BC Geological Survey
Coal Assessment Report
960

COAL ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Assessment Report - HUGUENOT Coal Project - 2011 Exploration Program

TOTAL COST: $4,648,900

AUTHOR(S): John H. Perry, P.Geo.

SIGNATURE(S):

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): CX-9-036 / July-22-2011

YEAR OF WORK: 2011-2012

PROPERTY NAME: HUGUENOT

COAL LICENSE(S) AND/OR LEASES ON WHICH PHYSICAL WORK WAS DONE: 416919, 416920, 417014, 417621

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: Unknown

MINING DIVISION: LIARD

NTS / BCGS: 93-I/08 and 93-I/09

LATITUDE: 54° 30’ 26" N

LONGITUDE: 120° 16’ 16" W

UTM Zone: NAD83/Zone10 EASTING: 676,675 NORTHING: 6,043,354

OWNER(S): COLONIAL COAL INTERNATIONAL CORP.

MAILING ADDRESS: 200-595 Howe St., Vancouver, BC, V6C 2T5

OPERATOR(S) [who paid for the work]: COLONIAL COAL CORP. (a subsidiary of Colonial Coal International Corp.)

MAILING ADDRESS: 200-595 Howe St., Vancouver, BC, V6C 2T5

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**): Coal, coaly zone, claystone, carbonaceous, shale, siltstone, sandstone, conglomerate, Cretaceous, Bullhead Group, Fort St John Group, Gates Formation, Gething Formation, Hulcross Formation, Moosebar Formation, Holtslander South Thrust, Holtslander Synclinorium, Holtslander North Thrust.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: Assessment Report Nos.: 460, 463, 465, 466, plus as yet un-numbered assessment reports filed by Colonial Coal Corp. for 2008-2011.

SUMMARY OF TYPES OF WORK IN THIS REPORT		EXTENT OF WORK	ON WHICH TENURES
GEOLOGICAL (scale, area)			
	Ground, mapping	1: 2,500	416919, 416920, 417621, 417014
	Photo interpretation		
GEOPHYSICAL (line-kilometres)			
	Ground (Specify types)		
	Airborne		
	(Specify types)		
	Borehole		
	Gamma, Density,	6,525.36 m	416919, 416920, 417621, 417014
	Resistivity	6,525.36 m	416919, 416920, 417621, 417014
	Caliper	6,525.36 m	416919, 416920, 417621, 417014
	Deviation	5,672.96 m	416919, 416920, 417621, 417014
	Dip Meter		
	Others: Neutron	5,594.30 m	416919, 416920, 417621, 417014
	Core	3,399 m - HQ core 118.4 m / 31.3 m - 6" rotary / core 166.3 m / 16.0- PQ rotary / core	416919, 416920, 417621, 417014
	Non-core	3,006 m	416919, 416920
SAMPLING AND ANALYSES		578 – sent to lab	
Total Number of Samples	Proximate	608	416919, 416920, 417014
	Ultimate	63	416919, 416920, 417014
	Petrographic	78	416919, 416920, 417014
	Vitrinite reflectance	78	416919, 416920, 417014
	Coking	5	416919
	Wash tests	100 - Total 6 - Full Wash (6" core) 2 - Full Wash (6" core) - Coaly Zones 62 - Seam Wash (HQ core) 15 - Seam Wash (HQ core) - Coaly Zones 15 - Alternative mining section from seam 1	
PROSPECTING (scale/area)			
PREPARATORY/PHYSICAL			
Trails (ha)		Constructed: 1.265 ha Modified: 0.744 ha	416919, 417621, 417014
Drill Pads/Helicopter Pads (ha)		Constructed: 0.33 ha Modified: 0.03 ha	416919, 416920, 417621, 417014

Parts of Section 6, Figure 7.1, and Appendix IV remain confidential under the terms of the Coal Act Regulation, and have been removed from the public version.

http://www.bclaws.ca/civix/document/id/complete/statreg/251_2004

COLONIAL COAL CORP.

ASSESSMENT REPORT

HUGUENOT COAL PROJECT
2011 EXPLORATION PROGRAM

(covering the period June 2011 to June 2012)

British Columbia
Coal Licenses
416919, 416920, 417014, 417156,
and 417614 to 417622

Owner: Colonial Coal International Corp.

Operator: Colonial Coal Corp.

Author: John H. Perry, P.Geo.

Effective Date: September, 2012

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LIST OF ABBREVIATIONS

BCM ..... Bank cubic metre

bcm/t..... Bank cubic metre per tonne

CSR..... Coke strength after reaction

ddpm ..... Dial divisions per minute

FSI..... Free swelling index

HGI ..... Hardgrove Grindability Index

kg..... Kilogram

m ..... Metre

PCI ..... Pulverized coal injection

psi..... Pounds per square inch

Ro..... Reflectance, mean maximum, (%) of vitrinite in oil

S.G. ..... Specific gravity

t ..... tonne

SECTION 1 INTRODUCTION AND PROPERTY DESCRIPTION

1.1 INTRODUCTION

This report documents the coal exploration activities carried out by Colonial Coal Corp. (Colonial) on its Huguenot Coal project in northeastern British Columbia, within the Peace River Regional District, from June, 2011 to June, 2012. Field activities commenced in mid-June 2011 and were completed by mid-November 2011. Associated coal quality analyses, attrition, sizing, washability, and carbonization testing, together with database compilation, geological modelling and resource estimation extended well into 2012. This work culminated in the preparation and issuance of a N.I. 43-101 compliant report in late August (Norwest Corporation, 2012). This report has been used either in whole or in part, or as otherwise modified, for the purpose of preparing this assessment report. The original N.I. 43-101 compliant report ("Technical Report - Huguenot Coal Project (August 2012)") forms Appendix I of this report and may be independently accessed on-line using the following link:

http://www.sedar.com/GetFile.do?lang=EN&docClass=24&issuerNo=00029072&fileName=/csfsprod/data134/filings/01957682/00000001/f%3A%5Cdata2%5CSEDAR%5C57795_Colonial%5C43-101%5CAug2012%5CHuguenot_8-31-12.pdf

The Huguenot property lies in the Rocky Mountains foothills of Northeastern British Columbia, within an area that has been shown to contain thick coal seams with the potential to yield medium volatile hard coking coal. During the months of July through November, 2011 Colonial conducted a program of geological mapping, drilling and sampling, together with associated trail building and surveying.

A total of 6,737 m of drilling, including 16 rotary holes, 13 diamond HQ core holes and 4 large diameter (6") core holes, were completed as part of the 2011 exploration program. Approximately 3.35 km of exploration trails were constructed. Surface disturbance from trails, helicopter pads and drill pads totalled 2.37 ha. Laboratory work included coal quality analyses, attrition, sizing, washability, carbonization and petrography testing carried out on samples obtained during the field program. This, together with data base compilation, geological modelling, resource estimation, wash plant engineering studies, and report preparation extended into 2012. Any work reported herein that occurred up to June 2012 is considered to have formed part of the 2011 exploration "campaign".

1.2 LOCATION

The Huguenot Coal property is located in northeastern British Columbia, within the Peace River Regional District, approximately 690 km north-northeast of Vancouver and 115 km southwest of the city of Grande Prairie (Alberta). It is situated close to the Alberta border, between Latitudes 54° 28' N and 54° 35' N, and Longitudes 120° 10' 30" W and 120° 22' 30" W. The project encompasses one contiguous group of coal licences and license applications that lie within the Liard Mining Division and are located on NTS Map Sheets 93-I/08 and 93-I/09.

The property is approximately 12 km in length and covers northwest-southeast trending coal measures situated between current mining operations near Grande Cache, Alberta (Grande Cache Coal Corporation) and Tumbler Ridge (Trend South Coal Mine), which are located approximately 85 km to the east-southeast and 70 km to the northwest, respectively. The town of Tumbler Ridge, which was built in the early 1980s to service the Quintette and Bullmoose coal mines, lies approximately 85 km northwest of the property. The general location of the property is shown in Figure 1-1. The location of the property with

respect to regional and local population centres, roads, rail lines, coal mines and other major coal deposits is shown in Figure 1-2.

