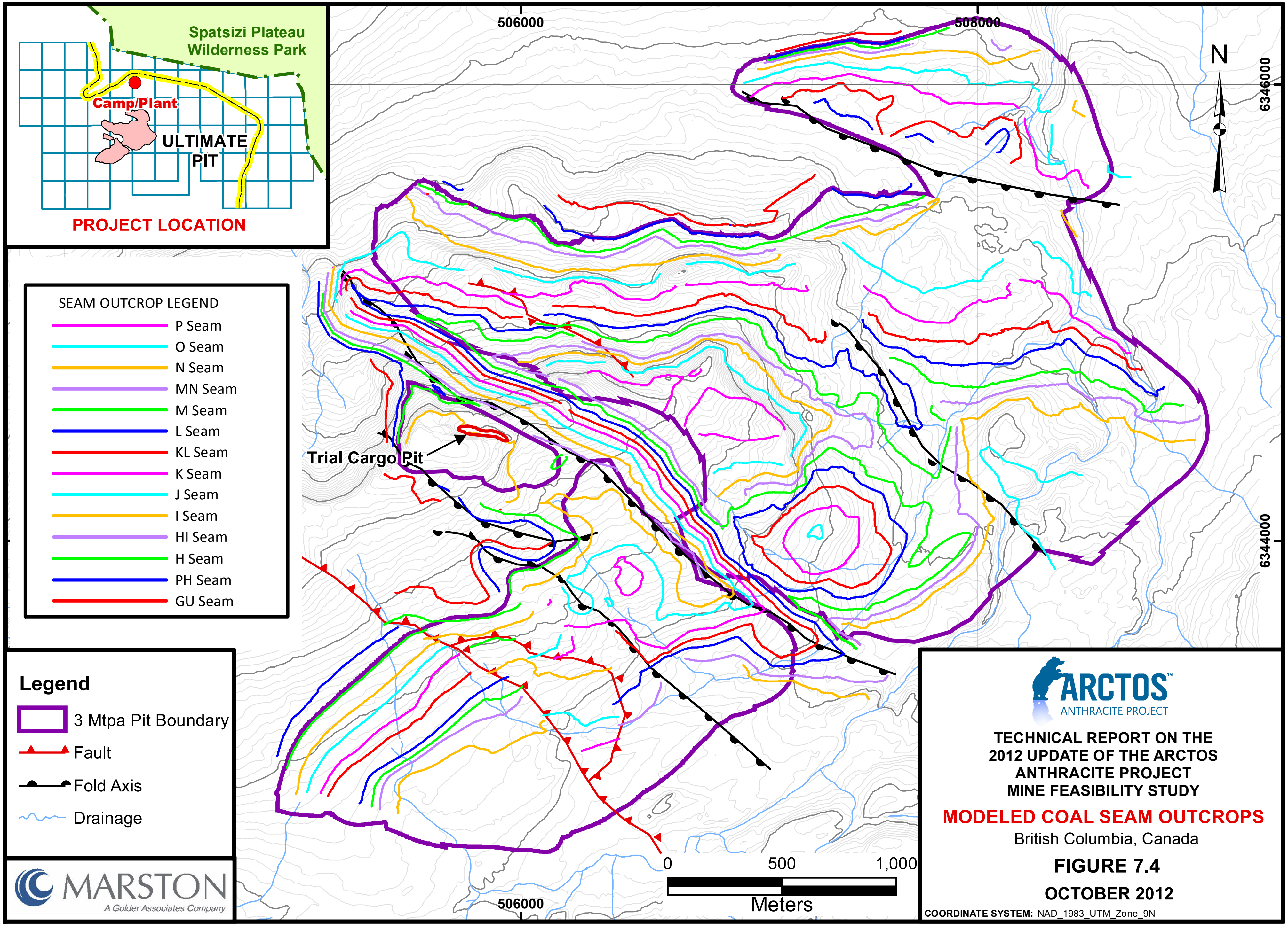
LOCAL GEOLOGY MAP

British Columbia, Canada

FIGURE 7.3

OCTOBER 2012

COORDINATE SYSTEM: NAD_1983_UTM_Zone_9N



Spatsizi Plateau
Wilderness Park
Camp/Plant
ULTIMATE
PIT
PROJECT LOCATION
SEAM OUTCROP LEGEND
P Seam
O Seam
N Seam
MN Seam
M Seam
L Seam
KL Seam
K Seam
J Seam
I Seam
HI Seam
H Seam
PH Seam
GU Seam
Legend
3 Mtpa Pit Boundary
Fault
Fold Axis
Drainage
MARSTON
A Golder Associates Company
506000
508000
6346000
6344000
N
Trial Cargo Pit
0
500
1,000
Meters
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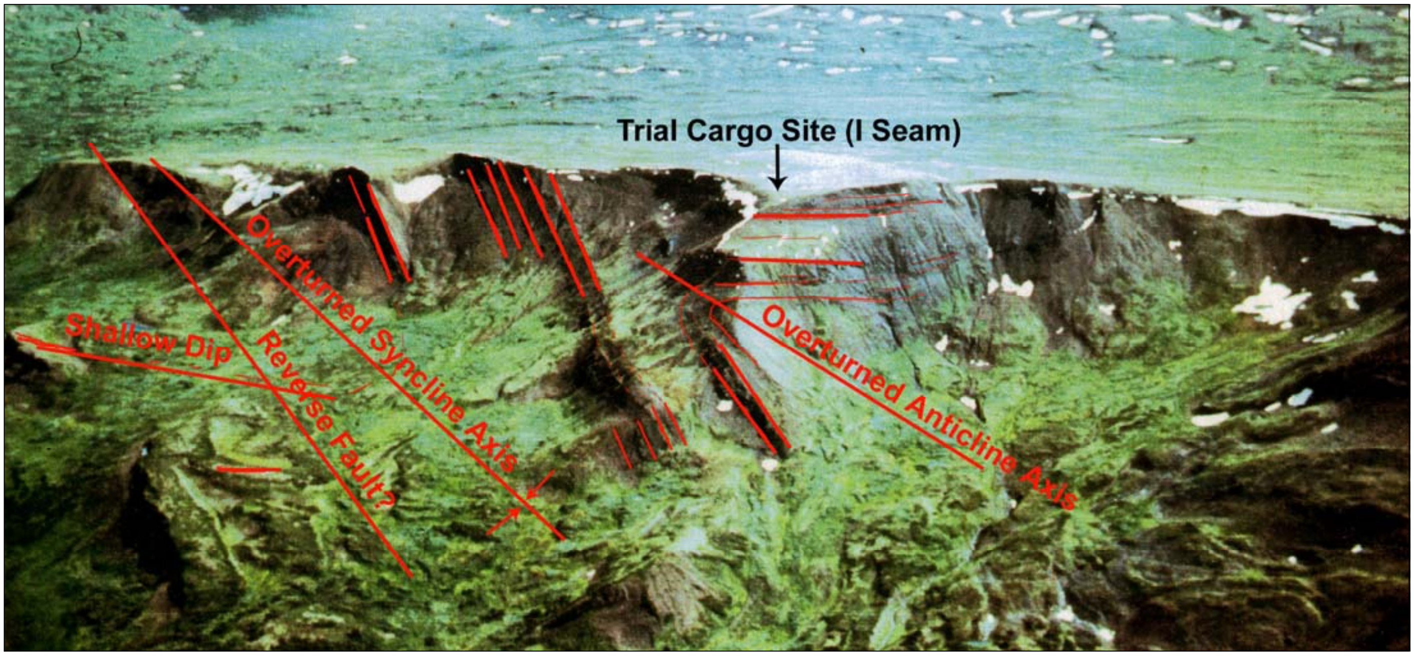
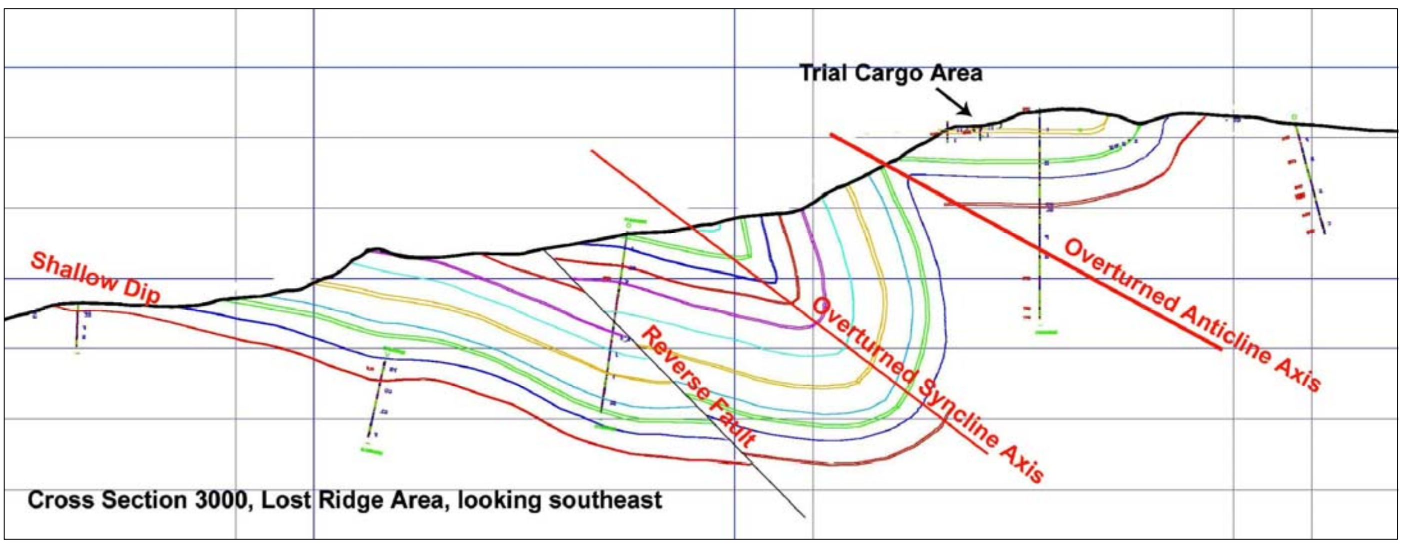
2012 UPDATE OF THE ARCTOS
ANTHRACITE PROJECT
MINE FEASIBILITY STUDY
MODELED COAL SEAM OUTCROPS
British Columbia, Canada
FIGURE 7.4
OCTOBER 2012
COORDINATE SYSTEM: NAD_1983_UTM_Zone_9N



Lost Ridge Area - Looking Southeast
(bedding planes highlighted in red)



Geologic Model Cross Section 3000

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MINE FEASIBILITY STUDY

GEOLOGICAL SECTION WITH
OBSERVED OUTCROP INFORMATION

British Columbia, Canada

FIGURE 7.5

OCTOBER 2012

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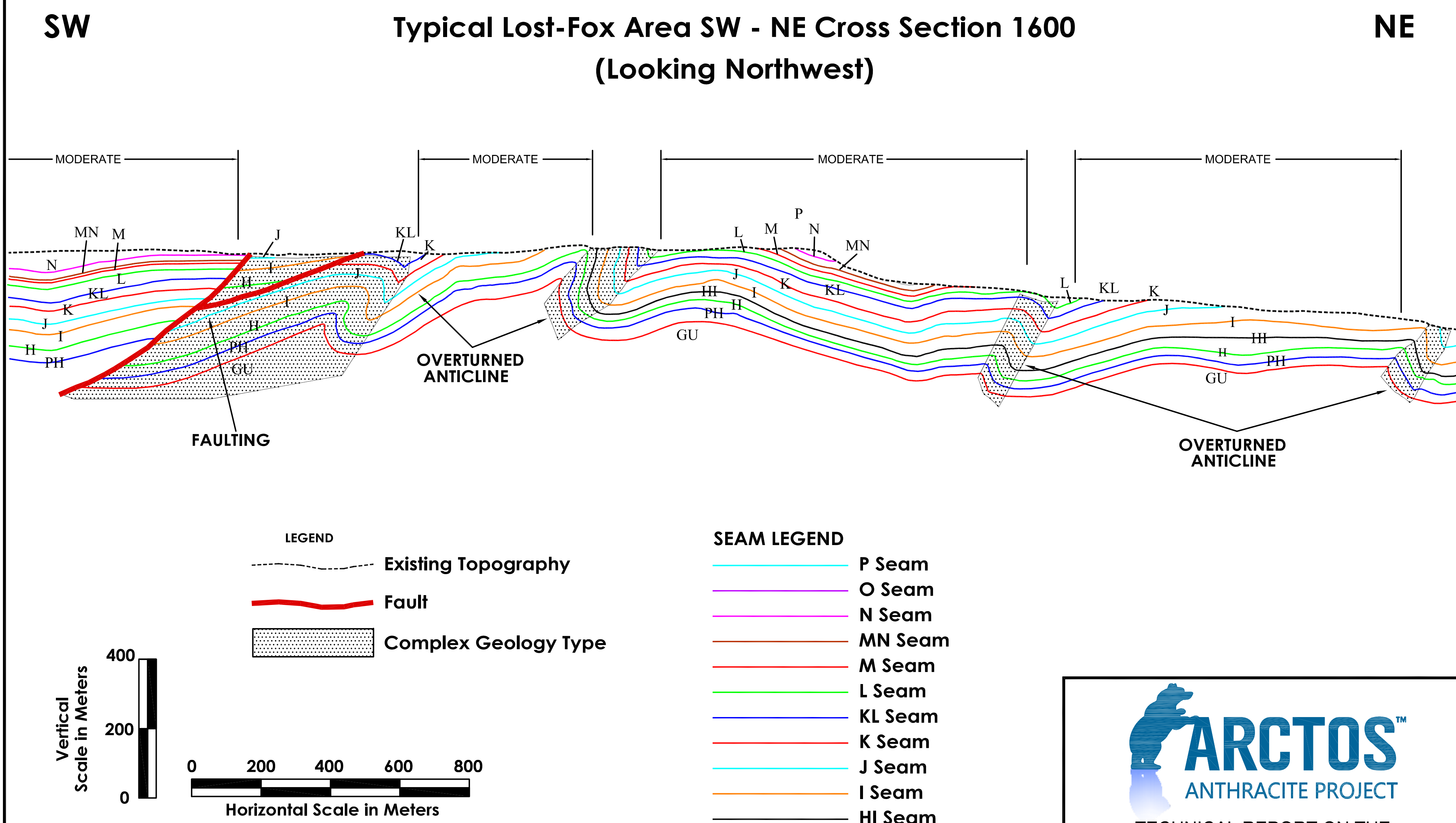

ARCTOS™ ANTHRACITE PROJECT

TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY

TYPICAL GEOLOGICAL CROSS-SECTION

British Columbia, Canada

FIGURE 7.6

OCTOBER 2012

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Item 8 Deposit Types

The mineral deposit types being investigated at the Arctos Anthracite Property are numerous anthracite coal seams deposited as layers in sedimentary rock formations. The coal seams were deposited in a deltaic, fluvial environment and therefore vary in thickness and coal quality.

The rock formations on the Property are faulted and folded due to post-depositional tectonic activity. Folds vary from broad and open to tight and overturned. A very few significant reverse faults occur in areas of tight folding; minor faults with less than 3 metres of displacement are likely to be prevalent over the Property.

