

**BC Geological Survey  
Coal Assessment Report  
951**



**COAL ASSESSMENT REPORT TITLE PAGE AND SUMMARY**

**TITLE OF REPORT:** Assessment Report for 2014 - Arctos Anthracite Project

**TOTAL COST:**

**AUTHOR(S):** Robin E. Goad, M.Sc., P. Geo. - President & CEO, Fortune Coal Limited (Qualified Person)

**SIGNATURE(S):**

**NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):** C-160 (5 YR term, expires March 31, 2018)  
Approval number: 13-0200025-0604, CX-1-004: 2013 (expires April 30, 2018)

**YEAR OF WORK:** 2014

**PROPERTY NAME:** Arctos Anthracite Project

**COAL LICENSE(S) AND/OR LEASES ON WHICH PHYSICAL WORK WAS DONE:**

417191, 417194-96, 417200-01, 417204-05, 417214-16, 417219-21, 417225-26,  
417230-31, 417160-61, 417180-99 & 417200-38

**MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:** 0200025

**MINING DIVISION:** Liard

**NTS / BCGS:** 104H02 and 104H07

**LATITUDE:** 57.2410° N

**LONGITUDE:** 128.8923° W

**OWNER(S):** Fortune Coal Limited (Managing Partner), POSCO Klappan Coal; parties to the Arctos Anthracite Joint Venture

**MAILING ADDRESS:** 148 Fullarton Street, Suite 1600, London, Ontario N6A 5P3

**OPERATOR(S) [who paid for the work]:** Fortune Coal Limited

**MAILING ADDRESS:** 148 Fullarton Street, Suite 1600, London, Ontario N6A 5P3

**REPORT KEYWORDS** (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**)

**REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:**

Fortune Coal Limited completed its exploration work of the Arctos Anthracite project in 2005. The exploration work undertaken is described in detail in our assessment report "Assessment Report for 2005 - Mount Klappan Anthracite Coal Project (Liard Mining Division)" which is on file with the BC Government.

SUMMARY OF TYPES OF WORK IN THIS REPORT		EXTENT OF WORK (in metric units)	ON WHICH TENURES
GEOLOGICAL (scale, area)			
	Ground, mapping	Not applicable	
	Photo interpretation	Not applicable	
GEOPHYSICAL (line-kilometres)			
	Ground (Specify types)	Not applicable	
	Airborne (Specify types)	Not applicable	
	Borehole	Not applicable	
	Gamma, Resistivity,	Not applicable	
	Resistivity	Not applicable	
	Caliper	Not applicable	
	Deviation	Not applicable	
	Dip	Not applicable	
	Others (specify)		
	Core	Not applicable	
	Non-core	Not applicable	
SAMPLING AND ANALYSES			
Total # of Samples			
	Proximate	Not applicable	
	Ultimate	Not applicable	
	Petrographic	Not applicable	
	Vitrinite reflectance	Not applicable	
	Coking	Not applicable	
	Wash tests	Not applicable	
PROSPECTING (scale/area)		Not applicable	
PREPARATORY/PHYSICAL			
	Line/grid (km)	Not applicable	
	Trench (number, metres)	Not applicable	
	Bulk sample(s)	Not applicable	

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## 1.0 - INTRODUCTION

This report is provided in fulfillment of the Coal Mine Regulations regarding the filing of an Assessment Report for exploration work conducted in 2014. The project has not had any exploration work performed since 2005. All work performed since 2005 has been in fulfillment of securing an EA certificate from the BC EAO. The project is currently in the pre-application stage of the BC EA process and has completed a formal Project Description Report, as well as a draft Application Information Requirements document.

The only work that was performed in 2014 was EA related baseline data acquisition work. No exploration work was performed in 2014 that changed the scope and extent of known coal mineralization. The 43-101 compliant coal resource and reserve estimate, provided to the BC Government in our Coal Assessment report dated Feb. 2013, remains unchanged.

## 2.0 - SITE DESCRIPTION AND LOCATION

The site is located in northwestern British Columbia, approximately 160 kilometres (km) northeast of Stewart and 300 km northwest of Smithers, as shown on Figure 1, in the Liard Mining District and Bulkley-Cassiar Forest District between 57°06'N and 57°23'N latitude and 128°37'W and 129°15'W longitude, NTS Map Reference 104H 020-022.