1.3 ACCESSIBILITY

The Huguenot property is remote relative to population centers, but is reasonably easy to access by a network of provincial paved highways and un-paved, all-weather roads built for forestry purposes and oil and gas exploration and development. The main access to the property from Tumbler Ridge is via Highway 52, a paved secondary road (along a section called the Heritage Highway), to an area just west of Stony Lake. Here the route swings south, first along the un-paved, all-weather, Wapiti Forest Service road (FSR) and then the Red Deer FSR, which eventually connects to a westerly-trending gravel road that traverses Huguenot's northern coal licences, along the northwest side of Holtslander Creek. This road, originally built to access an old oil/gas exploration well-site located west of the southern part of the property, is in good drivable condition to approximately 2 km west of where it enters the property. The remainder has been reclaimed, although it could be re-instated relatively easily.

All these roads are maintained year-round in good, drivable condition in support of extensive gas-field development and operational traffic, and seasonal forestry operations throughout the general area. In good weather conditions, it takes about 2 hours to drive from the property to Tumbler Ridge and between 3 and 4 hours to travel to Dawson Creek, Fort St. John, or Grande Prairie.

1.4 CLIMATE

The climate is typical of northeastern British Columbia; that is, short, warm summers and long, cold winters interspersed with periods of very cold temperatures, in the range of –15°C to –30°C. The cold spells usually happen between January and March, but may occur as early as mid-November. Frost can occur throughout the year and the frost-free period averages less than 60 days per year. Precipitation ranges between 800 mm and 1100 mm annually; it occurs mainly as snow from October through March, with snowfalls of up to 36 mm in 24 hours. The snow pack persists from October to June. The prevailing wind direction is from the southwest and extended periods of high winds in excess of 20 km/h are common on ridge tops and exposed plateaus from October onwards. Throughout this foothills belt, coal exploration programs are typically conducted between June and October, although winter programs can be carried out where there is road access.

1.5 LOCAL RESOURCES AND INFRASTRUCTURE

The property is situated about 170 km east-northeast of city of Prince George and 115 km southwest of the city of Grande Prairie (Alberta); the smaller cities of Fort St John and Dawson Creek are located approximately 160 km to the north and 105 km to the north-northeast, respectively. Each of these cities is serviced by regularly scheduled flights from major western Canadian cities such as Vancouver, Edmonton and Calgary. The location of the property with respect to main population centres is shown in Figure 1-1.

A rail line, which terminates at the Quintette wash plant and coal load-out facility (approximately 14 km south of Tumbler Ridge), is located approximately 752 km northwest of the property. The currently operating Trend South and Perry Creek open pit coal mines are located approximately 25 km south and 15 km west-southwest of Tumbler Ridge, respectively. The rail load-out facility for the Trend South mine is located 4 km north-northeast of the Quintette load-out. The Tumbler Ridge rail line joins the CN Rail main line just north of Prince George and provides direct access to the coal export facility at Ridley Island, Prince Rupert, over a total distance of approximately 1,000 km (see Figure 1-1).

An airstrip suitable for light aircraft is located adjacent to Red Deer Creek, approximately 10 km north of the property. A permanent 250-room trailer camp is situated 6 km southeast of the airstrip.

There have been no improvements made to the property.

With regard to potential future mining operations, the property covers an area sufficient to host potential tailings storage and waste disposal areas, and potential processing plant sites, subject to the acquisition of appropriate surface rights. The project is well located with respect to sources of manpower and water to support possible future mining.

1.6 PHYSIOGRAPHY

The property lies within the foothills (Inner Foothills Belt) of the Rocky Mountains, east of the Hart Ranges. The topography comprises a belt of hills and low mountains dominated by a series of NW-SE oriented ridges that reflect the trend of the geological structure of this region. These ridges are truncated by a series of mature, northeasterly flowing rivers and major creeks that comprise the primary drainage system. The property is situated approximately mid-way between two major rivers, the Narraway and Wapiti Rivers, located approximately 14 km to the south and north, respectively.

Two creeks cut through the project area; namely, Holtslander Creek and (the informally named) Pika Creek (see Figure 1-3). The former transects the northern coal licenses while the latter drains the central portions of the property. Both empty into Belcourt Creek which is the main drainage in the area.

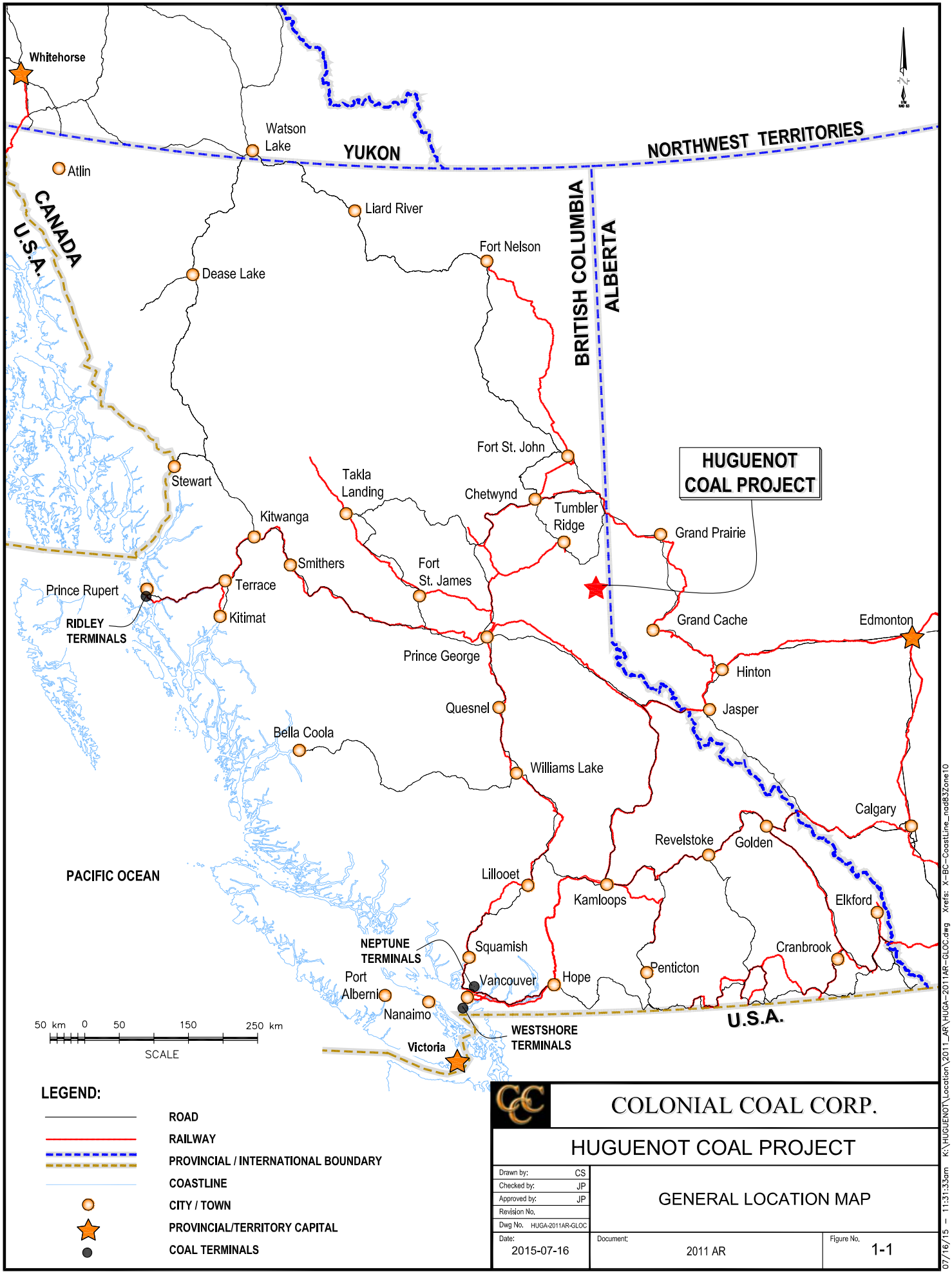
The upper reaches of Belcourt Creek trend E-W and approximate the southern boundary of the property. To the east, the creek flows northwards, to join the Wapiti River northeast of the property. Several minor creeks drain the southern parts of the property and empty directly into Belcourt Creek.

A structurally-controlled, secondary drainage system is also present. Creeks of this type are typically contained within steep-sided valleys that parallel the ridges and enter the rivers and main creeks at right angles. All but the major rivers appear to be affected at some point along their length by the secondary drainage trend.