Under GSC 88-21, the geology types for the deposits on the Property include Complex and Moderate portions. Complex geology type occurs in areas of tight folds with one or more steeply dipping limbs, and where faults have significantly displaced beds vertically or laterally. Moderate geology type occurs primarily as the limbs of broad, open folds with dips of up to 30 degrees. See Figure 7.6, Typical Geological Cross Section, which shows a cross sectional view of the anthracite seams and different geology types in the Lost-Fox Area.

The geologic model being applied in the investigation is similar to any bedded sedimentary deposit model. The anthracite seams are prevalent and continuous in the Klappan Formation of rocks. The Klappan Formation was formed over a relatively local basin at the northern end of the Bowser Basin and was later subjected to folding and faulting due to compressive tectonic forces. Within the Klappan Formation, certain marker beds have been identified including flora and fauna fossils and bentonitic clays associated with volcanic activity. See Figure 7.2, Generalized Stratigraphic Column. Combined with seam characteristics, these markers assist with the correlation of individual seams between drill holes and outcrops.

Surface mapping and aerial photography are used to define regional and local structures controlling the Klappan Formation and its coal seams. Drill holes and geophysical logging are used to verify and measure the thickness and characteristics of the seams at depth.

Item 9 Exploration

Fortune completed the 2005 Exploration Drilling Program for the Lost-Fox Area. This program included holes for exploration, rock storage pile condemnation, groundwater testing, acid rock drainage, and geotechnical drilling for pit wall and soil stability. The 2005 drilling results have been integrated into the updated geologic model for the 2012 FS, see Table 6.2, Exploration Activities by Year and Area. For a description of Gulf's extensive exploration of the area during 1981 – 1988, see Item 6 of this Report, Marston's 2002 Review and the references listed in Item 27.

Item 10 Drilling

Fortune completed the 2005 Exploration Drilling Program for the Lost-Fox Area. This program included 12 drill holes for exploration equating to approximately 2100 metres. The drilling program also provided data for rock stockpile condemnation, groundwater testing, acid rock drainage, and geotechnical drilling for pit wall and mine rock dump and soil stability. The complete results of the 2005 program have been incorporated into the updated 2012 FS. Fourteen seams were modeled in the updated 2012 geologic model, twelve of the fourteen seams contribute to the 2012 demonstrated and inferred resource estimates.

Gulf drilled 182 diamond core and rotary holes on the Arctos Anthracite Property. See Table 6.2. Of this total, 171 holes were drilled in the Lost-Fox Area, with nearly 26.8 km of the total metres drilled. Of the 171 holes drilled in the Lost-Fox Area, 152 were diamond core holes, 19 were rotary holes, and five were winkie holes.

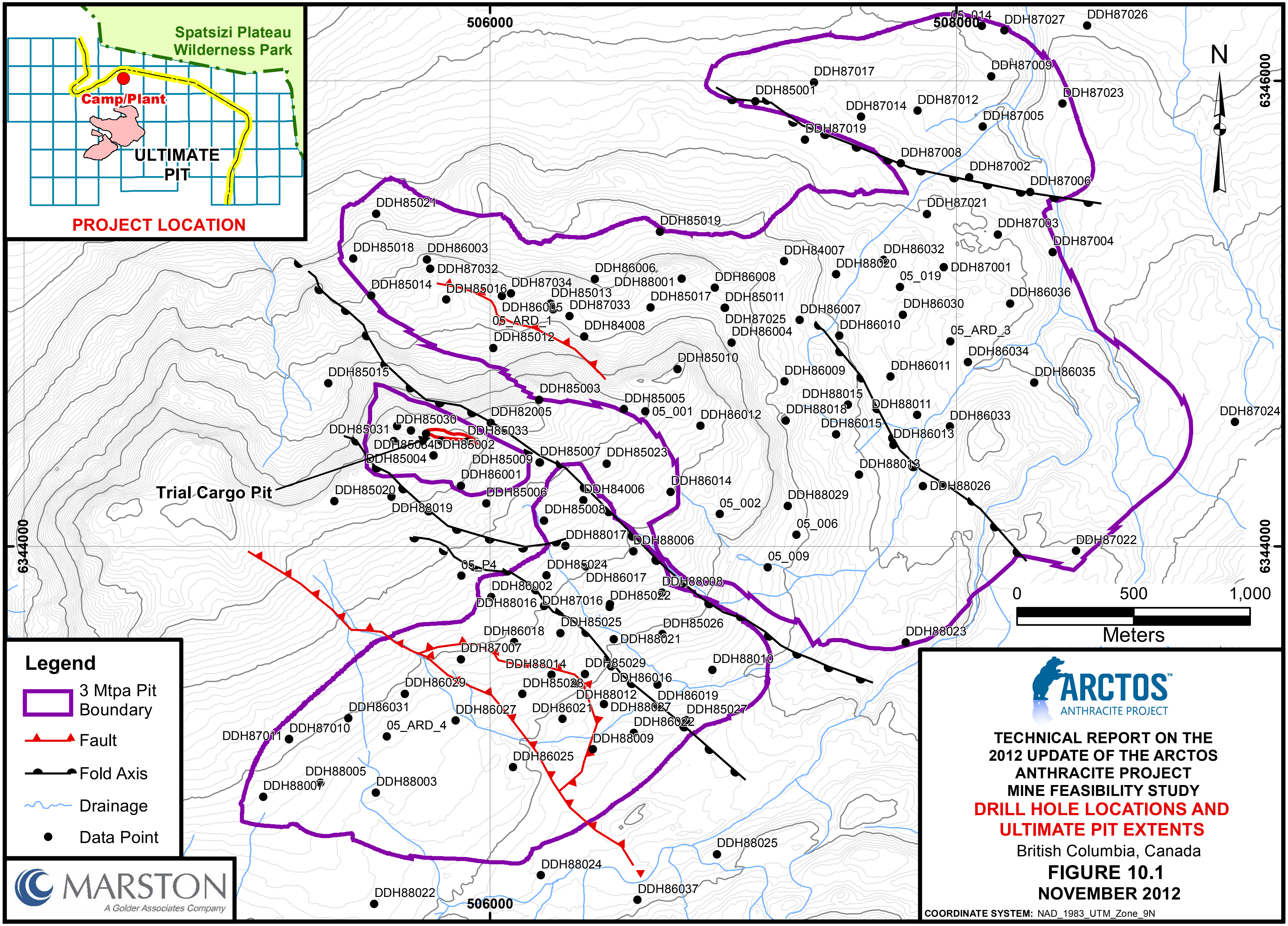
Gulf's results for the Lost-Fox Area are presented on Table 10.1, Summary of Gulf Geological Results for Lost-Fox Area. Gulf identified 12 principal seams with undisturbed seam intersections having a true thickness of 0.5 metres or greater. The principal seams were reported to have an average seam true thickness of 2.4 metres and an aggregate average coal plus rock true thickness of 29 metres.

Fourteen seams were modeled in the updated 2012 geologic model, 12 seams of which contribute to the 2012 demonstrated and inferred resource estimates.

The drill hole locations in the Lost-Fox area are shown in Figure 10.1, Drill Hole Locations and Coal Seam Outcrop Map.

Table 10.1 Summary of Gulf Geological Results for Lost-Fox Area

Seam	Number of Undisturbed Intersections	Primary Seams	Average True Thickness (m)		% Coal	S.G. (adb)
			(Coal)	(Coal + Rock)		
P	3		1.3	1.3	96.2	1.55
O	**16**	●	**0.8**	**1.1**	**75**	**1.73**
N	**18**	●	**1.2**	**1.4**	**84.3**	**1.65**
M/N	**11**	●	**0.8**	**1**	**74.8**	**1.85**
M Upper	2		1.4	1.6	88.9	
M	**25**	●	**2.2**	**2.9**	**76.2**	**1.72**
L/M	1		0.3	0.4	80	
L	**37**	●	**1.8**	**2.3**	**77.9**	**1.66**
K/L	**37**	●	**2.1**	**2.9**	**73.5**	**1.7**
K	**54**	●	**2.8**	**3.4**	**82.1**	**1.63**
J	63		0.3	0.8	37	1.61
J2	1		0.7	0.7	98.6	
I	**97**	●	**4.2**	**4.6**	**90.5**	**1.54**
H/I	21		0.8	1.6	47.8	1.74
H/I2	3		1.1	1.2	89.1	1.72
H	**66**	●	**3**	**3.8**	**79**	**1.66**
H Lower	1		1.1	1.2	94	
H-1	1		1.1	1.3	81.7	1.94
Phantom	33		0.7	2.5	28.3	1.79
G	29		1.3	2.4	56.8	1.92
G Lower	**11**	●	**1**	**1.3**	**75.2**	**1.85**
F/G	4		0.3	0.5	54	1.86
F	**14**	●	**2.3**	**3**	**75.6**	**1.72**
E	**11**	●	**1.3**	**1.4**	**95**	**1.55**
D	5		2	2.5	81.7	1.75
C	5		0.4	0.8	50.6	1.68
B	2		0.2	1.3	11.2	
B Lower	1		0.3	0.3	100	
A	6		1.2	1.9	65.4	1.53
A-2	1		0.9	1	83.3	
A-3	1		4.1	5	81.3	
A-4	1		2.4	3.1	76.5	
A-5	1		3.5	4.7	73.6	
Totals	**33**	**12**	**48.5**	**65**	**74.6**	**1.66**



Spatsizi Plateau Wilderness Park
Camp/Plant
ULTIMATE PIT
PROJECT LOCATION
506000
508000
6346000
6344000
N
0
500
1,000
Meters
Trial Cargo Pit
Legend
3 Mtpa Pit Boundary
Fault
Fold Axis
Drainage
Data Point
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TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY
DRILL HOLE LOCATIONS AND ULTIMATE PIT EXTENTS
British Columbia, Canada
FIGURE 10.1
NOVEMBER 2012
COORDINATE SYSTEM: NAD_1983_UTM_Zone_9N
05_014
DDH87027
DDH87026
DDH87009
DDH87017
DDH85001
DDH87023
DDH87014
DDH87012
DDH87005
DDH87019
DDH87008
DDH87002
DDH87006
DDH85021
DDH85019
DDH87021
DDH87003
DDH87004
DDH85018
DDH86003
DDH87032
DDH84007
DDH86032
DDH88020
DDH87001
05_019
DDH85014
DDH85016
DDH87034
DDH86006
DDH88001
DDH86008
DDH85013
DDH85017
DDH85011
DDH86036
DDH86005
DDH87033
DDH86030
DDH86007
05_ARD_1
DDH87025
DDH86010
DDH84008
DDH86004
05_ARD_3
DDH85012
DDH86034
DDH85010
DDH86011
DDH85015
DDH86009
DDH86035
DDH85003
DDH88015
DDH85005
DDH88011
DDH82005
05_001
DDH88018
DDH87024
DDH85030
DDH86012
DDH86033
DDH85031
DDH85033
DDH86015
DDH86013
DDH85034
DDH85002
DDH85007
DDH85023
DDH85009
DDH85004
DDH88013
DDH86001
DDH86014
DDH88026
DDH85020
DDH85006
DDH84006
DDH88019
05_002
DDH88029
DDH85008
05_006
DDH88017
DDH88006
DDH87022
05_009
05_P4
DDH85024
DDH86017
DDH86002
DDH88008
DDH88016
DDH87016
DDH85022
DDH85025
DDH85026
DDH86018
DDH88023
DDH88021
DDH87007
DDH88014
DDH85029
DDH88010
DDH86016
DDH86029
DDH85028
DDH88012
DDH86019
DDH86031
DDH86027
DDH86021
DDH88027
DDH85027
DDH86022
05_ARD_4
DDH87011
DDH87010
DDH88009
DDH86025
DDH88005
DDH88007
DDH88003
DDH88025
DDH88024
DDH88022
DDH86037

Item 11 Sample Preparation, Analyses & Security

Gulf's procedures for coal sampling and analyses are described in detail in Gulf's Field Exploration Manual and the Gulf Geological Reports. In general, Gulf geologists prepared all anthracite samples or supervised sampling by Gulf technicians. All coal samples were logged and bagged for shipment to independent coal laboratories. Gulf geologists identified and logged all sample intervals. Gulf personnel issued directions to the labs on the intervals to analyze and the tests to perform on each interval. Following a review of initial washability testing, Gulf personnel then issued directions to composite specified samples for further washability testing for product yield and quality.

Typically, test work on all coal samples included proximate analyses, ultimate analyses, ash mineral analyses, and washability tests. See Table 11.1 for Gulf's Projected Raw Coal Proximate Analyses. All tests were performed using American Society for Testing and Materials (ASTM) standard test methods. All test work was performed in independent coal laboratories familiar with coal testing and subject to the quality control measures of each lab. Golder-Marston is not aware of the specific measures or checks of quality control employed by the labs at the time of the test work. Loring Laboratories of Calgary, Alberta; Birtley Engineering Ltd. (now GWIL Industries) of Calgary, Alberta; and Cyclone Engineering Sales Ltd. of Edmonton, Alberta, performed coal testing.

Table 11.1 Projected Raw Coal Proximate Analyses for Lost-Fox Area Anthracite Resources

Resource Type	Coal Seam	Average Thickness (m)	In Situ Coal (kt)	ROM Coal (kt)	10% Ash Product (kt)	Yield	In Situ (adb)					
							Specific Gravity	In Situ Ash %	In Situ S %	Calorific Value MJ/kg	Volatile Matter %	Fixed Carbon %
Measured	GU	2.4	2,705	2,826	1,291	45.7%	1.8	47.0	0.4	15.9	7.4	44.3
Measured	PH	2.0	6,680	6,789	3,279	48.3%	1.7	39.0	0.5	19.9	7.7	52.4
Measured	H	3.4	41,914	43,698	22,295	51.0%	1.7	35.9	0.6	20.3	7.8	55.3
Measured	HI	0.7	3,570	2,211	689	31.2%	1.7	39.4	1.9	18.6	7.6	52.0
Measured	I	4.3	43,265	45,187	32,426	71.8%	1.5	24.7	0.4	25.5	7.1	67.0
Measured	J	0.9	5,192	3,514	1,464	41.7%	1.7	39.6	1.3	19.5	7.6	51.7
Measured	K	3.2	25,374	26,536	14,977	56.4%	1.6	31.9	0.5	22.6	8.1	58.9
Measured	KL	3.3	15,394	15,765	5,898	37.4%	1.8	44.2	0.6	17.5	7.9	46.9
Measured	L	2.3	10,391	10,896	4,699	43.1%	1.7	39.0	0.5	20.1	8.2	52.0
Measured	M	3.0	10,661	11,159	4,847	43.4%	1.7	36.3	0.4	20.9	7.3	54.7
Measured	MN	1.9	2,888	2,947	951	32.3%	1.9	57.9	0.4	10.8	8.1	32.8
Measured	N	1.6	3,087	3,170	1,633	51.5%	1.7	35.4	1.6	21.2	7.3	56.2
Measured	O	2.1	1,164	1,192	582	48.8%	1.8	43.7	0.8	17.0	7.2	48.1
Measured	P	1.9	184	196	100	51.1%	1.5	20.9	0.3	27.0	8.1	70.6
Total Measured		**3.2**	**172,470**	**176,086**	**95,130**	**54.0%**	**1.7**	**34.3**	**0.6**	**21.4**	**7.6**	**56.9**
Indicated	GU	1.5	131	138	52	37.8%	1.8	44.2	0.4	17.1	8.5	46.3
Indicated	PH	1.1	568	586	254	43.4%	1.8	42.8	0.4	17.6	7.3	49.1
Indicated	H	2.9	3,366	3,524	1,665	47.2%	1.7	36.0	0.6	20.4	7.7	55.2
Indicated	HI	0.6	683	509	160	31.5%	1.8	39.8	0.8	18.6	8.0	51.1
Indicated	I	4.2	4,585	4,781	2,848	59.6%	1.6	31.2	0.4	23.0	7.6	60.1
Indicated	J	0.6	295	156	63	40.6%	1.7	42.2	1.5	18.4	7.5	49.3
Indicated	K	3.1	3,150	3,297	1,737	52.7%	1.6	33.4	0.5	21.9	8.2	57.4
Indicated	KL	2.4	1,606	1,680	588	35.0%	1.8	45.9	0.5	16.8	8.0	45.2
Indicated	L	2.7	2,064	2,158	880	40.8%	1.7	39.9	0.5	19.7	7.9	51.3
Indicated	M	3.2	1,787	1,868	723	38.7%	1.7	41.4	0.4	18.7	8.0	48.5
Indicated	MN	2.3	1,753	1,826	589	32.3%	1.9	57.9	0.4	10.8	8.1	32.8
Indicated	N	1.8	459	485	275	56.7%	1.6	34.1	1.4	21.6	7.3	57.5
Total Indicated		**2.9**	**20,447**	**21,009**	**9,835**	**46.8%**	**1.7**	**38.5**	**0.5**	**19.7**	**7.9**	**52.6**
Total Demonstrated[1]		**3.2**	**192,917**	**197,095**	**104,965**	**53.3%**	**1.7**	**34.8**	**0.6**	**21.2**	**7.7**	**56.5**

Notes: 1. Demonstrated is equal to Measured plus Indicated Coal Tonnage.
20:1 bcm/product tonne cutoff strip ratio limit
The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Mineral Reserves.