Ground access to the property is via a connector road from Stewart-Cassiar Highway 37 to the BC Railway sub-grade, which functions as a road and passes through the coal license area. The site is accessible by air to via 1,000-metre gravel airstrip built on the railway sub-grade, which is suitable for landing fixed-wing aircraft.

The mineral rights comprise 61 contiguous coal licenses, listed in Table 1, with a combined area of 16,411 hectares located on and around the north side of Mount Klappan as shown on Figure 2.

**Table 1 Coal Licenses**

<b>License No.</b>	<b>Mapsheet</b>	<b>Area (ha)</b>	<b>License No.</b>	<b>Mapsheet</b>	<b>Area (ha)</b>
417160	104H026	281	417209	104H027	280
417161	104H026	491	417210	104H027	280
417180	104H017	281	417211	104H027	211
417181	104H017	281	417212	104H027	280
417182	104H027	276	417213	104H026	280
417183	104H027	281	417214	104H026	280
417184	104H027	281	417215	104H026	280
417185	104H027	205	417216	104H026	280
417186	104H027	280	417217	104H027	247
417187	104H027	280	417218	104H026	279
417188	104H017	281	417219	104H026	280
417189	104H027	281	417220	104H026	280
417190	104H026	281	417221	104H026	280
417191	104H026	281	417222	104H026	58
417192	104H027	280	417223	104H026	104
417193	104H026	280	417224	104H026	149
417194	104H026	280	417225	104H026	280
417195	104H026	280	417226	104H026	280
417196	104H026	280	417227	104H026	280
417197	104H016	281	417228	104H026	280
417198	104H016	281	417229	104H025	280
417199	104H016	281	417230	104H026	280
417200	104H026	281	417231	104H026	280
417201	104H026	281	417232	104H026	280
417202	104H026	281	417233	104H026	280
417203	104H026	281	417234	104H025	280
417204	104H026	280	417235	104H026	202
417205	104H026	280	417236	104H026	280
417206	104H026	280	417237	104H026	280
417207	104H026	280	417238	104H025	280
417208	104H027	173			

Note: Mapsheet references are to BC Geographic Survey.

### 3.0 - PROJECT HISTORY

In 1901, V.H. Dupont reported a coal outcrop near Mount Klappan in a Canadian government railway survey report. 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 by Buckham and Latour (1950) and Richards and Gilchrist (1979). 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. In 1978, Esso Resources Ltd. and Petrofina Ltd. acquired the first coal licenses at the current project location but allowed the licenses to lapse in 1980. Based on Esso's report from a summer geological mapping program, Gulf acquired its licenses between 1981 and 1987 covering an area much greater than the current license area.

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 core drilling, adits, trenching and outcrop sampling, and quality testing. In 1985 and 1986, Gulf developed a trial cargo pit on top of Lost Ridge and constructed a pilot processing plant near the railway bed access road for bulk testing and to produce sample shipments for potential customers. Anthracite mined from the trial cargo pit (was hauled to the pilot plant where it was processed in a heavy media bath and water-only cyclones to separate coal from the rock. The clean coal products were then trucked to the Port of Stewart and shipped via ocean vessels to potential overseas customers. In February 1992, Gulf surrendered several coal licenses north (in the Little Klappan Valley), south (in the Skeena/Spatsizi Valley) and west (in the Nass/Klappan Valley) of the current license block. In 1994, Gulf performed its last major technical study, which was an analysis of producing a single anthracite product for use in steelmaking.

A summary of Gulf's exploration work is as follows. 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.

In July 2001, Conoco acquired Gulf's remaining coal licenses through acquisition of the company. In 2002, Fortune Coal Limited acquired these coal licenses and Gulf's comprehensive technical database, and archives of supporting documents from Conoco Canada Ltd.