The topography of the project area is typical of that of the Rocky Mountain Inner Foothills. The topography rises from rolling hills in the east to a series of moderate- to steep-sided massifs that break to stretches of gently-sloping plateau, culminating in steep-sided ridges, in the central and western areas. The highest ridges within the licence block vary in elevation between 1,700 m to 2,000 m while the lowest elevations range between 1,200 m and 1,300 m. The vertical relief over most of the property is in the order of 400 m. Broad alpine saddles often connect the ridges and these features, combined with the primary drainage orientation, occasionally impart a NE-SW-trending grain to the topography.

Vegetation in the area is predominantly boreal to sub-alpine coniferous forest. Tree line in this region varies between 1,750 m and 1,800 m; above these elevations the alpine vegetation consists of stunted and/or dwarf varieties of spruce and fir, juniper, moss, heather and other alpine tundra flora, and occasional sub-alpine meadows. The area is heavily forested at elevations below about 1,500 m. The forest consists mostly of sub-alpine Engelmann and white spruce, sub-alpine fir, and lodgepole pine. Douglas fir, balsam poplar, aspen, willow, and alder are also found. Bogs and black spruce stands cover some lower areas. The timber on most of the property appears to be of little if any economic interest, although merchantable stands of timber are present in areas of lower elevation. Recent logging, evidenced by large cut-blocks, has taken place in the northern parts of the property, either side of Holtslander Creek.

Exposed rock is common above tree line and usually composed of sandstone and conglomerate. Such resistive units can often be traced for several kilometres. Coal seams can be mapped by tracing coal “bloom” that may be present at surface and by mapping resistant seam roof and/or floor lithologies. Rock exposures decrease significantly on the treed slopes where they are often limited to the bottoms and steep sides of creeks. Various surface materials and soils are present. Colluvium is the dominant material at higher elevation with poorly developed regosolic soils in alpine areas. Brunisolic soils are dominant below tree line with podzols developed in areas of better moisture supply. Benches of moraine deposits with assorted luvisolic soils are sometimes present at lower elevations, and major valleys may contain areas of finer-textured lacustrine and scattered organic deposits (mostly as bogs), glacio-fluvial fans and terraces.



COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

GENERAL LOCATION MAP

Drawn by:	CS
Checked by:	JP
Approved by:	JP
Revision No.	
Dwg No.	HUGA-2011AR-GLOC
Date:	2015-07-16
Document:	2011 AR
Figure No.	1-1

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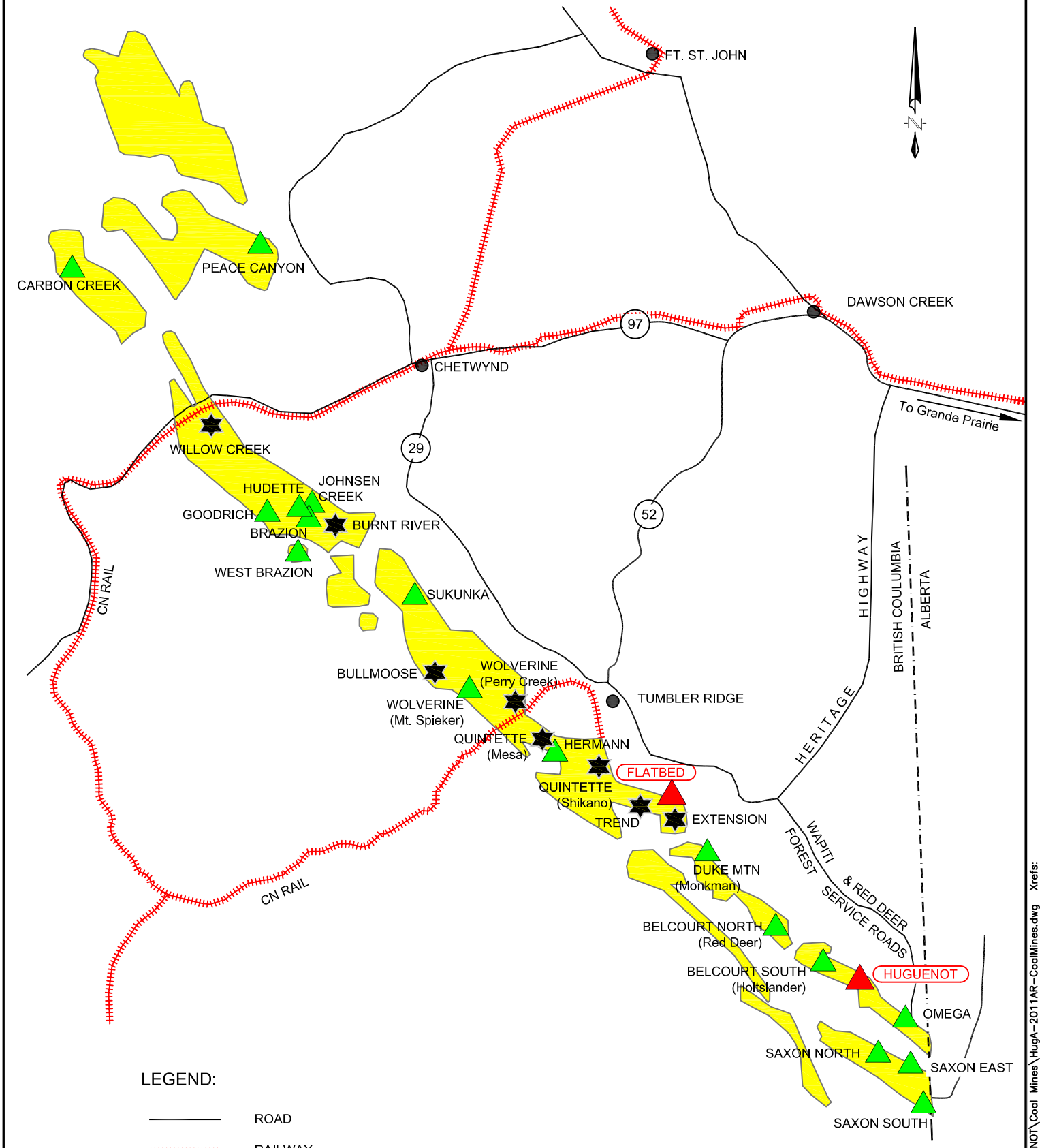

LEGEND:

- ROAD
- RAILWAY
- TOWN
- EXISTING COAL MINES
- MAJOR COAL DEPOSITS
- HUGUENOT AND FLATBED COAL PROJECTS
- PEACE RIVER COAL FIELD

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

REGIONAL LOCATION MAP
(WITH COAL MINES AND
MAJOR COAL PROJECTS)

Drawn by:	CVS
Checked by:	JHP
Approved by:	JHP
Revision No.	
Dwg No.	HugA-2011AR-CoalMines
Date:	2015-06-23
Document:	2011 AR
Figure No.	1-2