Gulf's sampling, sample preparation, security and analytical procedures are reasonable. This opinion is based on: a) the materials reviewed and data verification process conducted in the preparation of this Report; b) the observations of Richard Marston and other Marston personnel during their site visits of Gulf field personnel and sampling methods and procedures at the time; and, c) Gulf's use of laboratories recognized for coal analytical work and high standards.

For the drilling program completed in 2005, Fortune used the same sampling procedures as Gulf's procedures, which are outlined above. See Table 11.2, Sample Locations, at the end of this section, which shows sample locations at the Arctos Anthracite Property. Core samples were taken of numerous anthracite seams intercepted at depth in the diamond core holes, but only the drill hole collar elevation is shown on the table.

Table 11.2 Sample Locations

ID NO.	SEAMS SAMPLED																		Totals
	D	E	F	G	GU	H	HI	I	J	K	K/L	L	M	M/N	N	O	P	PH	
Adit Samples																			
ADT86101						1													1
ADT86103						1													1
ADT86104						1													1
ADT86105						1													1
Diamond Drill Holes																			
DDH82005								1	1	1	1	1							5
DDH83001		1	1		1	1		1										1	6
DDH84005				1															1
DDH84006							1	2	1	1									5
DDH84007		2	1		1	1		1	1									1	8
DDH84008					1	1	1	1	1	1		1						1	8
DDH85001					1	1	1	1	1									1	6
DDH85002						1		1											2
DDH85003													1	1	2				4
DDH85004		2	1		1	1		1										1	7
DDH85005										1	1	1	2			2			7
DDH85006		1	1		1	1												1	5
DDH85007								1											1
DDH85008			1																1
DDH85008						1	1											1	3
DDH85009							1	1	1	2	1								6
DDH85010										1	1	1	1	1	1				6
DDH85011							1	1	1	1									4
DDH85012							1	1	1	2	1	1							7
DDH85013			2		1	1		1	1	1								1	8
DDH85014			1			1		1	1	1									5
DDH85015		1	1		1													1	4
DDH85016	1	1	1		1	1		1	1									1	8
DDH85017		1	1		1	1		1	1										6
DDH85018	1		1		1	1		1	1									1	7
DDH85019			1		1														2
DDH85020	1	1																	2
DDH85021		1	1		1			1	1										5
DDH85022					1	1		1	1									1	5
DDH85023										1		1	3						5
DDH85024						1		1										1	3
DDH85025						1		1										1	3
DDH85026						1		1	1										3
DDH85027						1		1	1	1	1	1	1	1	1	1			10
DDH85028						1		1	1										3
DDH85029									1										1
DDH85030								1											1
DDH85031								1											1
DDH85032								1											1
DDH85033								1											1
DDH85034								1											1
DDH86001						1		1											2
DDH86002						1												1	2
DDH86003						1		1											2
DDH86004						1		1	1	1	1	1	1						7
DDH86005						1		1	1										3
DDH86006						1		1											2
DDH86007						1		1	1										3
DDH86008						1		1		1								1	4
DDH86009						1		1	1	1	1	1							6
DDH86010						1		1	1	1									4
DDH86011											1	1							2
DDH86012															1	1	1		3
DDH86013								2	1	1	1								5

	SEAMS SAMPLED																		
ID NO.	**D**	**E**	**F**	**G**	**GU**	**H**	**HI**	**I**	**J**	**K**	**K/L**	**L**	**M**	**M/N**	**N**	**O**	**P**	**PH**	**Totals**
DDH86014										1		1		1					3
DDH86015										1	1	1	1						4
DDH86016						2		1	1										4
DDH86017						1		1	1										3
DDH86018						1		1										1	3
DDH86019								1	1	1	1	1	1	1					7
DDH86020																			0
DDH86021								2	1	1									4
DDH86022								2	1	1	1	1	1						7
DDH86025								2	2	1	1	1	1		1				9
DDH86027								1	1	1	1	1	1						6
DDH86028	1																		1
DDH86029						1		1	1	1								2	6
DDH86030						1		1	1									1	4
DDH86031					1	1		1	1									1	5
DDH86032						1		1											2
DDH86033										1	1	1	1						4
DDH86034								1	1	1	1								4
DDH86035						1	1	1	1	1	1	1	1						8
DDH86036						1	1	1	1	1									5
DDH86037															1	1			2
DDH87001						1	1	1											3
DDH87002						1	1	3											5
DDH87003						1	1	1											3
DDH87004						1	1	1										1	4
DDH87005						1	1	1	1	1	1								6
DDH87006						1	1	1											3
DDH87007					1	2		1											4
DDH87008								3											3
DDH87009						1	1	1										1	4
DDH87010						1													1
DDH87011						1												1	2
DDH87012						1	1	1	1	1									5
DDH87013						1		1	1									1	4
DDH87014						1	1	1	1	1									5
DDH87015						1				1									2
DDH87016								1	1										2
DDH87017						1	1	1		1								1	5
DDH87019						1	1	1											3
DDH87020											1	1	1	1					4
DDH87021						1		1											2
DDH87022													1	1	1	1	1		5
DDH87023					2													2	4
DDH87024											1	1	1	1	1	1			6
DDH87025								1	1	1									3
DDH87026													2		1				3
DDH87027					2	1												2	5
DDH87028										1	1	1	1	1	1	1			7
DDH87029														1	3	2			6
DDH87030										1	1	1	1						4
DDH87031										1	1	2	1						5
DDH87032								2											2
DDH87033								1	1	1									3
DDH87034								1											1
DDH88001						1		1	1										3
DDH88002								1											1
DDH88003									1	1	1	1	1						5
DDH88004						2		1	1										4
DDH88005								1	1	1	1								4
DDH88006						1												3	4
DDH88007						1												1	2
DDH88008																		1	1

	SEAMS SAMPLED																		
ID NO.	D	E	F	G	GU	H	HI	I	J	K	K/L	L	M	M/N	N	O	P	PH	Totals
DDH88009						1		1	1	1	1	1							6
DDH88010						1		1	1	1	1	1	1						7
DDH88011						1		1	1	1	1	2	1						8
DDH88012								3	1	1									5
DDH88013						1		1	1	1	1	1	1						7
DDH88014						1		1	1	1									4
DDH88015						1		1	1	1	1	1							6
DDH88016						1		1											2
DDH88017						1	1												2
DDH88018						1		1	1	1	1	1	1	1				1	9
DDH88019					3														3
DDH88020						1		1	1										3
DDH88021						1		1										1	3
DDH88023																1	1		2
DDH88024												1	1						2
DDH88026								1	1	1	1	1							5
DDH88027								2	1	1	1	1							6
DDH88028													1	2	2	1			6
DDH88029					1	1		2	1	1									6
05_001						1		1	1	1	1	1						1	7
05_002						1	1	1	1	1	1							1	7
05_006						1	1	7											9
05_009							1	1										1	3
05_014*																			
05_015*																			
05_016*																			
05_019						1		1											2
05_ARD_1						1		1		1								1	4
05_ARD_3					1	1				1									3
05_ARD_4						1		1		1	1								4
05_P4					1	1												1	3
Rotary Drill Holes																			
RDH84001								1											1
RDH84002								1											1
RDH84003								1	1										2
RDH84007						1		1											2
RDH84008								1											1
RDH84012						1		1											2
RDH84014												1							1
RDH84015											1	1							2
RDH84016										1	1	1							3
RDH84017					1														1
Trenches																			
TRC82031													1						1
TRC82032											1								1
TRC82036																1			1
TRC82043								1											1
TRC82045					1														1
TRC83005															1				1
TRC83042															1				1
TRC83047					1														1
TRC83092								1											1
TRC83093								1											1
TRC84200								1											1
TRC84202								1											1
TRC84203								1											1
TRC84204										1									1
TRC84209					1														1
TRC84210						1													1
TRC84212										1									1
TRC84213												1							1
TRC84215													1						1

	SEAMS SAMPLED																		
ID NO.	**D**	**E**	**F**	**G**	**GU**	**H**	**HI**	**I**	**J**	**K**	**K/L**	**L**	**M**	**M/N**	**N**	**O**	**P**	**PH**	**Totals**
TRC84216												1							1
TRC84217										1									1
TRC84218										1									1
TRC84220						1													1
TRC84221						1													1
TRC84224								1											1
TRC84225								1											1
TRC84226								1											1
TRC84227								1											1
TRC84228								1											1
TRC84233								1											1
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TRC84237								1											1
TRC84240								1											1
TRC84241					1														1
TRC84260										1									1
TRC84265												1							1
TRC84267																	1		1
TRC84269																	1		1
TRC84272																	1		1
TRC84274																	1		1
TRC84281								1											1
TRC84290																1			1
TRC84295								1											1
TRC84297								1											1
TRC84298										1									1
TRC84299													1						1
TRC84314					1														1
TRC84335					1														1
TRC85007													1						1
TRC85030								1											1
TRC85034								1											1
TRC85037								1											1
TRC85038								1											1
TRC85039								1											1
TRC85041								1											1
TRC85042								1											1
TRC85049								1											1
TRC85050								1											1
TRC86002													1						1
TRC86003													1						1
TRC86005									1										1
TRC86006												1							1
TRC86007															1				1
TRC87100					1														1
TRC87102					1														1
TRC87103					1														1
TRC87104					1														1
TRC87106					1														1
TRC87115					1														1
TRC87118								1											1
TRC87122								1											1
TRC87123					1														1
TRC88100								1											1
TRC88102								1											1
TRC88103								1											1
TRC88106								1											1
TRC88107								1											1
TRC88108									1										1
TRC88109								1											1
TRC88110								1											1
TRC88111								1											1

ID NO.	SEAMS SAMPLED																		Totals
	D	E	F	G	GU	H	HI	I	J	K	K/L	L	M	M/N	N	O	P	PH	
TRC88112								1											1
TRC88117					1														1
TRC88119					1														1
TRC88122					1														1
TRC88123					1														1
Winkie Holes																			
WKD83002								1											1
WKD83003								1											1
WKD83004								1											1
WKD83005								1											1
WKD83006								1											1
TOTALS	**4**	**11**	**14**	**1**	**44**	**92**	**24**	**168**	**67**	**66**	**40**	**43**	**37**	**13**	**19**	**14**	**7**	**42**	**706**

*outside modeling area

Item 12 Data Verification

For the resource estimates in this Report, Golder-Marston has relied on 2010 updated LIDAR digital data of topography and geological and analytical data provided by Fortune. For primary data verification, Golder-Marston reviewed all of the electronic data with the same data printed in Gulf's 1982 – 1988 Mount Klappan Project Geological Reports. The appendices to the Gulf Reports include computer printouts of lithologic logs and analytical data, copies of geophysical logs of all drill holes, and cross sections and geological mapping generated during and from each field program. Golder-Marston reviewed all down-hole geophysical logs and compared the lithologic picks with the Gulf geologist's lithologic logs. Golder-Marston agreed with the majority of Gulf's coal seam interpretations; however, in some cases, seam identification was changed and therefore Golder-Marston geologists and engineers reviewed the logs, as well as those from surrounding holes to approve the change.

In 2005, Fortune completed the first drilling program on the property in over 15 years. This program was designed to provide data on water quality, acid rock drainage, geotechnical conditions, and to verify previous drilling and sampling programs. The completed results from the drilling program have been included in the updated 2012 FS.

Although original core samples no longer exist from Gulf's exploration programs, except for a few holes stored in the B.C. Government core library in Prince George, original geologist's logs and photographs are available for nearly all core samples from drill holes, and selections were reviewed and compared with the Gulf Report data. Samples sent by Gulf for laboratory analyses during Gulf's 1981 – 1988 field programs reportedly were also discarded some time ago, although some 50 barrels of samples still exist from Gulf's pilot processing test work and trial shipments. Also, the sample analyses data in the Reports could not be verified with the original lab analyses sheets that were transcribed into Gulf's coal database and printed out for the Geological Reports. The original lab sheets, possibly lost, could not be located in the information on file with Fortune.

Richard Marston, P.E., and other Golder-Marston employees observed Gulf's field activities in the Lost-Fox Area in 1986 and 1987 and worked closely with Gulf geologists and engineering personnel in reviewing the data and geologic work related to those programs. Trenches and drill sites were observed on Gulf's aerial photographs prepared in 1984 and 1985, and compared with the survey coordinates provided in the Gulf Reports. Surveyed elevations of drill hole collars were compared with Gulf's 1:2000 scale topography prepared from the aerial photographs. Concerning any field programs and sample collections that were not observed during site visits or on the aerial photographs, Golder-Marston's review of contemporaneous records and notes indicates that Gulf conducted all of its exploration and sampling programs thoroughly and in a reasonable, professional manner.

Item 13 Mineral Processing and Metallurgical Testing

Gulf planned to process all mined anthracite to separate rock and lower the product ash content and to produce different product sizes. As the basis for processing plant design, Gulf performed over 700 coal washability analyses on drill core samples from all seams. Additionally, the coal processing test work included extensive pilot processing and sampling of the I Seam coal from the trial cargo pit and some H Seam coal from adits. Gulf planned to produce four separate products of different sizes and ash contents using standard coal processing methods and planned to use heavy media vessels and cyclones for coarse coal (35 mm x 6 mm) and water – only cyclones and froth flotation for fine and very fine coals.

Golder-Marston's 2012 FS was developed based on producing a single 10 percent ash (adb) product. The raw washability data developed by Gulf was the basis for the development of the 10 percent ash (adb) wash characteristics. This raw data consisted of sink float analysis on a variety of size fractions depending on the year the samples were prepared and the potential markets Gulf was evaluating. Data for a coal intercept, typical of I Seam coal, is included as Table 13.1, Typical Coal Intercept Washability Data.