Fortune Coal Limited conducted a drilling exploration program in 2005 and specific details of the work performed are described in detail in our assessment report "Assessment Report for 2005 - Mount Klappan Anthracite Coal Project (Liard Mining Division)" which is on file with the BC Government. All drill core samples are stored off-site in a locked shipping container in Smithers, BC. Table 2 is a summary of intrusive exploration by Gulf in the 1980s and Fortune in 2005:

**Table 2 Summary of Intrusive Exploration**

<b>Exploration Program</b>	<b>1980-1988 (Historical, Gulf)</b>	<b>2005 (Fortune)</b>	<b>Total</b>
Adits	4	None	4
Diamond Drill Holes	159 (22,752 m)	12 (2,109 m)	171 (24,861 m)
Rotary Drill Holes	23 (1517 m)	None	23 (1517 m)
Mechanical Trenches	210 (2304 m)	None	210 (2304 m)
Hand Trenches	357 (1999 m)	None	357 (1999 m)
Measured Sections	64 (8818 m)	None	64 (8818 m)

#### **4.0 - 2014 EXPLORATION WORK**

The Arctos Anthracite project entered the BC EA process in 2012 and is currently in the pre-application stage. All recent work at the project site has involved the acquisition of baseline data in support of an EA application. In 2013, the project was granted a Notice of Work (NOW) permit for 5 years. In 2014, the BC Government delayed granting approval to a NOW permit amendment that was required to complete the scope of work for the summer of 2014. The NOW amendment was required in order to secure more drill locations for our geotechnical, hydrogeological and geochemical studies, and to perform near surface bulk coal sampling for coal characterization testing. As the NOW permit amendment was not issued in 2014, we were only able to conduct limited EA fieldwork this year under the existing NOW. We did not set up a camp at the Arctos Anthracite project site in 2014. All baseline environmental fieldwork was done by consultants who were flown in and out of the project site each day by helicopter.

In January, a group of scientists from Knight Piésold Consulting worked at the site for three days for the baseline hydrology program. They conducted snow pack measurements, took winter low flow measurements at established hydrology stations, and collected data from meteorological stations we have established at the site.

In February, a group of scientists from Knight Piésold Consulting worked at the site for two days for the baseline hydrology program. They conducted snow pack measurements, took winter low flow measurements at established hydrology stations and collected data meteorological stations we have established at the site.

In April, a group of scientists from Knight Piésold Consulting worked at the site for four days for the baseline hydrology program. They conducted snow pack measurements, took winter low flow measurements at established hydrology stations and collected data meteorological stations we have established at the site. They changed out some of the data loggers at some of the creeks being monitored.

In June, a group of scientists from Knight Piésold Consulting worked at the site for two days for the baseline hydrology program. They conducted snow pack measurements, took freshet flow measurements at six established hydrology stations and collected data meteorological stations we have established at the site. Water level sensors and data loggers were left installed to collect data through the summer.

In October, a group of scientists from Knight Piésold Consulting worked at the site for one day for the last portion of the 2014 baseline hydrology program. They removed the data-loggers and transducers from six hydrology stations and winterized the meteorological stations.

The environmental data collected in 2014 will be added to data collected in previous years, and collectively this information will be used in support of an application for a BC Environmental Assessment Certificate. To date, none of this data has been used to prepare any final technical reports or has been summarized for review by external parties. More baseline data must be acquired at the site before our primary environmental consultants (Stantec, Lorax and Knight Piésold) can prepare their final reports.