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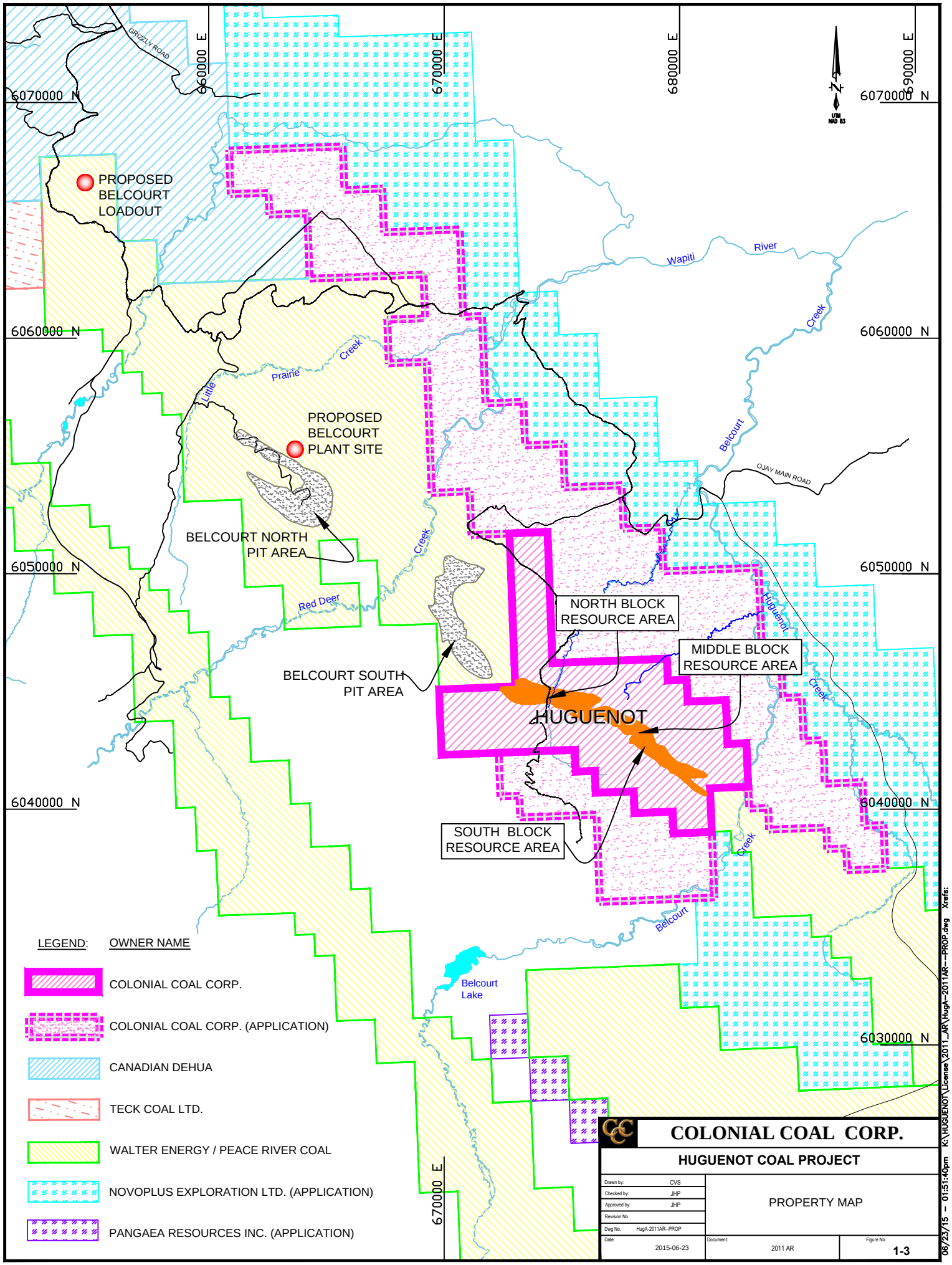
GRIZZLY ROAD
6070000 N
6060000 N
6050000 N
6040000 N
6030000 N
660000 E
670000 E
680000 E
690000 E
UTM NAD 83
PROPOSED BELCOURT LOADOUT
PROPOSED BELCOURT PLANT SITE
BELCOURT NORTH PIT AREA
BELCOURT SOUTH PIT AREA
NORTH BLOCK RESOURCE AREA
MIDDLE BLOCK RESOURCE AREA
SOUTH BLOCK RESOURCE AREA
HUGUENOT
Wapiti River
Little Prairie Creek
Red Deer Creek
Belcourt Creek
Huguenot Creek
OJAY MAIN ROAD
Belcourt Lake
LEGEND: OWNER NAME
COLONIAL COAL CORP.
COLONIAL COAL CORP. (APPLICATION)
CANADIAN DEHUA
TECK COAL LTD.
WALTER ENERGY / PEACE RIVER COAL
NOVOPLUS EXPLORATION LTD. (APPLICATION)
PANGAEA RESOURCES INC. (APPLICATION)
COLONIAL COAL CORP.
HUGUENOT COAL PROJECT
PROPERTY MAP
Drawn by: CVS
Checked by: JHP
Approved by: JHP
Revision No.
Dwg No. HugA-2011AR--PROP
Date: 2015-06-23
Document: 2011 AR
Figure No. 1-3
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SECTION 2 COAL TENURE AND OWNERSHIP

2.1 COAL TENURE

The Huguenot Coal Project consists of one contiguous block of 13 coal licenses covering 6,467 hectares (ha) plus 10 coal license applications over approximately 17,550 ha, for a total area of some 24,017 ha. The recorded owner of both the issued tenures and the applied for ground is British Columbia numbered company, 0735513 B.C. Ltd. which is a wholly owned subsidiary of Colonial.

The property lies within the Liard Mining Division and is covered by British Columbia Coal Maps 93-I-08 and 93-I-09. Coal license data and descriptions are summarized in Table 2-1 and the locations of the licenses and areas under application are shown in Figure 2-1 Information pertaining to coal license tenure is posted on the British Columbia Ministry of Energy and Mines web site (current for September 12, 2012). The posted records of the British Columbia Ministry of Energy and Mines indicate that the issued licenses are in good standing.

No legal surveys have been undertaken either as a requirement for, or subsequent to acquisition of the coal licenses. Within British Columbia, coal lands are acquired simply by application (paper "staking"); claim posts are not required. Colonial does not own surface rights over any of the property; there is no requirement to own surface rights in order to conduct mineral exploration within the Province. No search of land title, survey records or surface rights has been undertaken for this report. However, it may reasonably be expected that the Crown retains surface rights.

Table 2-1: Coal License Information – Huguenot Coal Project

Coal License No.	Current Owner	Area (ha)	NTS Map Series	Expiry Date
416919	0735513 B.C. Ltd.	1,202	093I049	2013,06,22
416920	0735513 B.C. Ltd.	1,203	093I049	2013,06,22
417014	0735513 B.C. Ltd.	1,352	093I049	2013,07,21
417156	0735513 B.C. Ltd.	901	093I059	2012,12,21
417614	0735513 B.C. Ltd.	151	093I049	2013,08,17
417615	0735513 B.C. Ltd.	301	093I049	2013,08,17
417616	0735513 B.C. Ltd.	76	093I049	2013,08,17
417617	0735513 B.C. Ltd.	151	093I049	2013,08,17
417618	0735513 B.C. Ltd.	301	093I049	2013,08,17
417619	0735513 B.C. Ltd.	76	093I059	2013,08,17
417620	0735513 B.C. Ltd.	301	093I059	2013,08,17
417621	0735513 B.C. Ltd.	301	093I059	2013,08,17
417622	0735513 B.C. Ltd.	151	093I059	2013,08,21
Total Licensed Area		**6,467**		

Coal License No.	Current Owner	Area (ha)	NTS Map Series	Expiry Date
Application 417674	0735513 B.C. Ltd.	975	093I049	n.a.
Application 417678	0735513 B.C. Ltd.	150	093I049	n.a.
Application 417779	0735513 B.C. Ltd	1,800	093I050	n.a.
Application 417780	0735513 B.C. Ltd	2,700	093I059	n.a.
Application 417781	0735513 B.C. Ltd	1,200	093I068	n.a.
Application 417782	0735513 B.C. Ltd	1,650	093I049	n.a.
Application 417783	0735513 B.C. Ltd	2,100	093I050	n.a.
Application 417784	0735513 B.C. Ltd	4,725	093I059	n.a.
Application 417785	0735513 B.C. Ltd	600	093I068	n.a.
Application 417786	0735513 B.C. Ltd	1,650	093I068	n.a.
Total Applied For Areas		**17,550**		