Drilling programs were conducted in the Arctos Anthracite resource area every year from 1982 through 1988. The FS incorporated washability data obtained from 1985 through 1988. Earlier washability data from 1982 through 1984 was excluded because the top size of the washability tests was performed at 10 mm. The fine particle size used in this testing may cause overstatement of the product yield.

The following criteria were used in determining the drill cores that would be used from the 1985, 1986, 1987, and 1988 drilling programs:

- The core or seam recovery was greater than 70 percent
- The undiluted specific gravity of the core was less than 2.0
- Mineable thickness was greater than 0.6 metres

Table 13.1 Typical Coal Intercept Washability Data

Drill hole ID	Seam	From	To	Sample ID	Composite Number	Wash ID	Analysis Type	Size Fraction	Weight Percent	Ash Percent	S.G. or Flot Time	Incr. Yield	Incr. Ash	Cum. Flt. Yld.	Cum. Flt. Ash	Cum. Sink Yld.	Cum. Sink Ash
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	1.40	2.07	2.12	2.07	2.12	97.93	25.71
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	1.45	31.08	6.22	33.15	5.96	66.85	34.78
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	1.50	24.96	10.78	58.11	8.03	41.89	49.08
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	1.55	4.27	17.27	62.38	8.66	37.62	52.69
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	1.60	4.14	18.06	66.52	9.25	33.48	56.97
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	1.70	7.46	28.20	73.98	11.16	26.02	65.22
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	1.80	0.47	33.90	74.45	11.30	25.55	65.79
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	2.00	2.37	41.67	76.82	12.24	23.18	68.26
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	2.60	23.18	68.26	100.00	25.23	0.00	0.00
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	1.40	20.66	1.83	20.66	1.83	79.34	26.25
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	1.45	28.31	5.29	48.97	3.83	51.03	37.87
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	1.50	11.31	9.92	60.28	4.97	39.72	45.83
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	1.55	4.32	13.74	64.60	5.56	35.40	49.75
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	1.60	4.35	16.34	68.95	6.24	31.05	54.43
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	1.70	7.34	21.04	76.29	7.66	23.71	64.77
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	1.80	3.00	27.28	79.29	8.41	20.71	70.20
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	2.00	3.22	39.49	82.51	9.62	17.49	75.85
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	2.60	17.49	75.85	100.00	21.20	0.00	0.00
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	1.40	24.72	1.67	24.72	1.67	75.28	27.65
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	1.45	19.73	3.00	44.45	2.26	55.55	36.41
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	1.50	11.91	6.07	56.36	3.07	43.64	44.69
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	1.55	4.02	8.57	60.38	3.43	39.62	48.35
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	1.60	4.49	10.94	64.87	3.95	35.13	53.13
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	1.70	8.58	15.85	73.45	5.34	26.55	65.18
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	1.80	4.02	24.36	77.47	6.33	22.53	72.46
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	2.00	3.00	38.89	80.47	7.54	19.53	77.62
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	2.60	19.53	77.62	100.00	21.23	0.00	0.00
DDH88001	I	66.57	70.81	10411	1	WA1	froth	0.15x0.00	3.53	25.01	240.00	0.00	25.01	100.00	0.00	0.00	0.00

Two methods for estimating the plant yield are detailed in this section. The methods are as follows:

Method A – Used when washability data is available

Method B – Uses proximate (ash) data and adjacent float sink data to estimate washability based on ash.

Method A

Step 1

The laboratory washability data was first adjusted for the difference between the as-tested size distribution and the predicted as-mined size distribution. Table 13.2 below shows the raw coal size distribution used.

Table 13.2 Raw Coal Size Distribution

Size Fraction	Incremental Weight (percent)	Cumulative Weight (percent)
50 mm x 6 mm	45.2	45.2
6 mm x 0.5 mm	42.0	87.2
0.5 mm x 0.15 mm	7.8	95.0
0.15 mm x 0 mm	5.0	100.0

Step 2

The amount of dilution was then calculated for each ply. A total of 0.1 metre of out-of-seam dilution was added to the core data and 0.1 metre of coal was removed as coal lost during the mining process. If the seam was sampled as multiple plies, dilution was applied at the rock contacts only. The out-of-seam material was assumed to have a specific gravity of 2.3. The total calculated dilution was then distributed across the raw coal in proportion to the predicted raw coal size distribution.

Step 3

The core hole washabilities were then fed into a spreadsheet-based coal process simulation program, as on the solids flowsheet of Figure 13.1, Simplified Solids Flowsheet, it adds the required out-of-seam dilution and calculates the predicted yield and ash at various specific gravities. Plant efficiencies were applied based on partition curves generated for each type of separation process. This was done for each of the three fractions that were modeled using the washability data. The froth flotation yield was calculated for the 0.15 mm x 0 mm fraction using the ash balance method assuming a 10 percent product ash and a tailings ash of 52.73 percent.

Step 4

The three process streams were then blended to determine the separating specific gravity that produced the optimum product yield at the 10 percent ash limit.

Step 5

Since the process flowsheet includes a middlings recovery circuit associated with the coarse coal heavy media bath circuit (plus 6 mm), the middlings materials were crushed, reprocessed in the appropriate fine coal circuit, and mathematically combined with the clean coal products using the ash balance method. This produced the overall yield for the individual core sample.

In the 2005 study, the out-of-seam material was assumed to be a constant 2.30 specific gravity, however, specific gravity varies with ash, and there is no basis to assume the dilution ash% is constant across the resource, and for different seams.

Data points for the yield estimations are shown in Table 11.1. These data points were then used to calculate the estimated yield by seam for coal blocks in the resource model. See Item 19. Product quality was developed for a 10 percent ash (adb) product by Gulf as described in Item 14. Estimated clean coal quality is included as Table 13.3, Projected Clean Coal Quality – 10% Ash Product. Estimated raw coal seam quality and yield is included in Table 13.2.

Recommended future work is as follows:

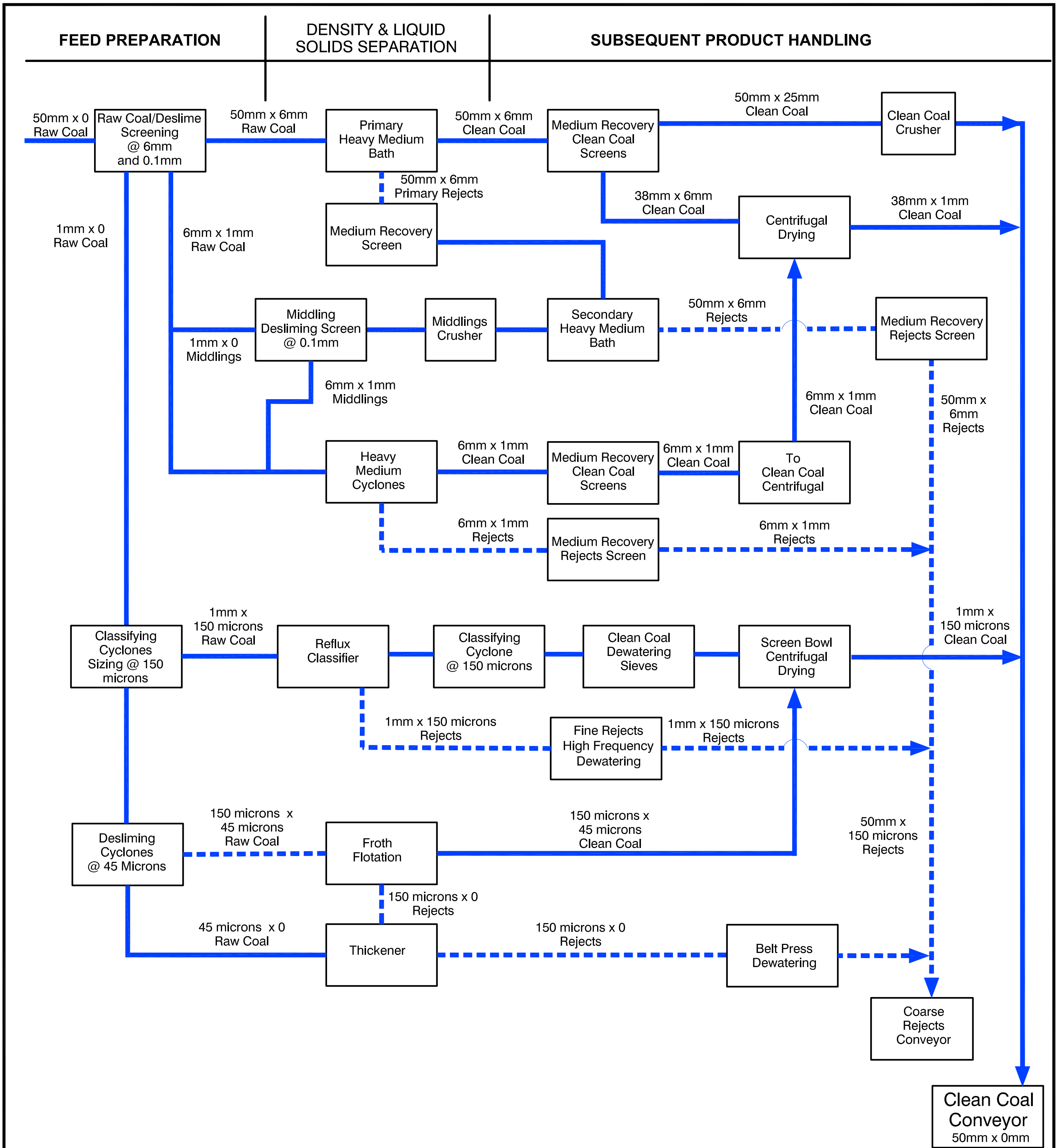
1. Collection of a representative bulk sample(s) for the major seams in proportions consistent with the mining area to confirm the flowsheet parameters and the benefits of the coarse middlings circuit. This would include studies to: a) determine the top size of the feed into the plant; and, b) determine the top and bottom size to the heavy media cyclone circuit.
2. Optimise the design and dewatering of the minus 0.5 mm clean coal products to assure maximum recovery and minimum product moisture with additional flotation and dewatering testing.

Table 13.3 Projected Clean Coal Quality – 10% Ash Product

Clean Coal Specification	Units	Air-dried basis (adb) Mean	Max.	Min.	Mean Dev.	% Mean Dev.
Residual Moisture	wt. %	0.9	2.0	0.4	0.18	19.5
Ash	wt. %	10.0	18.7	7.4	0.79	7.9
Volatile Matter	wt. %	6.5	8.8	4.0	0.48	7.4
Fixed Carbon	wt. %	82.6	85.9	72.9	0.98	1.2
Sulphur	wt. %	0.52	1.74	0.00	0.06	12.1
Gross Calorific Value	GJ/t	31.1	32.6	17.4	0.54	1.7
Gross Calorific Value	kcal/kg	7,423	7,789	4,166	129	1.7
Gross Calorific Value	btu/lb.	13,352	14,011	7,494	232	1.7
HGI		40-45				
Size	mm		50	0		

Ash Chemistry	Units	Air-dried basis (adb) Mean	Max.	Min.	Mean Dev.	% Mean Dev.
SiO_2	wt. %	52.94	67.5	31.88	5.33	10.1
Al_2O_3	wt. %	23.28	29.73	15.5	2.08	8.9
FE_2O_3	wt. %	4.55	14.39	1.59	1.31	28.9
CaO	wt. %	4.81	13.61	1.04	1.91	39.6
MgO	wt. %	2.47	6.35	0.97	0.55	22.1
TiO_2	wt. %	1.79	5.5	0.49	0.45	25
Na_2O	wt. %	1.95	2.75	0.57	0.26	13.3
K_2O	wt. %	1.02	2.09	0.44	0.22	21.4
SO_3	wt. %	1.48	6.07	0.15	0.58	39.2
P_2O_5	wt. %	2.55	7.64	0.18	1.52	59.9
P in Coal (Calculated from P_2O_5)	wt. %	0.11	0.45	0.01	0.06	59.7
Sulphur (dry basis)	wt. %	0.53	1.76	0	0.06	12
Non-combustible Sulphur	wt. %	0.07	0.35	0	0.03	37.4
Combustible Sulphur	wt. %	0.45	1.67	-0.1	0.07	15.4

Note: From Gulf Canada Resources Coal Quality Handbook



ARCTOS™ ANTHRACITE PROJECT

TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY

SIMPLIFIED SOLIDS FLOWSHEET

British Columbia, Canada

FIGURE 13.1

NOVEMBER 2012

MARSTON
A Golder Associates Company

Method B

Step 1

Locate the target cell (without washability) on the map and identify the closest core hole with both washability data and acceptable core recovery (over 70%). Use that data as a reference.

Step 2

If there is more than one ply for the reference sample, perform a weight-average composite for all of the plies. The mass values of the plies were estimated using the interval thickness and an estimate of the ply specific gravity based upon the equation:

Specific Gravity = 1.3622+0.0141*ash%-0.00004*ash%^2

Ash for each ply is calculated from the washability data.

Step 3

Develop a plant yield model for the known washability data. The model is based upon separate processes for the plus 6 mm, 6 mm x 0.5 mm, 0.5 mm x 0.15 mm, and minus 0.15 mm. The process efficiencies used were as follow:

- plus 6 mm 98%
- 6 mm x 0.5 mm 98%
- 0.5 mm x 0.15 mm 94%

Froth flotation yield was estimated using ash balance assuming a 10% product ash, a 52.73% tailings ash, and the reported minus 0.15 mm raw ash from the washability data. The assumptions for product ash% and tailings ash% were taken from the 2005 Marston Report.

Step 4

Estimate the specific gravity of the out-of-seam dilution using the composite value for the > 2.00 sink ash and the equation shown in Step 2 above.

Step 5

Estimate the change in ROM ash% based upon losing 0.1 mm of in-seam coal and gaining 0.1 mm of out-of-seam dilution. It is necessary to calculate the specific gravity of the in-seam coal, calculate the mass of the in-seam coal less 0.1 mm, and calculate the weight-average ash for the adjusted in-seam coal plus dilution.

Step 6

Input the data for seam thickness and in-seam ash in the process model. The model is set-up to adjust the in-seam recovery for differences in seam thickness and differences for in-seam ash%. For example, 0.1 mm dilution has a lesser impact on ash% for thicker seams than thinner seams. Higher in-seam ash reduces in-seam recovery. The recovery of in-seam coal based on ash differences is calculated using the assumption that differences in in-seam ash reflect differences in in-seam dilution, and the ash and specific gravity of in-seam dilution is the same as out-of-seam dilution.

Step 7

Interpolate theoretical recovery from the washability data using LaGrange interpolation, a method suitable for non-linear data plots. The cut-points used for the interpolation were up to 1.80 for the plus 6 mm size fraction, up to 1.90 for the 6 mm x 0.5 mm size fraction, and 1.80 for the 0.5 mm x 0.15 mm size fraction. The cut-points for the plus 0.5 mm size fractions were taken from previous Marston work on the Project and are the highest possible realistic values for those sizes using dense medium separation.

Step 8

Model plant yield at 10% ash. For the I-Seam, the maximum cut-points were typically utilized due to the low washed-ash content, however for the other seams, the washed-ash for the plus 6 mm was usually set at 11.5%, and the cut-point for the 6 mm x 0.5 mm size fraction was adjusted to produce a combined ash content of 10%. This is done using the Goal Seek tool in Excel.

Item 14 Mineral Resource Estimates

Golder-Marston estimated mineral resources within the conceptual pit designed for the 2012 FS; they were estimated for a conceptual pit using a cut-off clean coal strip ratio of 20 bcm per product tonne. Coal yield estimates were for a 50 mm x 0 mm product with an average ash content of 10 percent, adb.