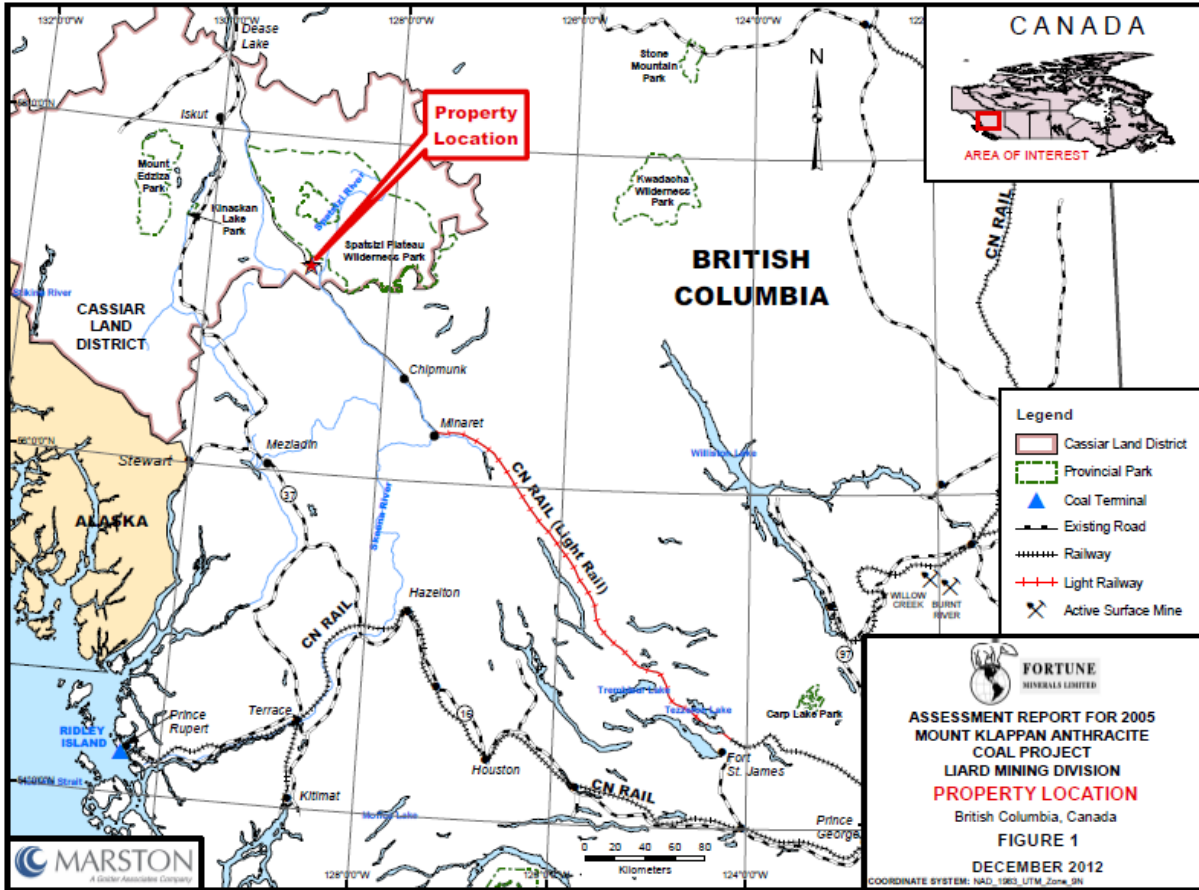
## 5.0 - SUMMARY OF COSTS

Table 3 provides a summary of costs associated with the completion of the 2014 work.

Exploration Work type	Comment	Days			Totals
<b>Personnel (Name)* / Position</b>	<b>Field Days (list actual days)</b>	<b>Days</b>	<b>Rate</b>	<b>Subtotal*</b>	
FN Workers			\$0.00	\$5,389.99	
				\$5,389.99	<b>\$5,389.99</b>
<b>Office Studies</b>	<b>List Personnel (note - Office only, do not include field days)</b>			\$0.00	<b>\$0.00</b>
<b>Airborne Exploration Surveys</b>	<b>Line Kilometres / Enter total invoiced amount</b>			\$0.00	<b>\$0.00</b>
<b>Remote Sensing</b>	<b>Area in Hectares / Enter total invoiced amount or list personnel</b>			\$0.00	<b>\$0.00</b>
<b>Ground Exploration Surveys</b>	<b>Area in Hectares/List Personnel</b>				<b>\$0.00</b>
<b>Ground geophysics</b>	<b>Line Kilometres / Enter total amount invoiced list personnel</b>			\$0.00	<b>\$0.00</b>
<b>Geochemical Surveying</b>	<b>Number of Samples</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
				\$0.00	<b>\$0.00</b>
<b>Drilling</b>	<b>No. of Holes, Size of Core and Metres</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
				\$0.00	<b>\$0.00</b>
<b>Other Operations</b>	<b>Clarify</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Baseline Hydrology	Field work at site		\$0.00	\$65,400.25	
				\$65,400.25	<b>\$65,400.25</b>
<b>Reclamation</b>	<b>Clarify</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
<b>Transportation</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Helicopter (hours)	For work done at site		\$0.00	\$104,169.36	
				\$104,169.36	<b>\$104,169.36</b>
<b>Accommodation &amp; Food</b>	<b>Rates per day</b>				
Hotel	For work done at site		\$0.00	\$6,512.46	
Meals	For work done at site		\$0.00	\$4,697.35	
				\$11,209.81	<b>\$11,209.81</b>
<b>Miscellaneous</b>				\$0.00	<b>\$0.00</b>
<b>Equipment Rentals</b>				\$0.00	<b>\$0.00</b>
<b>Freight, rock samples</b>				\$0.00	<b>\$0.00</b>
				\$0.00	<b>\$0.00</b>
<b>TOTAL Expenditures</b>					<b>\$186,169.41</b>