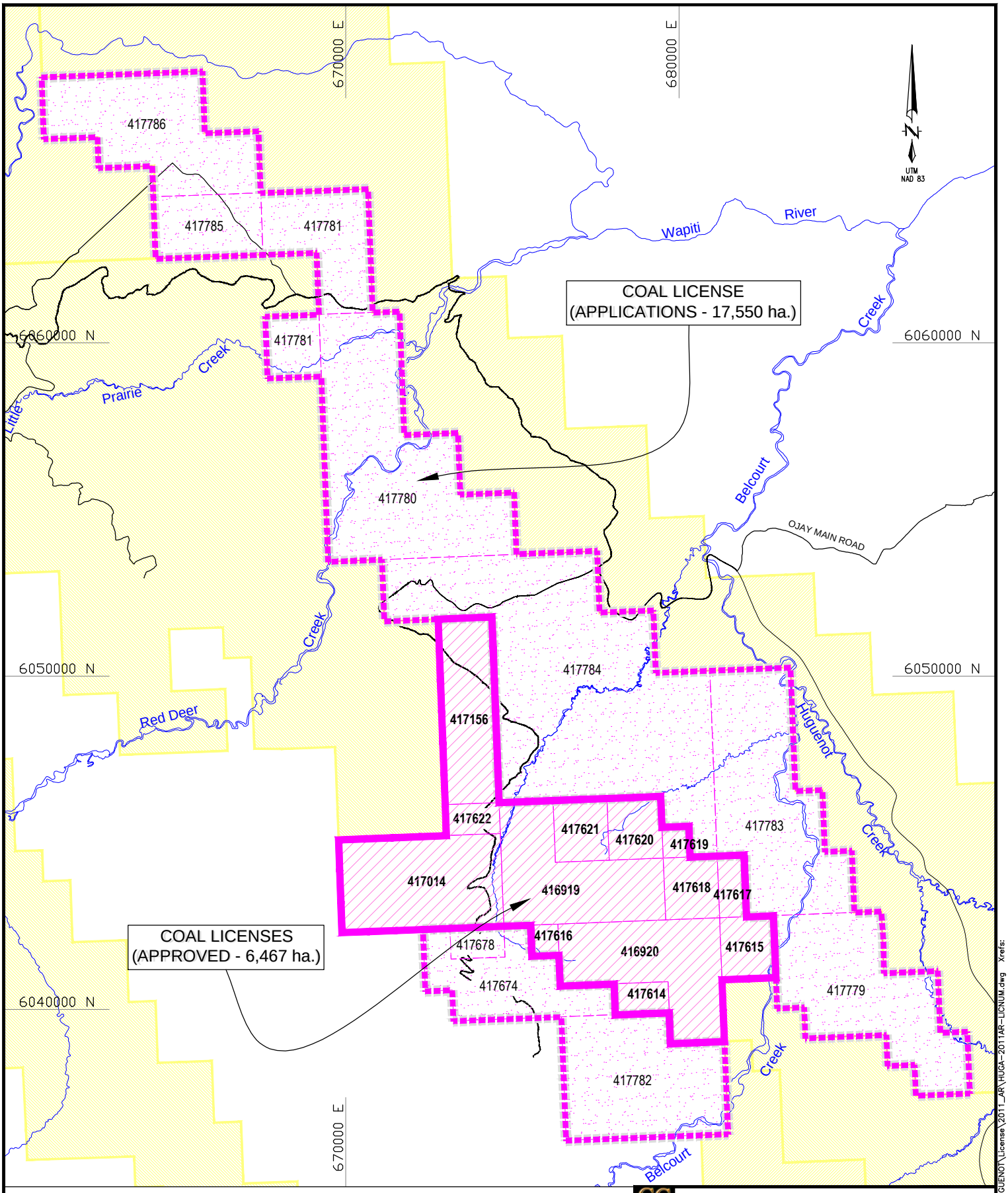
2.2 OWNERSHIP

The property is held beneficially for Colonial by a British Columbia company, 0735513 B.C. Ltd. This company is a wholly-owned subsidiary of Colonial.

The core group of coal licenses (numbers 416919, 416920, and 417014) were originally granted to a Mr. I. Downie in mid-2005, while coal license 417156 was acquired that same year by Western Coal Corporation (Western). Western subsequently transferred this coal license to Belcourt Saxon Coal Limited (BSCL) a joint venture company owned by Western and NEMI Northern Energy and Mining Inc (NEMI). As a result of a swap of other coal licenses between Mr. Downie and BSCL, ownership of C.L. 417156 was transferred to Mr. Downie in exchange for C.L. 417015.

Mr. Downie subsequently transferred ownership of all four coal licenses to 0735513 B.C. Ltd. who, since inception, has held the licenses as trustee for and on behalf of Colonial. The property interests are subject to a retained production royalty of 1.5%.

The ten coal license applications are in the name of 0735513 B.C. Ltd.



LEGEND:

COLONIAL COAL CORP.

- *APPROVED LICENSE*
- *LICENSE APPLICATION*

OTHER OWNERS

1000m 0 1000 2000 3000 4000 5000m

SCALE: 1:150,000

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

Drawn by: CVS	COAL LICENSES (APPROVED AND UNDER APPLICATION)
Checked by: JHP	
Approved by: JHP	
Revision No.	
Dwg No. HUGA-2011AR-LICNUM	
Date: 2015-06-23	Document: 2011 AR
	Figure No. **2-1**

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SECTION 3 SUMMARY OF EXPLORATION ACTIVITIES

3.1 DENISON MINES LTD 1971 – 1979

The area now covered by the current Huguenot Coal Property was once part of the Belcourt Coal Property that was originally acquired and held by Denison Mines Ltd (Denison) in 1970. At that time, the property consisted of 55 contiguous coal licences, totalling approximately 14,209 ha. In April 1978, Denison entered into an agreement with Gulf Canada Resources, Inc. to form the Belcourt Coal Joint Venture (BCJV); Denison, through its subsidiary Denison Coal Ltd, was manager of the project. By mid-1978, the property was expanded to 144 coal licences that covered an area of 36,442 ha. At that time most of the current Huguenot property was referred to as the Holtslander South Block; Denison's old Huguenot Block referred to an area immediately south of Belcourt Creek.

Work undertaken by Denison on the area now covered by the current Huguenot property from 1971 to 1979 can be outlined as follows:

1971 –	Limited geological reconnaissance to confirm the presence of coal seams within the Lower Cretaceous Gates and Gething Formations.
1975 –	Aerial photography and ground control survey followed by detailed geological mapping.
1976 –	Further geological mapping followed by the completion of two core holes to ascertain seam thickness and coal quality data; one of those holes (BD7601) is located within the current Huguenot licences.
1977 –	Limited geological mapping and trenching.
1978 –	Subsequent to the forming of the BCJV (between Denison and Gulf Canada), an extensive exploration program was undertaken to gather information on geological structures, coal resources and coal quality, consisting of: detailed geological mapping; hand trenching; drilling and geophysical logging of 5 core holes (HQ); core coal sampling and sample testing; aerial photography was carried out and topographic maps were prepared at various scales for general and detailed coverage.
1979 –	Continuation of the work started in the previous year (detailed geological mapping; hand trenching; drilling and geophysical logging of 2 core holes (HQ); core coal sampling and sample testing).

No further field work was conducted by Denison on the old Belcourt property after 1980. Western Canadian Coal Corp carried out a small rotary drilling program during the winter of 1998, on the northern part of Denison's proposed Holtslander North open pit area (later renamed the Belcourt South pit area). In 2005, Belcourt-Saxon Coal Ltd. undertook major drilling programs on the Belcourt North and Belcourt South coal deposits and at Saxon East, Saxon South and Omega.

The historical exploration activities conducted over the area that is now the Huguenot property are summarized in Table 3-1. This table does not include drillholes and trenches that lie outside but proximal to the property that are of importance in defining the geology. The locations of historical drillholes and trenches that lie both within, and in the immediate vicinity of, the current Huguenot property are shown in Figure 3-1. The results of this work are incorporated into ensuing sections of this report. No work was conducted on or immediately adjacent to the current license block after the 1979 field program.

Table 3-1: Summary of Exploration Activities – Huguenot Property, 1971 to 1979

Year	Drillholes	Depth (m)	Geophysical Logs	Hand Trenches	Geological Mapping	Other	Assess Report
1971	-	-	-	-	Recon.	AP/Topo	457
1975	-	-	-	-	1: 2,500	AP/Topo	458
1976	1(D/HQ)	59	-	-	-	Topo	460
1977	-	-	-	25	-	mss	461
1978	5(D/HQ)	1,388	d,g,n,c,fr,dev	84	1: 2,500	Topo	462/463
1979	2(D/HQ)	1,004	d,g,n,c,fr,dev	29	1: 2,500	-	465
Total	**8**	**2,452**		**138**			

Note: (D/HQ) = diamond drillhole/core size; mss = measured stratigraphic section; AP/Topo = air photography and topographic mapping; d,g,n,c,fr,dev = density, gamma, neutron, caliper, focussed beam resistivity, and deviation survey logs.