This Report presents resource and reserve estimates based on the completed 2012 FS. The 2012 FS was based on producing a 10 percent ash product that is standard for PCI markets. The resource estimates are classified as Measured, Indicated and Inferred according to the CIMDS prepared by the CIM Standing Committee on Reserve Definitions and updated by CIM Council, November 22, 2010, which are incorporated by reference in NI 43-101. For coal resource estimates, the CIMDS incorporates by reference the guidelines of GSC 88-21.

Table 14.1 Measured and Indicated Anthracite Resource Estimates

Seam	In Situ Tonnes (kt)		10% Ash (adb) Product Tonnes (kt)	
	Measured	Indicated	Measured	Indicated
GU	2,705	131	1,291	52
PH	6,680	568	3,279	254
H	41,914	3,366	22,295	1,665
HI	3,570	683	689	160
I	43,265	4,585	32,426	2,848
J	5,192	295	1,464	63
K	25,374	3,150	14,977	1,737
KL	15,394	1,606	5,898	588
L	10,391	2,064	4,699	880
M	10,661	1,787	4,847	723
MN	2,888	1,753	951	589
N	3,087	459	1,633	275
O	1,164	0	582	0
P	184	0	100	0
Totals	**172,470**	**20,447**	**95,130**	**9,835**

Notes: 20:1 bcm/product tonne cutoff strip ratio limit

The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Mineral Reserves.

Table 14.1 shows the Measured, and Indicated anthracite resource estimates for the Lost-Fox Area by seam. At a 20:1 bcm/product tonne cut-off strip ratio, the estimated Measured and Indicated in-situ anthracite resources total 192.5 Mt. There are an additional 12.1Mt of inferred in-situ resources.

Item 15 Mineral Reserves

A portion of the resources delineated in the 20:1 conceptual pit were classified as reserves. Estimates of reserves were calculated from the same geologic model used for resource estimation developed by Golder-Marston.

CIMDS defines a mineral reserve as “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.”

The anthracite reserves for the Lost-Fox Area are shown below in Table 15.1:

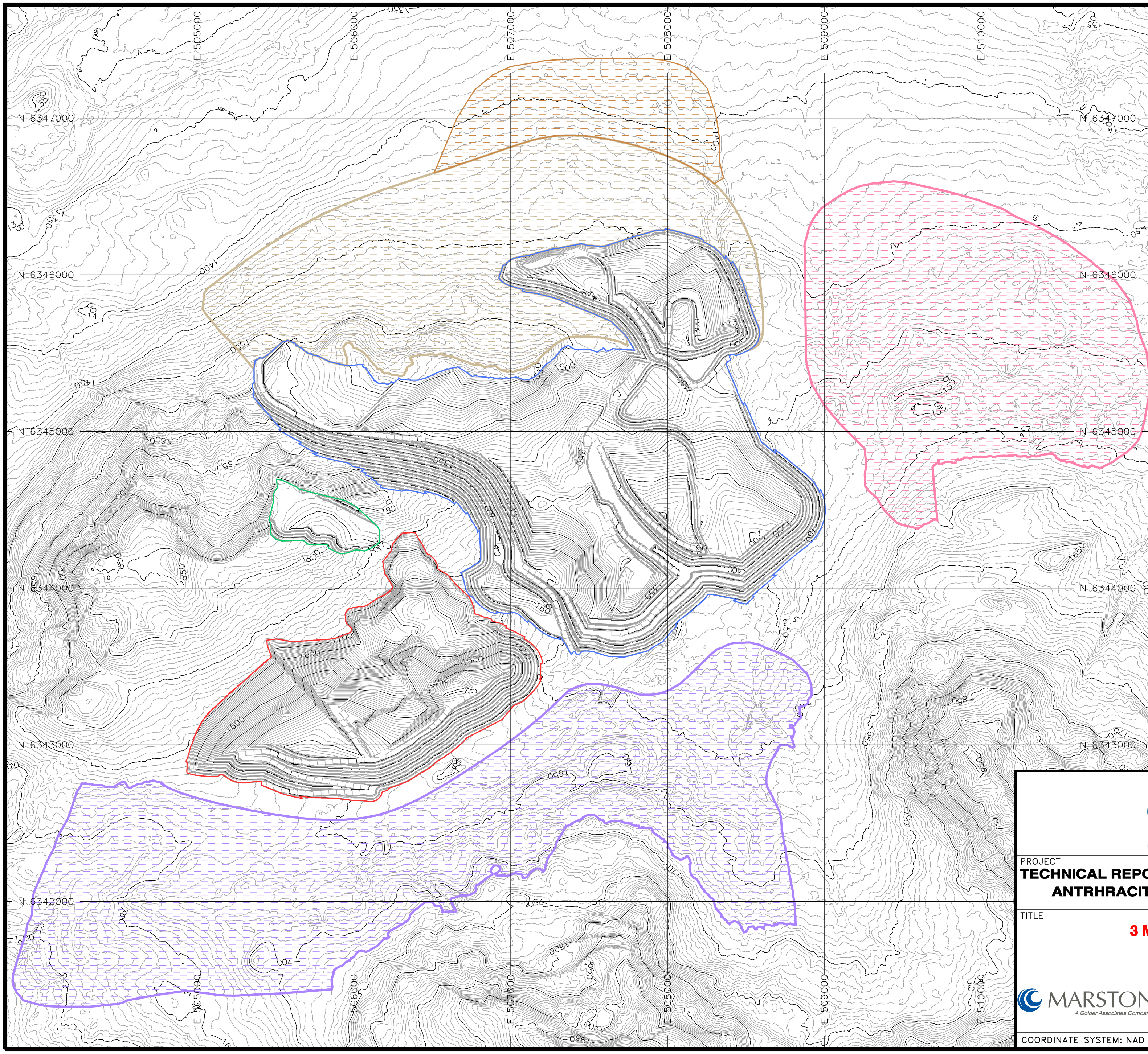
Table 15.1 Lost-Fox Area Anthracite Reserves

ROM Tonnes (Proven & Probable) (Mt)	Yield %	10% Ash (Adb) Clean Coal Reserves (Mt)			Waste (Mbcm)	Clean Coal Strip Ratio (Bcm/tonne)
		Proven	Probable	Total		
124.9	55.4	64.4	4.8	69.2	780.8	11.3

The reserves were developed by targeting the lowest cost coal to sustain a 25-year mining operation at a rate of 3.0 Mtpa. The resulting economic pit limits are shown in Figure 15.1, 3 Mtpa Ultimate Pit Design.

Qualified Person

Edward H. Minnes, P.E. (Missouri), is the Qualified Person responsible for the preparation of this Report. He is a professional mining engineer registered in Missouri, USA. He graduated from Queen’s University at Kingston, Ontario in 1984 with a B.Sc. – Mining Engineering and has 27 years of experience in coal mine geology, geologic modeling and engineering, modeling, reserve estimating, mine design and planning. He was assisted in the preparation of this report by employees of Golder-Marston.



LEGEND

- MAJOR TOPOGRAPHY CONTOUR (50m)
- MINOR TOPOGRAPHY CONTOUR (5m)
- ULTIMATE PIT EXTENTS (731 HA)
- SOUTH ROCK STORAGE PILE (538 ha)
- NORTHWEST ROCK STORAGE PILE (290 ha)
- NORTHEAST ROCK STORAGE PILE (336 ha)
- COAL REJECTS STORAGE PILE (102 ha)
- GROWTH MEDIA STORAGE PILE (31 HA)

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ARCTOS™ ANTHRACITE PROJECT

PROJECT
TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTRHRACITE PROJECT MINE FEASIBILITY STUDY

TITLE
3 MTPA ULTIMATE PIT DESIGN

BRITISH COLUMBIA, CANADA

PROJECT No.	1213540007	DATE	07-Nov-12
DESIGN	LH	SCALE	AS DRAWN
GIS	WJS		
CHECK	TM		**Figure 15.1**
REVIEW	RM		

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COORDINATE SYSTEM: NAD 1983 UTM ZONE 9 NORTH METERS

Quality

The coal in all areas of the Arctos Property is anthracite in rank under ASTM standards. Golder-Marston has completed a comprehensive coal quality model of the resources in the Lost-Fox Area. The average in situ coal quality for the Lost-Fox Area coal is not expected to be materially different from the Gulf data presented in Item 13 of this Report.

Key Assumptions, Parameters and Methods Used to Estimate Mineral Resources

Golder-Marston created a three-dimensional digital geologic model of the anthracite seams within the Lost-Fox Area using Maptek's Vulcan 3D© software package. The seam measurement data used to create the model is summarized in Table 15.2, Anthracite Seam Data from 2012 FS Geologic Model. The data is from Fortune's electronic files of verified Gulf data (as described in Item 11 of this Report). In addition to the seam measurement data, Golder-Marston utilized Gulf's 1988 geological sections for reference; black and white aerial stereographic photographs; horizontally corrected black and white aerial orthogonal photographs; Gulf's extensive topographic and geological mapping of the Area; and, Gulf's 1:2000 scale digital terrain model of the Lost-Fox Area.

Table 15.2 Anthracite Seam Data from 2012 FS Geologic Model

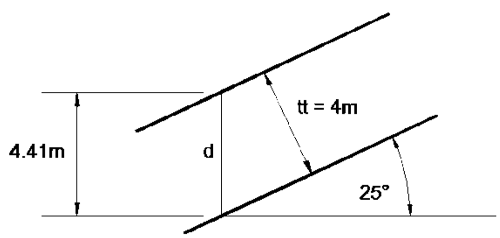
Seam	Lithology Data Points	Assay Data Points	Minimum Thickness	Maximum Thickness	Average True Thickness	Average In Situ Ash Content	Average In Situ Specific Gravity	Average Product Yield
			(m)	(m)	(m)	(adb)	(adb)	(Product % of In Situ)
P	14	1	0.3	2.6	1.9	21%	1.49	50%
O	10	2	0.1	3.6	2.3	44%	1.76	48%
N	15	5	0.6	2.8	1.9	35%	1.66	47%
MN	9	1	0.3	2.6	1.6	58%	1.92	32%
M	32	5	0.3	6.8	3.9	41%	1.72	44%
L	42	10	0.5	6.6	2.9	39%	1.71	42%
KL	40	8	0.2	6.1	4	41%	1.74	43%
K	64	31	1.0	8.1	4.3	32%	1.64	55%
J	74	6	Trace	4.5	1.8	36%	1.67	40%
I	198	66	0.9	10.6	5.1	23%	1.52	74%
HI	32	3	Trace	2.6	1.4	39%	1.72	30%
H	97	59	0.5	9	4.6	36%	1.68	48%
PH	43	9	Trace	4.7	2.4	35%	1.66	49%
GU	55	7	Trace	8.7	3.4	42%	1.74	45%
Totals	**725**	**213**	**Trace**	**10.6**	**3.0**	**37%**	**1.69**	**46%**

The first step in constructing the updated Lost-Fox geologic model was to examine the black and white aerial stereographic photographs to verify and establish basic geological structures. An overlay on these photographs was marked with lines of visible geological structures, and the stereo pairs were closely reviewed to find general structural trends. The orthogonal photos were also scanned into an image file that could be draped onto a triangulation of the topography. Lines drawn onto the image in a photo editor were then transformed to UTM coordinates by digitally drafting onto the draped image.

The Lost-Fox Area anthracite resource model was developed using a combination of gridding, solids modeling and block modeling controlled by topography and the interpreted geological structures from aerial photographs and drill hole and trench data. The model was separated into nine areas of Moderate geology type, and six areas of Complex geology type. In the Lost-Fox Area, the coal deposits are either Moderate or Complex geology types as the terms are defined in GSC 88-21, see Item 10 of this Report.

In the Moderate areas, drill hole and trench data were used to construct top of seam elevation grids. Seam dip at each grid node was derived from the top of seam grids; for each seam, true thickness grids were interpolated from Gulf's drill hole data using inverse distance squared weighting. To determine the bottom of each coal seam, apparent seam thickness was determined at each grid node location as follows.

> Vertical displacement from seam roof = seam true thickness (tt) / cosine (dip of coal bed) as shown on the following diagram.



$$d = \frac{tt}{\cos 25°} = 4.41m$$

Removable partings of 0.6 metre or greater were excluded from the seam true thickness prior to calculating the seam bottom. The resulting seam tops and bottoms were pieced together to form solids. A solid herein means a closed triangulation for modeling a solid object. All solids carry a seam designation for identification.

In Complex areas, coal structure was further controlled by creating a series of closed polygons on sections spaced 50 metres apart. Additional sections were added where necessary to control complex structures. The use of these polygons ensured that the model closely followed geological interpretation. The sectional polygons were then extruded between sections to create solids of the coal seams in Complex areas.

Seam structure modeling was an iterative process to ensure that the solid models conformed to the geological structures interpreted from the aerial photography, seam correlations and drill hole seam elevation and thickness data. Cross sections were created at a spacing of 100 metres through the model and at the same locations to allow a comparison with Gulf sections. Significant changes from the Gulf sections in seam correlation or geological structures were thoroughly reviewed and revised as necessary to conform to Golder-Marston's overall structural interpretation for the Lost-Fox Area.

A block model was created using the solid models to code seam identification into the blocks. A variable size block model was utilized. The model was created with a parent block size (maximum block size) of 25 m x 25 m x 10 m and a smallest sub-block size of 1 m x 1 m x 1 m. The solids and the topographic surface define the creation of the blocks in the model. Sub-blocks were created along the boundaries as required to honor the contact and the resolution of 1 metre. The blocks were coded with the seam identification assigned to the solid as they were created. A sub-blocked model defines resolution by the smallest block, and accordingly blocks are coded as completely coal or completely waste.

In-situ coal seam density was estimated based on apparent specific gravity measurements included in Gulf's analytical data. Because apparent specific gravity is used, the resource estimates are designated as air-dried, which reflects the sample condition in the standard apparent specific gravity measurement. After mining and processing, the actual density of mined and product coal will differ from apparent specific gravity depending on the coal's actual pore volume and surface moisture. Standard industry practice uses apparent specific gravity measurements as a starting point for in-situ coal resource estimates and applies any adjustments for density changes due to mining and processing to reserve estimates.

Coal seam density is a function of ash content because of the influence of in-seam rock partings on the average density of the seam. Because apparent specific gravity measurements were available for about half of the data points, Golder-Marston developed a function of apparent specific gravity versus air-dried ash content for all representative sample intervals. Based on that function, the following expression was developed to estimate in-situ coal seam density for the Lost-Fox Area.

Estimated in situ coal seam density = Ash Content (wt. %, adb) / 86.313 + 1.251

Based on the expression above, in-situ coal seam density was estimated for each coal seam data point with a representative ash content measurement. For each block in the Lost-Fox block model, a three-dimensional search was used to find density data that matched the seam coded into the block. An inverse distance squared weighting was applied to the data points to interpolate the estimated in situ coal seam density for each block. The resulting interpolated densities were used to estimate in-situ coal tonnes as the product of estimated density and calculated block volume.