# FIGURES



**Figure 1 - Property Location**

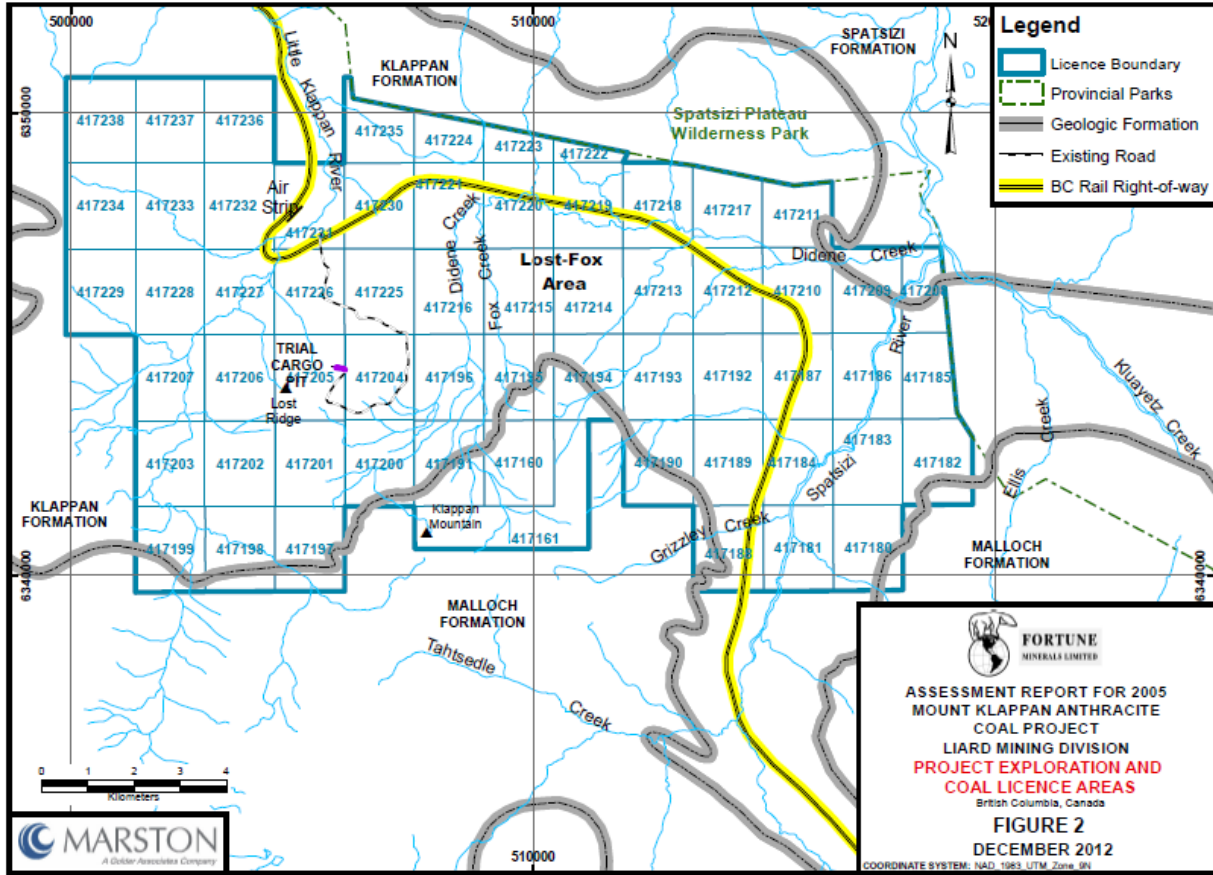


Figure 2 - Project Exploration and Coal License Areas