The first hole drilled on the property was by Denison in 1976, as a follow-up to earlier geological mapping and trenching programs in order to confirm initial coal seam thickness estimates and coal quality. Widely-spaced, helicopter-supported drilling was carried out by Denison and BCJV during 1978 and 1979 to provide information for structural geological interpretation, resource estimation and coal quality characterization.

Typically, drillholes were logged using slim-line borehole geophysical tools. In most instances, a suite consisting of density, gamma ray, neutron, caliper, focussed electric (resistivity) and hole deviation logs were obtained. These logs were produced at a general scale of 1: 200 with detailed logs at a scale of 1: 20 over thick coal intervals. Three holes were not logged; these were BD7601 and BD7803 and BD7804 (the latter two did not reach the targeted coal measures).

During 2011, coal seam correlations and other data from all historical trenches excavated on the current property were reviewed in detail. Those trenches considered to provide the most reliable data were selected for resource estimation purposes, while many of the remainder were used to provide data points for resource classification purposes or for geological control. Only 8 historic drillholes (BD7601, BD7803, BD7804, BD7805, BD7811, BD7814, BD7906 and BD7914) are located within the area of the 2008 and 2011 programs. Geological data for these drillholes were re-evaluated in conjunction with 2008 and 2011 data and re-interpreted as required.

The information gathered during these programs is contained in historical Assessment Reports 457, 458, 460 – 463, 465, and in the Assessment Report submitted by Colonial for 2008.

3.2 COLONIAL COAL CORP. 2008

Colonial first carried out exploration on Huguenot in 2008; fieldwork commenced in early September and was completed by the end of October.

Due to access considerations, work focused on the northern part of the property and was essentially confined to the upper thrust slice (or North Block). The proposed Belcourt South surface mine (of BSCL) is situated immediately north of the Huguenot property; the southern pit limit comes to within 200 m of the property boundary. The geology of Huguenot's North Block is an extension of that defined within the Belcourt South deposit. The purpose of the 2008 work was to confirm and refine the geological interpretation, coal quality and resources previously outlined by Denison and BCJV between 1970 and 1980 and to demonstrate geological, coal seam and coal quality continuity between the North Block and the Belcourt South coal deposit.

Exploration was carried out throughout the North Block although drilling, mechanized trenching, and associated trail construction was restricted to the northwestern half of the block (i.e., the area northwest of Holtslander Creek). South of the creek, only geological mapping and hand trenching were carried out; some of these activities also extended onto adjacent portions of the Middle Block. Exploration personnel were housed at a local, permanent camp. The completed program consisted of 17 air rotary holes and ten 6-inch core holes (for a total of approximately 2,045 m), 19 mechanical trenches, and 36 hand trenches. The main exploration activities carried out during the 2008 program are summarized in Table 3-2.

Table 3-2: Summary of 2008 Exploration Activities

Drillholes		Metres Drilled	LD Type Rotary/Core (m)	Geophysical Logs	Trenches	Geological Mapping	Drill Trail (km) (constructed / modified)
Type	Number						
Rotary	17	1,623	-	d,g,n,c,fr,dev,(+/- dm)	M: 19	1: 5,000 &	4.69 / 0.81
LD	10	422	334 / 88	d,g,n,c,fr,dev	H: 36	1: 2,500	-
Total	**27**	**2,045**	**-**	**-**	**55**	**-**	**5.50**

Note: LD = large diameter (Rotary + 6" core); d,g,n,c,fr,dev,dm = density, gamma, neutron, caliper, focussed beam resistivity, deviation, and dip meter logs. M = mechanically excavated trench; H = hand excavated trench. Rec = reconnaissance.

The results of the 2008 Exploration activities are presented in detail in the "The Huguenot Coal Project – 2008 Exploration Program Assessment Report" (Perry, 2010).

3.3 COLONIAL COAL CORP. 2010

In 2010, limited fieldwork was undertaken between August and November. Work focused on the North Block and included the re-surveying of existing drillholes followed by a program of access trail construction and modification of an existing trail.

The short surveying program was carried out over a two-week period in August. Work focussed on re-surveying as many of the 2008 drillholes as possible in addition to surveying prospective drill sites and identifying possible access routes for the planned 2011 drill program. The 2008 drillholes had originally been surveyed using handheld GPS instruments while the 2010 surveying utilized a more accurate, geodetic, survey system. A total of 18 drillholes from 2008 were re-surveyed.

During November, a program of access trail construction and re-activation of existing trails was carried out. Approximately 1,500 m of newly excavated access trail was constructed and approximately 2,700 m of previously excavated access trail was modified. The purpose of this work was to facilitate future

exploration activities within the southeastern portion of the North Block and to provide a main access route into the Middle and South Blocks.

The data acquired during the 2010 exploration program did not warrant re-interpretation of the geology or re-assessment of the coal resources and coal quality of the Huguenot Project.

Activities carried out in 2010 are described in Colonial's Assessment Report entitled "The Huguenot Coal Project – 2010 Exploration Program Assessment Report" (Perry, 2011) which is on file with the British Columbia Ministry of Energy & Mines.

3.4 COLONIAL COAL CORP. 2011

Fieldwork commenced in early July and was completed by the end of October. Exploration personnel were housed at a local, permanent camp.

Work focused mostly on the Middle and South Blocks and was designed to confirm and refine previous geological interpretations and to demonstrate geological, coal seam and coal quality continuity within these blocks sufficient for estimation of N.I. 43-101 compliant resouces.

In addition to core and rotary drilling, exploration activities included geological mapping, surveying and trail construction. Several old trenches from the (1970s) were located and re-opened as part of the geological mapping work. Minor additional drilling was also conducted within the North Block.

The main exploration activities carried out during the 2011 program are summarized in Table 3-3.

Table 3-3: Summary of 2011 Exploration Activities

Drillholes		Metres Drilled	LD Type Rotary/Core (m)	Geophysical Logs	Trenches	Geological Mapping	Drill Trail (km) (constructed / modified)
Type	Number						
Rotary	16	3,006	-	d,g,n,c,fr,dev	7	Rec. &	2.11 / 1.24
HQ Core	13	3,399	-	d,g,n,c,fr,dev	-	1: 2,500	-
LD	4	332	285 / 47	d,g,n,c,fr,dev	-	-	-
Total	**33**	**6,737**	**-**	**-**	**7**	**-**	**3.35**

Note: LD = large diameter (Rotary + 6" core or Rotary + PQ core); d,g,n,c,fr,dev = density, gamma, neutron, caliper, focussed beam resistivity, and deviation logs. H = hand excavated trench. Rec = reconnaissance.

3.4.1 Geological Mapping

Geological mapping was carried out to corroborate and expand upon field data acquired both by Colonial during 2008, and the extensive historical geological mapping carried out by Denison in the 1970's. Field maps covering the area of interest were prepared at a scale of 1: 2,500, with 20 metre contour intervals. These maps were enlarged from 1: 20,000 B.C. TRIM maps. Handheld GPS units were used to determine the position of specific coal and rock exposures. These data were plotted on the 1: 2,500 maps and were subsequently transferred to 1: 5,000 base maps.

3.4.2 Trenching

During the 2011 field season, several historic trenches (from the 1970s) were located and re-opened to confirm historic coal seam interpretations. They were geologically mapped, re-logged

and re-surveyed (using handheld GPS units) by Colonial geologists. Table 3-4 below summarizes the re-logged and re-located trenches.

No new trenches were dug during the 2011 work program.

Table 3-4: Summary of 2011 Trenching Activities: Located and Reopened Old Trenches

Trench	Block	Seam	Bearing (°)	Plunge (°)	Location		Elevation [m]
					Northing	Easting	
HS-77-09	Middle	3B/3A	211°	6°	6,043,364.05	607,705.11	1,717.74
HS-78-101	Middle	10	219°	5°	6,042,729.00	678,879.43	1,688.36
HS-78-102	Middle	1	218°	3°	6,042,725.00	678,871.00	1,692.24
HS-78-107	South	Seam 1 & Zone 2	220°	6°	6,040,478.78	681,223.15	1,694.77
HS-78-110	South	5	224°	8°	6,040,543.00	681,372.54	1,688.02
HS-78-112	South	8	225°	3°	6,040,690.09	681,445.01	1,654.33
HS-78-117	Middle	5	219°	3°	6,042,839.03	678,288.51	1,690.41

3.4.3 Drilling

The drilling conducted in 2011 focused mostly on the Middle and South Blocks and was designed to confirm and refine the previous geological interpretations and to demonstrate geological, coal seam and coal quality continuity within these blocks. Limited drilling was also undertaken in the North Block and most of this was focussed in the southern half of the block (southeast of Holtslander Creek), in the area that was not drilled in 2008. The locations of all drillholes completed on, or in the immediate vicinity of, the Huguenot property are shown in Figure 3-1, while Table 3-3 summarizes the 2011 Huguenot drilling program.