The completed block model was used to estimate in-pit resources. As described above, areas of Complex and Moderate geology types were identified in the geologic model, and Measured, Indicated and Inferred resources were estimated for each geology type as follows:

Moderate Geology Type Areas

- Seam Dip — Bedding inclinations generally less than 30 degrees
- Structure — Characterized by broad open folds greater than 1.5 km; faulting is uncommon with displacements generally less than 10 m.
- All Resource Estimates — Minimum seam thickness – 0.6 m
- Measured Resources: — Data point distance – Zero to 450 m
- Indicated Resources: — Data point distance – 450 to 900 m
- Inferred Resources: — Data point distance – 900 to 2,400 m

Complex Geology Type Areas

- Seam Dip — Bedding inclinations are steeply dipping or overturned
- Structure — Faults are present with large displacements
- All Resource Estimates — Minimum seam thickness – 0.6 m
- Measured Resources: — Minimum seam thickness – 0.6 m
  Section spacing of 150 m
  Maximum data point spacing along section 200 m
  Maximum mean spacing along section 100 m
- Indicated Resources: — Section spacing of 300 m
  Maximum data point spacing along section 400 m
  Maximum mean spacing along section 200 m
- Inferred Resources: — Within the area modeled with the solids methodology, data and understanding, all areas not Measured or Indicated were classified as Inferred resources.

The Complex designation was based on an examination of each seam in section and on plan. Areas were designated as Complex if faulting caused multiple occurrences of the seam vertically, the area was tightly folded, was overturned or had significant areas of coal dipping greater than 30 degrees.

Conceptual pit shells used for resource estimates were developed using an average pit wall angle of 45 degrees and Lerchs-Grossmann pit design tools in the Vulcan software. This method of targeting resources delineates coal meeting the pit slope and ratio constraints but does not account for access. Application of practical pit designs will result in increased stripping and/or reduced resources.

Reserve estimates were based on detailed pit designs with a maximum overall slope angle of 45 degrees. These designs incorporated access and were designed to allow the logical mining of the deposit from low to high strip ratio.

ROM tonnages were calculated using a mining loss of 5 centimetres at the coal/rock contact and dilution of 5 centimetres at the coal/rock contact multiplied by the estimated dilution specific gravity of 2.3 grams/cc. The resulting tonnage was adjusted by the addition of moisture from 3 percent in situ to 6 percent ROM.

Product tonnes were calculated as the ROM tonnage times yield with a 2 percent moisture adjustment for an 8 percent moisture product.

Discussion on Material Effects of Issues on Mineral Resource and Reserve Estimates

A basic assumption of this Report is that the estimated in-pit anthracite resources for the Lost-Fox Area have a reasonable prospect for development under existing circumstances and assuming a reasonable outlook for all issues that may materially affect the mineral resource estimates.

Failure to achieve reasonable outcomes in the following areas could result in significant changes to reserves and or resources.

- Arctos must obtain the necessary permits to develop the Lost-Fox Area. The permitting process will require extensive updating of fieldwork, applications and approvals process time.
- The reserves are based on the future projected price of US$ 175 per tonne.
- The 2012 FS has been completed. Development of the property is dependent on financing.
- Significant upgrades to existing access or rail roadbeds are required for anthracite transportation, and other significant infrastructure will be necessary to produce anthracite from the Arctos Anthracite Project. Financing of these improvements will likely depend on government and other approvals and the outcome of the feasibility study.

Item 16 Mining Methods

Mining Operations

The mine plan and production schedule is based on an ultimate pit shell, which was derived using Lerchs-Grossman optimization and a price of $150/tonne for PCI coal. The design pit slope highwall of 45° was used to ensure all material was properly accounted for outward from the coal block at depth and is consistent with and based on a geotechnical analysis of the final pit slopes. The footwall followed the floor of the lowest coal seamed mined with dips varying from approximately 15° to 45°.

Rock storage piles were developed to minimize haulage and associated costs as well as to minimize their weight per unit area for stability purposes. The overall angle of the external rock storage piles is 14° (4:1) with 54-meter benches provided at 20-meter intervals.

The ultimate pit has been schedule to produce up to 3Mtpa of clean coal product. The operation is planned to use surface open-pit mining methods using shovels, truck, and ancillary equipment. The mine uses standard open-pit mining equipment that is diesel powered. The equipment includes hydraulic shovels and backhoes for mine rock removal and coal mining, rotary drillings for drilling and blasting, rear-dump off-highway mine trucks and standard auxiliary equipment such as dozers, graders, fuel and lube trucks, maintenance trucks and other items.

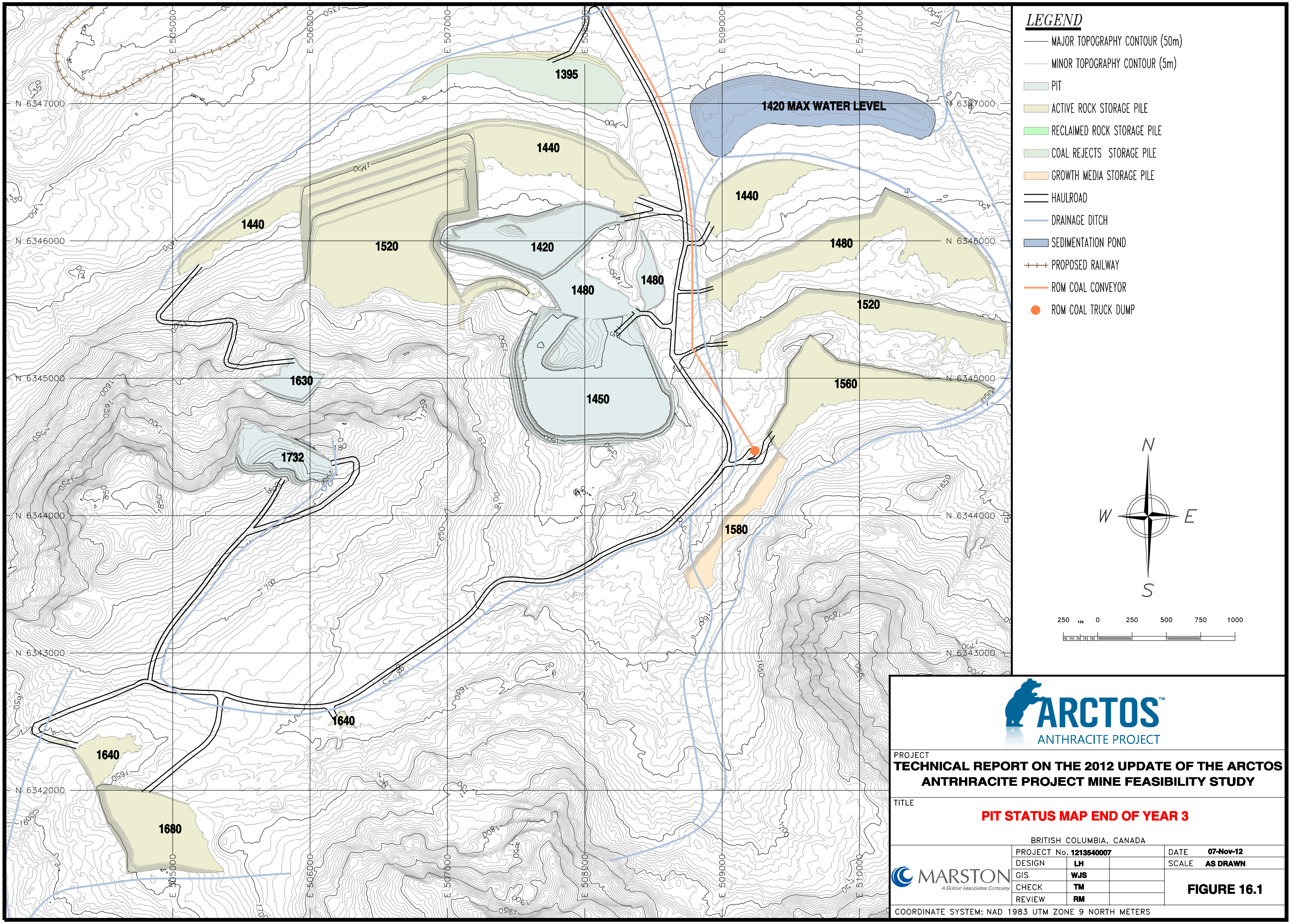
A summary of the proposed production schedule is shown in Table 16.1, Arctos Anthracite Production Forecast. The production period spans a 25 year mine life with construction operations beginning in Year -1 and mining operations continuing until the reserve is depleted in Year 25. The Arctos Anthracite Project is scheduled to produce approximately 69.2M clean coal tonnes over the mine of life. The average clean coal-stripping ratio is 11.3 bcm of mine rock per clean coal product tonne.

Table 16.1 Arctos Anthracite Production Forecast

Mine Year	**Total Stripping Volume (000s bcm)**	ROM Coal Production (000s tonnes)	*ROM Stripping Ratio (bcm/ ROM tonne)*	**Product Coal Tonnage (000s tonnes)**	*Product Stripping Ratio (bcm/ product tonne)*
Year -1	**3,026**	55	*55.1*	**0**	*0.0*
Year 1	**9,376**	708	*13.2*	**0**	*0.0*
Year 2	**27,329**	3,895	*7.0*	**2,780**	*9.8*
Year 3	**29,525**	4,803	*6.1*	**3,004**	*9.8*
Year 4	**33,744**	4,732	*7.1*	**3,009**	*11.2*
Year 5	**31,024**	4,563	*6.8*	**3,012**	*10.3*
Year 6	**32,806**	5,096	*6.4*	**3,008**	*10.9*
Year 7	**32,491**	4,929	*6.6*	**3,020**	*10.8*
Year 8	**34,832**	5,714	*6.1*	**3,004**	*11.6*
Year 9	**33,480**	5,909	*5.7*	**3,027**	*11.1*
Year 10	**34,692**	5,916	*5.9*	**2,928**	*11.8*
Year 11	**35,178**	5,917	*5.9*	**2,982**	*11.8*
Year 12	**35,015**	5,397	*6.5*	**3,010**	*11.6*
Year 13	**34,981**	5,206	*6.7*	**3,003**	*11.6*
Year 14	**34,577**	5,779	*6.0*	**3,007**	*11.5*
Year 15	**35,005**	5,148	*6.8*	**3,011**	*11.6*
Year 16	**35,052**	5,334	*6.6*	**3,000**	*11.7*
Year 17	**35,428**	5,705	*6.2*	**2,942**	*12.0*
Year 18	**35,096**	5,832	*6.0*	**2,875**	*12.2*
Year 19	**35,018**	5,725	*6.1*	**3,048**	*11.5*
Year 20	**35,175**	5,562	*6.3*	**2,959**	*11.9*
Year 21	**34,171**	5,580	*6.1*	**3,006**	*11.4*
Year 22	**32,246**	5,898	*5.5*	**3,065**	*10.5*
Year 23	**30,597**	5,470	*5.6*	**3,029**	*10.1*
Year 24	**27,012**	5,191	*5.2*	**3,008**	*9.0*
Year 25	**3,555**	984	*3.6*	**505**	*7.0*
TOTAL	**780,428**	**125,049**	***6.2***	**69,242**	***11.3***

A life of mine production plan is scheduled with the goal of developing the ultimate pit logically from lower cost areas to higher cost areas in order to maximize NPV. In addition to minimizing upfront mining costs, it is desirable to maximize the backfilling of mined-out phases to minimize the impact of ex-pit rock storage piles on the surrounding area. Backfilling also reduces haulage costs and results in rock storage piles with lower vertical profiles and improved hauling efficiency. The proposed initial mine development is shown in Figure 16.1, Pit Status Map End of Year 3. The proposed end of mine life status map is shown in Item 5, Figure 5.4, Pit Status Map End of Year 25.

There are multiple dipping coal and overturned coal seams, which will require proper sequencing of various operations crucial to the success of the mine plan. Mining equipment has been selected to carry out unit operations that are designed to minimize coal loss and dilution. Coal wedge removal, contact cleaning and excavation are to be performed with hydraulic backhoes operating in modes that are designed to minimize blasting or dozing of the coal seams. Coal recovery methods will vary based on seam dips.



ARCTOS™ ANTHRACITE PROJECT

PROJECT
TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTRHRACITE PROJECT MINE FEASIBILITY STUDY

TITLE
PIT STATUS MAP END OF YEAR 3

BRITISH COLUMBIA, CANADA

PROJECT No.	1213540007	DATE	07-Nov-12
DESIGN	LH	SCALE	AS DRAWN
GIS	WJS		
CHECK	TM		**FIGURE 16.1**
REVIEW	RM		

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COORDINATE SYSTEM: NAD 1983 UTM ZONE 9 NORTH METERS

Item 17 Recovery Methods

Coal recovery varies by seam, and in general are thickness based; thinner seams experience lower recoveries via losses at the roof and floor. The proposed production plan mines approximately 125 million ROM tonnes of the total reserve at an average ration of 11.3:1 bcm mine rock per tonne of clean coal. The ROM coal reports to the coal preparation plant where it is crushed and processed to reduce the ash content to 10% adb. The preparation plant uses a heavy media bath for coarse coal (50mm x 0), froth flotation for ultra-fine (-150 micron) material as well as a middlings regrind circuit. The processing method is standard and typical for the coal industry. Based on the washability analysis the projected average is estimated at 55.4%. The processing plant flowsheet is shown in Item 13, Figure 13.1, Simplified Solids Flowsheet.

The preparation plant utilizes a gravity based separation process that removes rock and non-carbonaceous material from ROM coal. The preparation plant is designed to use standard coal washing technology to produce a clean metallurgical coal product with an average of 10% ash on an air-dried basis and 8% total moisture.

Target specifications for the final product are shown below in Table 17.1:

Table 17.1 Target ROM Specifications

Mine Year	**Clean Coal**	Rom_Coal	*Yield %*	SG	*Ash %*	*Sulfur %*	Calorific Value (kcal/kg)	Volatile Matter %	*Fixed Carbon %*
1	**441,577**	763,040	*57.9%*	1.41	*26.8*	0.50	20.0	7.1	*52.8*
2	**2,338,302**	3,895,374	*60.0%*	1.57	*28.0*	0.45	23.6	7.3	*62.5*
3	**3,003,712**	4,803,173	*62.5%*	1.55	*31.1*	0.49	20.7	7.4	*55.0*
4	**3,009,160**	4,731,806	*63.6%*	1.49	*28.9*	0.53	20.9	7.3	*55.4*
5	**3,013,007**	4,564,499	*66.0%*	1.53	*28.4*	0.57	22.5	7.3	*59.2*
6	**3,008,122**	5,096,853	*59.0%*	1.59	*31.7*	0.55	21.2	7.2	*57.6*
7	**3,020,164**	4,929,459	*61.3%*	1.44	*27.3*	0.46	20.7	6.8	*54.9*
8	**3,002,690**	5,712,084	*52.6%*	1.66	*35.3*	0.47	20.9	7.4	*55.9*
9	**3,031,035**	5,917,629	*51.2%*	1.53	*29.2*	0.51	21.8	7.1	*58.0*
10	**2,931,461**	5,922,897	*49.5%*	1.64	*35.0*	0.68	20.5	7.4	*54.9*
11	**2,981,424**	5,915,370	*50.4%*	1.66	*36.7*	0.84	20.1	7.3	*53.8*
12	**3,009,744**	5,397,474	*55.8%*	1.65	*35.0*	0.60	20.7	7.6	*55.5*
13	**3,003,027**	5,206,462	*57.7%*	1.56	*29.9*	0.61	22.1	7.3	*59.1*
14	**3,007,156**	5,778,959	*52.0%*	1.62	*32.9*	0.65	21.5	7.7	*57.6*
15	**3,011,114**	5,148,076	*58.5%*	1.61	*30.9*	0.53	22.4	7.7	*60.5*
16	**3,000,461**	5,333,941	*56.3%*	1.63	*33.2*	0.59	21.6	7.5	*58.4*
17	**2,942,293**	5,705,019	*51.6%*	1.61	*34.8*	0.69	19.7	7.5	*52.9*
18	**2,875,442**	5,832,168	*49.3%*	1.65	*36.0*	0.82	19.9	7.4	*54.2*
19	**3,047,786**	5,724,590	*53.2%*	1.67	*36.3*	0.89	20.7	7.8	*54.6*
20	**2,958,706**	5,562,183	*53.2%*	1.65	*34.5*	0.59	21.3	7.8	*56.4*
21	**3,005,693**	5,580,308	*53.9%*	1.65	*34.8*	0.53	20.9	7.9	*56.1*
22	**3,065,371**	5,898,177	*52.0%*	1.66	*35.9*	0.49	20.8	7.9	*54.5*
23	**3,029,373**	5,470,045	*55.4%*	1.63	*33.9*	0.45	21.4	7.5	*56.5*
24	**3,007,652**	5,190,658	*57.9%*	1.62	*34.8*	0.40	20.2	7.1	*54.1*
25	**504,964**	983,998	*51.3%*	1.69	*39.1*	0.41	18.6	7.4	*51.4*
TOTAL	**69,249,439**	**125,064,240**	***55.4%***	**1.60**	**32.8**	**0.57**	**21.0**	**7.4**	**56.1**

Coarse and fine rejects from the coal preparation plant are transported to a designated rejects storage pile where they will be capped. Average projected clean coal yield from ROM production is estimated to be 55.4%. The processing method is standard and typical for beneficiating coal from non-coal materials. See Item 13 for additional information.