During 2011 a total of 6,737 metres were drilled, comprising: 16 rotary holes (totalling 3,006 m); 13 HQ-size core holes (totalling 3,399 m); and, 4 large diameter (two 6" and two PQ (3.33")) rotary/core holes (totalling 285 m of rotary drilling and 47 m of core). Drilling equipment consisted of one skid-mounted rotary rig, one helicopter-supported rotary rig and one helicopter-supported diamond drill rig. The skid-mounted rig was equipped with a 10-foot wireline core barrel and had the capability to obtain either PQ or six-inch diameter core.

Table 3-5 summarizes the 2011 Huguenot drillholes while drillhole locations and other details are presented in Appendix II. The HQ core holes were spread along the strike of the Gates Formation coal measures, from the southern end of the South Block to the northern end of the North Block, to provide a comprehensive understanding of coal seam and structural geology and of coal quality. Most of the boreholes were strategically positioned and oriented to provide appropriately spaced data for coal seam correlation and structural interpretation, and to ensure that subsequent resource estimates would be compliant with N.I. 43-101 guidelines. All but two of the drillholes (HD11-10 and HD11-10A) targeted coal seams within the Gates Formation. Drillholes HD11-10 (terminated in unconsolidated overburden) and HD11-10A were positioned to core Shaftesbury Formation strata in order to acquire samples for ARD testing.

Due to limited access, large diameter coring was restricted to the northern part of the Middle Block. Drillholes were generally positioned to intersect the top of each of the main coal seams at vertical depths at least 24 m from surface, where coal can normally be expected to be un-oxidized. Due to deeper than anticipated unconsolidated overburden, it was decided to limit the number of drill

locations and, wherever possible, to target two coal seams with one drillhole. Additionally, due to difficulties presented by the amount of unconsolidated overburden and down-hole drilling conditions, in two instances (holes HLD11-03 and HLD11-04) coring had to be done with a smaller, PQ-size (3.33”), bit.

All core was logged and sampled on site, then sent for detailed coal analysis, washability testing, and carbonization testing (using a sole-heated oven).

Table 3-5: Huguenot 2011 Drillhole Summary

Drillhole		Metres Drilled	Seam(s) Intersected	Block	Notes
ID	Type				
HR11-01	Rotary	253.50	6L, 5, 4_{U+L}, Zone 3, 2, 1, Fault	North + Middle	
HR11-02	Rotary	171.90	6L, 5, 4_{U+L}, Zone 3	Middle	
HR11-03	Rotary	177.73	6B, 6L, 5, 4_{U+L}, Zone 3, 2, 1	North	
HR11-04	Rotary	243.84	9, 8, 6D, 6B, 6L	Middle + South	
HR11-05	Rotary	306.31	5, 4, 3D, Zone 2, 1	South	
HR11-06	Rotary	265.16	8, 6B, 6L, 5, 4_{U+L}, Zone 3, Zone 2, 1	Middle	
HR11-07	Rotary	214.17	10, 9, 8, 6D, 6B, 6A, 6L, 5, Fault	Middle + South	
HR11-08	Rotary	313.94	6L, 5, 4_{U+L}, 3D, Fault	Middle + South	
HR11-09	Rotary	182.88	6L, 5, 4_{U+L}, Zone 3, Zone 2, 1	Middle	
HR11-10	Rotary	112.06	10, 9, 8	Middle	Pilot hole for Seams 8 + 9
HR11-11	Rotary	76.20	10, 9, 8	Middle	Pilot hole for Seams 8 + 9
HR11-12	Rotary	146.46	Zone 2/Fault/Zone 2r1/Fault/Zone 2r2, 1/Fault/1r	Middle + South	
HR11-13	Rotary	185.34	Zone 2/Fault/ Zone 2r1/Fault/Zone 2r2, 1	South	
HR11-14	Rotary	164.59	10, 9, 8	Middle	
HR11-15	Rotary	97.53	6B, 6L	Middle	Pilot hole for HLD11-02
HR11-16	Rotary	94.48	6L, 5	Middle	Pilot hole for HLD11-02
HLD11-01	Core (6")	70.96	9, 8	Middle	Cored Seams 8 and 9.
HLD11-02	Core (6")	78.66	6L, 5	Middle	Cored Seams 6L + 5.
HLD11-03	Core (PQ)	106.19	Zone 2, 1	Middle	Cored Zone 2; lost core Seam1
HLD11-04	Core (PQ)	76.10	1	Middle	Cored Seam 1
HD11-01	Core (HQ)	317.00	10, 9, 8, 6D, 6C, 6B, 6A, 6L, 5, 4_{U+L}, 3D	South	
HD11-02	Core (HQ)	249.38	6L/Fault/6Lr1, 5, 4_{U+L}, 3D, Zone 2, 1	South	
HD11-03	Core (HQ)	321.84	10. 9, 8, 6D, 6B, 6A, 6L, 5, Fault	Middle + South	Intersects Main Thrust Flt into the South Block
HD11-04	Core (HQ)	257.63	5, 4_{U+L}, 8, 9, 10, 8r	Middle + South	Intersects Main Thrust Flt into the South Block
HD11-05	Core (HQ)	199.86	5, 4_{U+L}, 3D, Zone 2, 1	South	
HD11-06	Core (HQ)	316.30	10, 9, 8, 6D, 6B, 6A, *6L	Middle	*Hole stopped in coal
HD11-07	Core (HQ)	197.35	6L, 5, 4, Fault, Zone 2, 1	South	
HD11-08	Core (HQ)	269.97	6D, 6B, 6A, 6L/Fault/6Lr1, Fault, 6Dr, 6Br, 6Ar, Fault, 6Lr2, 5	Middle	
HD11-09	Core (HQ)	262.77	6B, 6A, 6L, Fault, 5	Middle + South	Intersects Main Thrust Flt into the South Block
HD11-10	Core (HQ)	33.53		Middle	Abandoned
HD11-10A	Core (HQ)	96.32		Middle	Hole drilled for ARD data
HD11-11	Core (HQ)	410.76	10, 9, 8B, 8, 6D, 6C/Fault/6Cr, Fault	North + Middle	Intersects Thrust Flt into the Middle Block
HD11-12	Core (HQ)	466.48	10, 9, 8B, 8, 6D, 6C, 6A, 6L, 5, 4_{U+L}, 3D, Zone 3(C-B-A, 2A, 1	North	

3.4.4 Geophysical Logging

Downhole geophysical surveys were performed by Century Wireline Services. Of the 33 holes drilled, 30 were geophysically logged. The three holes that were not logged were HD11-10 (stopped in overburden), HD11-10A (drilled for ARD samples; no coal seams targeted or intersected) and HLD11-04 (poor hole conditions).

Typically, the following types of logs were obtained:

1. Sidewall Density
2. Gama Ray
3. Neutron
4. Caliper
5. Focussed Beam Resistivity
6. Directional (Deviation Compu-Log)

The geophysical logs were run at a general scale of 1: 100 and supplemented by detailed logs (density, gamma ray, and resistivity) generated over coal bearing intervals at a scale of 1: 50. For better definition of coal seam tops and bottoms as well as the intra-seam rock bands, a short spaced version of the detailed density log was also obtained.

The downhole geophysical surveys undertaken for each of the 2011 drillholes are presented in Table 3-6.