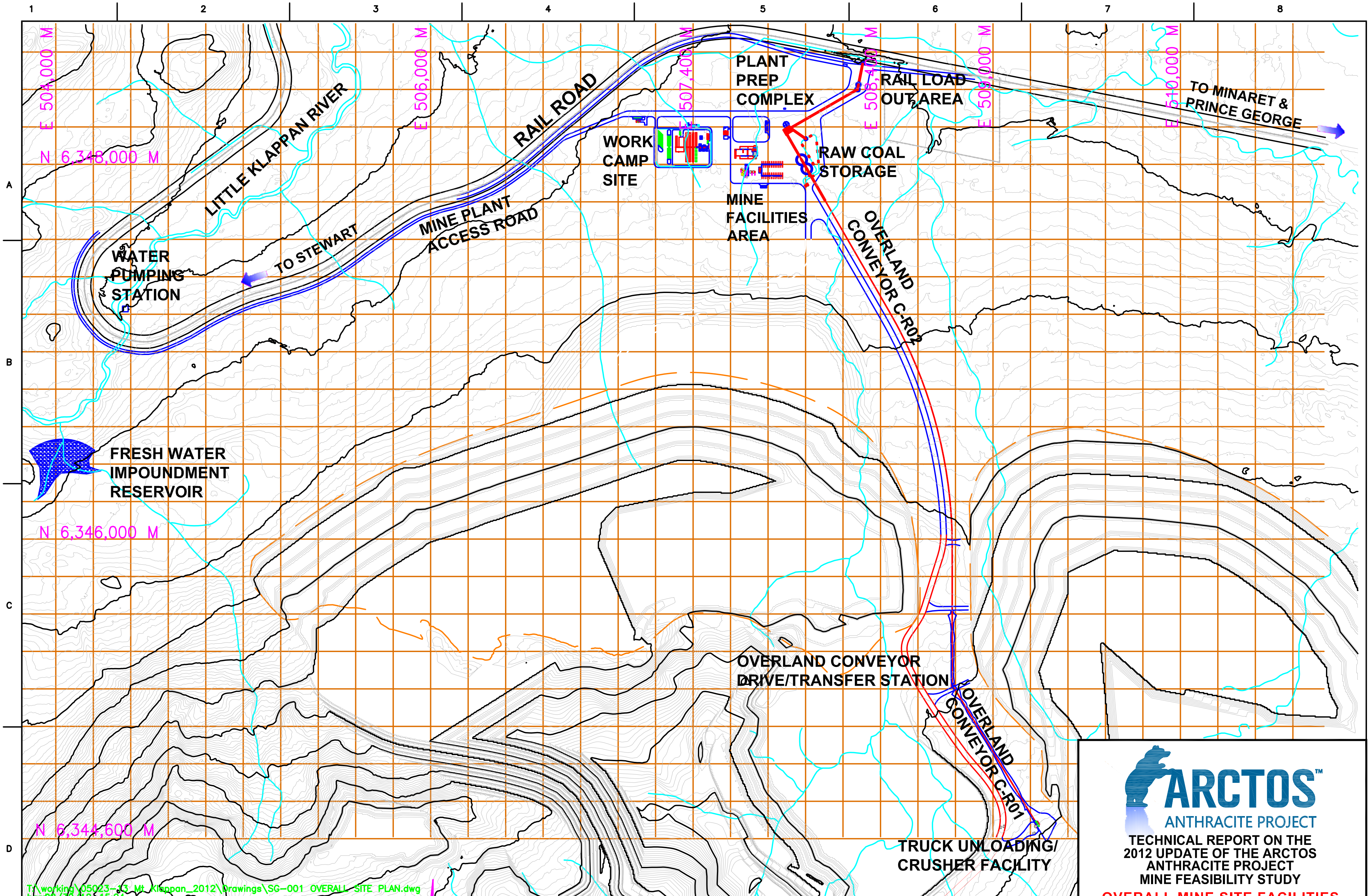
Item 18 Project Infrastructure

The Arctos Anthracite project is accessible by road and rail. Arctos will develop the infrastructure necessary to support mine development and operations, and the transportation of anthracite coal to world markets.

The road access route to the mine for over-the-road vehicles carrying workers, materials and supplies will be the Ealue Lake Road and the Dease Lake Extension railroad grade on the northern side of the project location, as shown in Item 5, Figure 5.1, Proposed Mine Access.

The access route by rail to the property location will undergo a series of upgrades to existing track as well as the construction of track in some areas. The rail right of way extends from the end of the existing rail at Minaret, through the northern end of the Property and on towards the town of Dease Lake. The sub-grade for this right-of-way has been completed, except for a 24 km section north of the Kluatantan River and a similar distance north of the Stikine River. Clean coal will be transported by rail 1,390 km from the mine site to the Ridley Coal Terminal at Prince Rupert where it will be able to be shipped to international markets. The details for the required track infrastructure is shown in Item 5, Figure 5.3, Rail Transportation Route.

The proposed on-site mine infrastructure includes a work camp complex, coal processing plant, train loadout, administration, and maintenance facilities. The processing plant has a capacity of 3.0 Mtpa clean coal. Clean coal will be loaded onto trains by a rail loadout facility capable of loading a 12,500-tonne unit train in less than six hours. Details of major on-site mine facilities infrastructure can be seen in Item 5, Figure 5.2, Mine Facilities Area Layout and Location Plan and Figure 18.1, Overall Mine Site Facilities Layout and Location Plan.



MARSTON
A Golder Associates Company

CDG ENGINEERS
CDG Engineers Architects Planners Inc.

PLAN - OVERALL MINE SITE FACILITIES

REV.	DATE	DESCRIPTION	APPROVED
L	11/08/12	REVISED > TECHNICAL REPORT NOV. 2012	MPS
K	08/30/12	REVISED > MINE FEASIBILITY STUDY 2012	MPS
J	07/24/12	MOVED FACILITED CLOSER TO RAIL	MPS
I	10/20/10	REVISED – RESTORED OLC/RAIL LOADOUT	MPS
H	06/03/08	DELETED – OLC/RAIL LOADOUT	MPS

ARCTOS™
ANTHRACITE PROJECT

TECHNICAL REPORT ON THE
2012 UPDATE OF THE ARCTOS
ANTHRACITE PROJECT
MINE FEASIBILITY STUDY

**OVERALL MINE SITE FACILITIES
LAYOUT AND LOCATION PLAN**

British Columbia, Canada

FIGURE 18.1

OCTOBER 2012

Item 19 Market Studies and Contracts

Markets for the Arctos Anthracite Coal

Arctos plans to produce up to 3 Mtpa of 10% ash on an air-dried basis (adb) anthracite product for sale primarily to steelmakers in international markets. Anthracite is used in blast furnaces for PCI and as a direct charge, for sintering iron ore, and as blend coal in making metallurgical coke. Currently, Arctos plans to develop rail from the Project to Ridley Terminal at Prince Rupert, British Columbia. See Item 5, Figure 5.3, Rail Transportation Route. Ridley is a world-class port and coal terminal.

Arctos' partner POSCAN is also potentially interested in receiving a 15% sinter ash product equivalent to 20% of the annual production. Golder-Marston retained Advance Coal Technology to determine the incremental plant recovery at 15% ash. Based on the analysis Golder-Marston believes that the production of the 15% ash product could be achieved.

Contracts

Currently, there are no contracts for the proposed Lost-Fox production. In export markets, metallurgical coal is typically sold under annual contracts after commercial production has commenced.

Item 20 Environmental Studies, Permitting and Social or Community Impact

Environmental Considerations

Arctos has provided all information on environmental and permitting related to the Project. The environmental studies by Arctos to date have been primarily desktop studies and environmental baseline studies in support of requisite environmental assessment approvals and permits from the British Columbia (BC) and Federal Governments.

Progressive rehabilitation will be performed during the normal course of mining operations. These activities include the final grading of rock storage piles, replacement of stockpiled topsoil, and re-vegetation. Mine closure reclamation includes the removal of infrastructure, re-grading and re-vegetation of disturbed lands.

Where present, topsoil will be removed from areas to be affected by mining, stockpiled and used for progressive and final reclamation. Overburden material will be removed during mining operations and will be placed in out-of-pit (ex-pit) rock storage piles and, where scheduling permits, backfilled into the mined out pits. The outside faces of the rock storage piles will be graded to 14 degrees (4:1) to support re-vegetation and meet BC regulations. The areas affected by the rock storage piles will be cleared, and any topsoil will be stockpiled. Sediment controls for the disturbed area will also be established.

Coal preparation plant rejects will consist of coarse coal reject material and filtered fine coal reject material that will be commingled during the disposal operation. Coal rejects will be transported from the preparation plant by conveyor belt and haulage trucks, and placed in a containment area. In addition to the containment area, coal rejects may also be disposed of within the rock storage piles. Rock storage piles will be located above drainage levels and any water table levels. Rejects will not be placed at the perimeter of the rock storage piles to maintain adequate cover over the rejects and to minimize the potential for slope stability problems.

Arctos will utilize the hydrological, hydrogeological and geochemical data to systematically identify potentially acid generating material that is excavated from the mine. The mine rock will also be characterized for potential metal leaching issues (for instance, selenium) that may need to be addressed. A comprehensive management plan will be developed that will address potential acid rock drainage and metal leaching issues in order to implement an effective strategy for avoidance, reduction or mitigation during the mine development, operations and closure. Comprehensive monitoring plans will also be established that will adhere to the *Guidelines for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia* (BC MEM, 1998).

Runoff and snowmelt from areas affected by the mining operation will be directed to sediment ponds prior to discharging to the receiving stream. Collector ditches will be constructed around mining areas, rock and soil storage piles, facility areas and roads to direct the water to the sediment ponds. Sediment ponds are designed to treat the runoff from outlier magnitudes of precipitation events. The criteria used in the design ensures the ability to treat a 10-year, 24-hour rainfall event and to safely pass a 200-year rainfall event. Areas affected by the mining operation will require reclamation either when they are no longer needed to facilitate the mining operation or at final mine closure. Some areas of the rock storage piles will be completed and progressively rehabilitated prior to mine closure. All facility areas will be reclaimed at mine closure.

The open pit mining operation at this site will result in large open pits remaining at the time of mine closure. Areas that lie below the surrounding drainage elevations will be allowed to fill with water to create water impoundments.

The highwalls and endwalls of the open pits will be constructed during the mining operation and will consist of 10 metre benches, double or triple-benched, with catchments at 20 or 30-meter intervals. When these benches are in competent rock, the rock benches will remain as part of the final wall configuration. Highwall and endwall slopes that are not in competent rock will be graded to 2:1 slopes, covered with 30 centimeters of growth media and revegetated.

Item 21 Capital and Operating Costs

Mine Capital and Operating Cost Estimates

Golder-Marston prepared capital cost estimates for the mine equipment based on budget quotations from mining equipment suppliers. Golder-Marston compiled all other capital cost estimates for infrastructure and facilities from independent engineering firm, CDG Engineers Inc. Estimated capital expenditures are summarized in Table 21.1, Capital Expenditure Summary.

Table 21.1 Capital Expenditure Summary($1,000's)

	Initial	Sustaining	Total
Mine	$ 192,044	$ 589,186	$ 781,230
Off site Transportation	$ 330,410	$ -	$ 330,410
On site Infrastructure(1)	$ 259,598	$ 3,804	$ 263,402
Other(2)	$ 6,559	$ 39,980	$ 46,539
Total	**$ 788,611**	**$ 632,970**	**$ 1,421,581**

Notes:
1. Water Management
2. Mine Facility General Maintenance & Prep Plant Sustaining Capital

Production costs and capital requirements were estimated assuming all mining, coal processing and coal handling functions are directly performed by Arctos using company-owned equipment and company employees. Ex-mine coal transportation costs would be paid by Arctos using Canadian National (CN) Rail services. For the purpose of cost estimates, the camp operation, employee transport, and vessel loading services were assumed to be provided by contractors or other third parties. The operational costs reflect updated 2012 Feasibility Study budgetary prices. Ridley Terminal does not require capital investment to begin shipping coal.

Table 21.2 Operating Cost Summary

COST COMPONENT	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Avg. (6-10)	Avg. (11-15)	Avg. (16-19)	Avg. (20-25)	TOTAL
PRODUCTION STATISTICS											
Growth Media Volume (000s bcm)	800	250	250	750	250	800	350	440	313	250	9,800
Overburden & Interburden Volume (000s bcm)	2,226	9,126	27,079	28,775	33,494	30,224	33,310	34,511	34,836	26,876	770,628
Total Stripping Volume (000s bcm)	**3,026**	**9,376**	**27,329**	**29,525**	**33,744**	**31,024**	**33,660**	**34,951**	**35,148**	**27,126**	780,428
ROM Coal Production (000s tonnes)	55	708	3,895	4,803	4,732	4,563	5,513	5,489	5,649	4,781	125,049
ROM Stripping Ratio (bcm / ROM tonne)	*55.1*	*13.2*	*7.0*	*6.1*	*7.1*	*6.8*	*6.1*	*6.4*	*6.2*	*5.4*	*6.2*
Product Coal Tonnage (000s tonnes)	0	0	2,780	3,004	3,009	3,012	2,997	3,003	2,966	2,595	69,242
Product Stripping Ratio (bcm / product ton	*0.0*	*0.0*	*9.8*	*9.8*	*11.2*	*10.3*	*11.2*	*11.6*	*11.9*	*10.0*	*11.3*
Productivity (ROM tonnes/total man-hour)	0.2	2.0	4.8	5.3	5.0	4.9	5.1	4.7	4.9	4.7	4.8
DIRECT MINING COSTS ($000s)											
Drilling & Blasting	$2,324	$7,087	$22,222	$24,343	$27,747	$24,557	$27,428	$28,380	$29,735	$23,971	$650,085
Cost Per ROM tonne ($/tonne)	$42.31	$10.01	$5.70	$5.07	$5.86	$5.38	$5.01	$5.18	$5.26	$4.74	$5.20
Cost Per Total bcm Stripped ($/bcm)	*$0.768*	*$0.756*	*$0.813*	*$0.825*	*$0.822*	*$0.792*	*$0.816*	*$0.812*	*$0.846*	*$0.875*	*$0.833*
Stripping & Growth Media Removal	$10,112	$24,373	$60,782	$73,529	$77,413	$77,720	$95,552	$105,845	$98,128	$79,114	$2,198,109
Cost Per ROM tonne ($/tonne)	$184.10	$34.42	$15.60	$15.31	$16.36	$17.03	$17.49	$19.33	$17.36	$16.08	$17.58
Cost Per Total bcm Stripped ($/bcm)	*$3.342*	*$2.600*	*$2.224*	*$2.490*	*$2.294*	*$2.505*	*$2.846*	*$3.028*	*$2.793*	*$3.023*	*$2.817*
Coal Loading & Haulage	$215	$2,073	$9,328	$11,412	$12,567	$12,876	$15,423	$19,013	$18,453	$14,609	$382,115
Cost Per ROM tonne ($/tonne)	$3.92	$2.93	$2.39	$2.38	$2.66	$2.82	$2.79	$3.46	$3.27	$3.15	$3.06
Maintenance	$1,669	$3,995	$10,659	$12,295	$13,162	$12,798	$15,080	$16,429	$16,061	$12,866	$353,561
Cost Per ROM tonne ($/tonne)	$30.38	$5.64	$2.74	$2.56	$2.78	$2.80	$2.75	$3.00	$2.84	$2.66	$2.83
Operations Support & Interim Reclamation	$4,083	$7,065	$19,625	$20,534	$21,283	$20,788	$24,625	$25,383	$26,643	$22,755	$586,517
Cost Per ROM tonne ($/tonne)	$74.33	$9.98	$5.04	$4.27	$4.50	$4.56	$4.48	$4.63	$4.72	$5.20	$4.69
Coal Processing Costs	$0	$0	$28,088	$28,540	$28,378	$27,996	$30,147	$30,094	$30,455	$26,282	$693,846
Cost Per ROM tonne ($/tonne)	$0.00	$0.00	$7.21	$5.94	$6.00	$6.14	$5.49	$5.49	$5.39	$5.67	$5.55
Supervision & Administration	$7,271	$7,304	$8,181	$8,226	$8,223	$8,214	$8,262	$8,261	$8,269	$8,106	$211,742
Cost Per ROM tonne ($/tonne)	$132.38	$10.31	$2.10	$1.71	$1.74	$1.80	$1.51	$1.51	$1.47	$2.48	$1.69
TOTAL DIRECT MINING COSTS ($000s)	$25,798	$51,896	$158,886	$178,879	$188,773	$184,949	$216,517	$233,404	$227,745	$187,702	$5,075,975
Cost Per ROM tonne ($/tonne)	$469.69	$73.29	$60.73	$37.24	$39.89	$40.53	$39.50	$42.60	$40.31	$39.99	$40.59
Cost Per Product tonne ($/tonne)	n/a	n/a	$85.10	$59.55	$62.73	$61.40	$72.27	$77.74	$76.80	$74.41	$73.31
EX-MINE COAL TRANSPORTATION ($000)	$0	$0	$93,512	$101,019	$101,221	$101,303	$100,807	$100,986	$99,771	$87,286	$2,328,817
Cost Per Product tonne ($/tonne)	n/a	n/a	$33.64	$33.63	$33.64	$33.63	$33.63	$33.63	$33.63	$33.64	$33.63
COAL TERMINAL & PORT CHARGES	$0	$0	$25,019	$27,033	$27,082	$27,110	$26,976	$27,024	$26,698	$23,358	$623,181
Cost Per Product tonne ($/tonne)	n/a	n/a	$9.00	$9.00	$9.00	$9.00	$9.00	$9.00	$9.00	$9.00	$9.00
MINE OVERHEAD COSTS ($000s)	$4,096	$6,132	$7,095	$7,314	$6,858	$6,680	$6,051	$5,040	$3,811	$2,681	$124,957
Cost Per Product tonne ($/tonne)	n/a	n/a	$6.23	$2.44	$2.28	$2.22	$2.02	$1.68	$1.29	$1.14	$1.80
ON-SITE INFRASTRUCTURE COST ($000)	$4,462	$5,402	$9,136	$9,885	$10,224	$10,078	$11,196	$11,853	$11,680	$9,912	$270,625
Cost Per Product tonne ($/tonne)	n/a	n/a	$6.83	$3.29	$3.40	$3.35	$3.74	$3.95	$3.94	$4.17	$3.91
COAL PRODUCTION ROYALTIES	$0	$0	$7,138	$7,577	$7,402	$7,497	$9,415	$20,508	$21,945	$21,994	$398,977
Cost Per Product tonne ($/tonne)	n/a	n/a	$2.57	$2.52	$2.46	$2.49	$3.16	$6.83	$7.39	$8.01	$5.76
SELLING, GENERAL, & ADMIN, COSTS	$536	$536	$536	$536	$536	$536	$536	$536	$536	$469	$13,543
Cost Per Product tonne ($/tonne)	n/a	n/a	$0.58	$0.18	$0.18	$0.18	$0.18	$0.18	$0.18	$0.19	$0.20
TOTAL INDIRECT COSTS ($000s)	$9,094	$12,070	$142,436	$153,365	$153,323	$153,203	$154,982	$165,947	$164,443	$145,699	$3,760,101
Cost Per Product tonne ($/tonne)	n/a	n/a	$58.85	$51.06	$50.95	$50.86	$51.73	$55.26	$55.43	$56.14	$54.30
FOB VESSEL CASH COST ($000)	$34,892	$63,966	$301,321	$332,243	$342,096	$338,152	$371,499	$399,351	$392,188	$333,400	$8,836,076
Cost Per Product tonne ($/tonne)	n/a	n/a	$143.96	$110.61	$113.69	$112.26	$124.00	$133.01	$132.23	$130.55	$127.61
COST DEPRECIATION ($000s)	$21,518	$38,549	$49,792	$53,051	$55,035	$57,154	$66,381	$62,926	$66,986	$29,609	$1,367,231
Cost Per Product tonne ($/tonne)	n/a	n/a	$39.52	$17.66	$18.29	$18.97	$22.15	$20.96	$22.60	$14.71	$19.75
TOTAL COST OF MINING ($000s)	$56,411	$102,515	$351,113	$385,294	$397,131	$395,306	$437,880	$462,277	$459,174	$363,010	$10,203,307
Cost Per Product tonne ($/tonne)	n/a	n/a	$183.48	$128.27	$131.97	$131.23	$146.15	$153.96	$154.83	$145.26	$147.36

Item 22 Economic Analysis

Economic Model and Sensitivity Analysis

The cash flow for the Project is presented in Table 22.1, Estimated Cash Flow Summary. The cash flow was calculated on an annual basis using proven and probable mineral reserves only. The cost and cash flow estimate is on a 100 % equity basis and does not include interest payments or other financing charges. The NPV at an 8 % discount rate was estimated at $615.9 million before tax and $405.8 million after tax with an IRR of 17.0 % before tax and 14.7 % after tax, respectively.

Table 22.1 Estimated Cash Flow Summary

Item	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Avg. (6-10)	Avg. (11-15)	Avg. (16-19)	Avg. (20-25)	TOTAL
TONNES SOLD (kt)	0	0	2,780	3,004	3,009	3,012	2,997	3,003	2,966	2,595	69,242
SALES PRICE ($/t)	**184**	**184**	**184**	**184**	**184**	**184**	**184**	**184**	**184**	**184**	
REVENUE	-	-	512,083	553,315	554,319	554,883	552,133	553,117	546,460	478,080	12,755,169
Cash Costs											
Direct Operating	25,798	51,896	158,886	178,879	188,773	184,949	216,517	233,404	227,745	187,702	5,075,975
Mine Overhead	4,096	6,132	7,095	7,314	6,858	6,680	6,051	5,040	3,811	2,681	124,957
Onsite Infrastructure	4,462	5,402	9,136	9,885	10,224	10,078	11,196	11,853	11,680	9,912	270,625
Coal Transportation	-	-	93,512	101,019	101,221	101,303	100,807	100,986	99,771	87,286	2,328,817
Terminal Cost	-	-	25,019	27,033	27,082	27,110	26,976	27,024	26,698	23,358	623,181
Selling, G&A	536	536	536	536	536	536	536	536	536	469	13,543
Royalties	-	-	7,138	7,577	7,402	7,497	9,415	20,508	21,945	21,994	398,977
TOTAL CASH COSTS	34,892	63,966	301,321	332,243	342,096	338,152	371,499	399,351	392,188	333,400	8,836,076
Cash Cost Per Tonne ($/t)	$0.00	$0.00	$108.39	$110.61	$113.69	$112.26	$124.00	$133.01	$132.23	$130.55	$127.61
EBITDA	(34,892)	(63,966)	210,762	221,072	212,223	216,731	180,634	153,766	154,272	144,680	3,919,093
EBITDA per Tonne	$0.00	$0.00	$75.82	$73.60	$70.53	$71.95	$60.21	$51.20	$51.98	$53.66	$53.03
CAPITAL EXPEND.	372,428	308,546	107,638	30,258	13,698	12,843	30,495	39,615	30,225	17,453	1,421,581
WORKING CAPITAL CHANGE	250	-	21,337	1,718	42	24	(129)	127	70	(3,253)	4,126
Pre-tax Cash Flow	(407,570)	(372,512)	81,787	189,096	198,483	203,865	150,267	114,024	123,976	130,479	2,493,386
Cumulative	(407,570)	(780,082)	(698,295)	(509,198)	(310,716)	(106,851)	353,141	957,500	1,532,481	2,183,394	2,493,386
Income Taxes											
Federal Taxes	-	-	-	-	-	-	(22,122)	(17,487)	(18,755)	(17,984)	(380,968)
Provincial Tax	-	-	-	-	-	-	(14,748)	(11,658)	(12,504)	(11,989)	(253,979)
TOTAL INCOME TAX	-	-	-	-	-	-	(36,869)	(29,145)	(31,259)	(29,974)	(634,947)
After-Tax Cash Flow	(407,570)	(372,512)	81,787	189,096	198,483	203,865	113,398	84,879	92,717	100,506	1,858,439
Cumulative	(407,570)	(780,082)	(698,295)	(509,198)	(310,716)	(106,851)	244,085	691,570	1,121,755	1,615,042	1,858,439

Note: All figures are in $000's unless otherwise stated.

Table 22.2 shows the sensitivity analyses for various rail investment levels; Table 22.3 shows the sensitivity analyses to changes in price, Opex and Capex. The tables provide sensitivity analyses with variants in prices, exchange rates, capital costs and operating costs. Changes in coal grades or ranks would affect sales prices.

Table 22.2 Sensitivity Analyses for Various Rail Investment Levels

Pre-Tax Internal Rate of Return and NPV (C$ Millions) at 8% discount factor

Fortune Rail Capital Expenditure	Product Sales Prices (US$/t)					
	US$150/t		US$175/t		US$200/t	
	IRR	NPV 8%	IRR	NPV 8%	IRR	NPV 8%
100 percent	7.5%	-31M	17.0%	616M	24.8%	1246M
75 percent	8.9%	47M	19.1%	688M	27.7%	1326M
50 percent	9.5%	120M	21.7%	758M	31.0%	1394M

After-Tax Internal Rate of Return and NPV (C$ Millions) at 8% discount factor

Fortune Rail Capital Expenditure	Sales Price (US$/t)					
	US$150/t		US$175/t		US$200/t	
	IRR	NPV 8%	IRR	NPV 8%	IRR	NPV 8%
100 percent	6.3%	-94M	14.7%	406M	21.5%	883M
75 percent	7.5%	-28M	16.5%	466M	24.0%	949M
50 percent	8.9%	38M	18.7%	525M	26.8%	1004M

Table 22.3 Sensitivity Analyses to Changes in Price, OPEX & CAPEX

% Change		Pre Tax			After Tax		
		IRR	NPV (8%)	NPV (10%)	IRR	NPV (8%)	NPV (10%)
Price	-10	10.6%	$166,698	$34,889	9.1%	$60,450	($46,129)
		17.0%	$615,935	$411,940	14.7%	$405,771	$246,197
	+10	22.6%	$1,062,342	$784,869	19.6%	$744,243	$530,297
Opex	-10	20.8%	$916,526	$663,516	18.1%	$634,867	$439,058
		16.9%	$615,935	$411,940	14.7%	$405,771	$246,197
	+10	12.3%	$320,351	$163,825	11.1%	$178,438	$53,738
Capex	-10	19.0%	$701,801	$493,764	16.5%	$476,228	$314,534
		16.9%	$615,935	$411,940	14.7%	$405,771	$246,197
	+10	15.0%	$530,083	$329,936	13.1%	$334,876	$177,216

Payback

As shown in the economic model section, on a 100 % equity basis with no interest charges, the payback period for the Lost-Fox Project under the 3 Mtpa case is approximately 7.7 years on an after-tax basis at an 8% discount rate.

Mine Life

The mine life of the Lost-Fox operation is approximately 25 years with the reserves currently delineated. Additional exploration potential exists in the Hobbit-Broatch area.

Item 23 Adjacent Properties

This Technical Report does not contain information concerning an adjacent property.

Item 24 Other Relevant Data and Information

There is no other relevant data and information required to make this Technical Report understandable and not misleading.

Item 25 Interpretation and Conclusions

It is Golder-Marston's opinion that the data provided through various exploration and bulk sampling programs combined with detailed washability, infrastructure development, and cost analysis, is sufficient to support the feasibility level study and associated reserves, which were released by Fortune on October 15, 2012. This data confirms the property's ability to produce a washed anthracite coal with indicative qualities consistent with those currently being sold to overseas steel makers. The data is of sufficient density and reliability to support the mineral resource and reserve definitions under CIMDS and NI 43-101.

Golder-Marston recommends that additional drilling be performed to solidify the geological interpretation in selected areas as well as additional geotechnical drilling to confirm the suitability of rock stockpile locations. Even so, Gulf's exploration programs in the Lost-Fox Area were sufficient to provide the base data necessary for a project feasibility study.

Gulf's geological and sampling program met its original objective, which was to delineate sufficient resources in the Lost-Fox Area to perform mining feasibility studies.

Item 26 Recommendations

Golder-Marston proposed a drilling program to be completed prior to development that included exploration holes to increase confidence in selected areas, geotechnical holes, groundwater holes, and holes to test for potentially acid-generating material.

Additional drilling should be done to confirm some areas of localized uncertainty. These include drill intercepts that were not used due to inconsistencies and further refinement of a zone where the I Seam coal was repeated in the 2005 drilling resulting in the modeling of a "perched" I Seam.

During its next field program, Arctos should collect from trenches representative bulk samples of various seams in the proportions generally planned for mining and processing. The bulk samples should be tested to verify or improve the yield predictions used in the 2012 FS.

Golder-Marston recommends that Arctos perform a field testing program to identify any sources of ground water, permafrost, and clay or bentonite or other conditions that may impact the stability of the proposed rock and coal reject placement strategy or the stability of the proposed pit walls. Arctos should perform additional drilling to provide data for testing and stability analysis of the proposed rock and coal reject stockpiles.

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