Table 3-6: Huguenot 2011 Downhole Geophysics Summary

Hole ID	Hole Type	Geophysical Log run					
		Density	Caliper	Gamma	Neutron	Resistivity	Deviation
HR11-01	Rotary	Y	Y	Y	Y	Y	Y
HR11-02	Rotary	Y	Y	Y	Y	Y	Y
HR11-03	Rotary	Y	Y	Y	Y	Y	Y
HR11-04	Rotary	Y	Y	Y	Y	Y	Y
HR11-05	Rotary	Y	Y	Y	Y	Y	Y
HR11-06**	Rotary	Y	Y	Y	Y	Y	Y
HR11-07	Rotary	Y	Y	Y	Y	Y	Y
HR11-08	Rotary	Y	Y	Y	Y	Y	Y
HR11-09	Rotary	Y	Y	Y	Y	Y	Y
HR11-10	Rotary	Y	Y	Y	Y	Y	Y
HR11-11	Rotary	Y	Y	Y	Y	Y	Y
HR11-12	Rotary	Y	Y	Y	Y	Y	Y
HR11-13	Rotary	Y	Y	Y	Y	Y	Y
HR11-14	Rotary	Y	Y	Y	Y	Y	Y
HR11-15	Rotary	Y	Y	Y	Y	Y	Y
HR11-16	Rotary	Y	Y	Y	Y	Y	Y
HLD11-01	Core (6")	Y	Y	Y	Y	Y	Y
HLD11-02	Core (6")	Y	Y	Y	Y	Y	Y
HLD11-03**	Core (PQ)	Y	Y	Y	Y	Y	Y
HLD11-04	Core (PQ)	N	N	N	N	N	N
HD11-01	Core (HQ)	Y	Y	Y	Y	Y	Y
HD11-02	Core (HQ)	Y	Y	Y	Y	Y	Y

HD11-03	Core (HQ)	Y	Y	Y	Y	Y	Y
HD11-04*	Core (HQ)	Y	Y	Y	N	Y	N
HD11-05	Core (HQ)	Y	Y	Y	Y	Y	Y
HD11-06**	Core (HQ)	Y	Y	Y	Y	Y	Y
HD11-07	Core (HQ)	Y	Y	Y	Y	Y	Y
HD11-08	Core (HQ)	Y	Y	Y	Y	Y	Y
HD11-09*	Core (HQ)	Y	Y	Y	N	Y	N
HD11-10	Core (HQ)	N	N	N	N	N	N
HD11-10A	Core (HQ)	N	N	N	N	N	N
HD11-11*	Core (HQ)	Y	Y	Y	N	N	N
HD11-12	Core (HQ)	Y	Y	Y	Y	Y	Y

Note: Y = yes; N = no
**Drillhole geophysically logged through drill rods.*
***Drillhole and/or geophysical log terminated in coal seam.*

Paper log prints were prepared in the field to assist in core logging and correlation. A complete set of geophysical logs is presented in Appendix III.

3.4.5 Drill Core Logging and Sampling

During 2011, most of the core samples were obtained from diamond drilling as HQ-size core; additional coal samples were also obtained from selected coal seams utilizing large diameter (6" and 3.3" (PQ) diameter) drill cores. All the HQ-size cores were taken to a central core logging facility to be photographed, geologically described (logged), and sampled while the large diameter (6" and PQ-size) cores were logged and sampled at the drill rig. For each of the cores the following procedures usually applied:

- At the drill rig, HQ-size cores were placed in numbered wooden boxes that were securely covered by lids prior to transport to the core logging facility. At this facility, the cores were washed (with water) and photographed prior to undergoing geotechnical and geological description (logging) and sampling. Large diameter coring utilized a split core tube. Once extracted from the drillhole, the tube was opened to expose the core, which was then washed, photographed and logged.

- For both HQ-size and large diameter drillholes, rock cores were described for general lithology, bed thickness and structural data. Coal seam cores were described in detail; the coal was logged according to 'brightness' (i.e., varying from "dull", having up to 20% bright coal, to "bright" having greater than 80% bright coal).

- Core recoveries were obtained by comparing the lithological logs to the detailed density geophysical logs. Coal seam recoveries for the HQ sized cores varied widely, although a number of intersections from the main coal seams of interest reported greater than 50% core recovery. Coal seam recoveries from the 6" large diameter cores ranged from 82% to 100%, whereas only one of the three coal seams intersected by the PQ core drilling (Seam 2A, HLD11-03) was successfully (100%) recovered.

- For both HQ size and large diameter drillholes, coal seam cores were sampled on an incremental (or "ply") basis, modified as necessary for core recovery. Typically, coal samples were taken to a minimum of 0.15 m, which is essentially the length of HQ-size core necessary to provide sufficient weight to complete preliminary analyses and allow

sufficient retained weight for making full seam composite samples and their subsequent analysis. Thicker coal intervals (usually taken to a maximum sample length of 1.0 m) may also have been divided into smaller increments based on variations in coal composition (i.e., % brightness or presence of thin ash or higher ash coal bands). Where of sufficient thickness, rock bands and poor (high ash) coal plies were usually taken as separate samples (typically, if greater than 0. 05 m thick).

- For each sampled interval, the entire core was removed and sent to the laboratory for analysis. Immediate roof and floor lithologies were also sampled as were any coaly zones present in the roof or floor. Typically, if no coaly zone was present, the roof and floor samples were limited to a thickness of approximately 0.10 m; where a coaly zone was present, the entire zone was sampled either as one sample or as a series of ply samples. Occasionally, coaly zones present between the coal seams of interest were also sampled.

- Typically samples were placed into plastic bags, with the large samples often double-bagged, then packed into larger plastic or burlap sacks and trucked to the selected laboratory for testing. Each bag contained a sample tag that recorded drillhole, sample, and bag number in addition to the coal seam designation. This information was also written on the outside of the sample bags. A third set of sample tags were retained by the company.

- Samples were taken from the roof and floor lithologies of each coal seam, mostly to determine the ash and sulphur contents and specific gravities of potential out-of-seam dilution that might be expected during mining. The bulk samples included all coal splits and rock bands considered to form part of a practical mining section, including some rock bands normally excluded from resource estimations in compliance with N.I. 43-101 guidelines as presented in GSC Paper 88-21 (Hughes et al, 1989).

Detail descriptive logs for all of the 2011 diamond drillholes are included in Appendix II.

3.4.6 Drill Core Analysis

Evaluation of the chemical, rheological, petrographic and coking characteristics of the coal core was undertaken at recognised, commercial coal laboratories. All core samples were sent to Birtley Coal & Mineral Testing (a division of GWIL Industries), Calgary, Alberta, for processing and testing. Samples of washed (clean), simulated product coal from each bulk sampled coal seam were also submitted to CanmetENERGY (Ottawa, Ontario) for carbonization testing using a sole-heated oven (SHO). Pearson & Associates (Victoria, B.C.) carried out coal petrography.

3.4.6.1 HQ Core Analysis Procedures

Laboratory procedures for dealing with raw, HQ-size, coal core are illustrated in Figure 3-2 and may be summarized as follows:

- All ply samples were air-dried and crushed to -3/8”; retains were re-crushed until 100% passed the 3/8” screen. One-eighth by weight was taken for preliminary tests and for subsequent head raw analysis, while the remainder was retained for float/sink (washability) tests and subsequent analyses.

- Initial analyses were then performed on both coal and rock ply samples. For coal plies, tests included: as-received moisture (%), and, on an air-dried basis, Proximate, S%, FSI and S.G. Rock samples were analyzed for as-received moisture (%), and, on an air-dried basis, Moisture%, Ash%, S% and S.G.

- For selected coal seams and coal zones, individual ply samples were proportionally combined (by weight), using the retained (7/8ths) fractions, to form a seam composite.

- Head raw analyses comprising air-dried Proximate, S%, S.G. & FSI were performed on each seam composite.

- The composites were divided into two screen size fractions; namely 3/8" X 60 M and 60 M X 0. Screen-sizing analysis was performed for each size fraction where Weight, Ash%, S and FSI were determined.

- A series of float-sink tests were conducted on the 3/8" X 60 M size fractions using the following specific gravities: 1.40, 1.50, 1.60, 1.70 and 1.80. In some instances, less SG increments were used either due to insufficient sample mass or to elevate raw ash content. The 60 M X 0 size fractions underwent a time-limited froth flotation process, using a Wemco flotation machine with a speed of 1200 rpm. Flotation tests were performed at 30-second intervals for specified time periods, using kerosene and MIBC as reagents at 8% pulp density. The pulps went through a conditioning time of one minute before skimming.

- For each set of float/sink and froth/tail tests, weights were recorded and, Proximate and FSI analyses completed.

- Clean Coal Composites (CCCs) were generated by compositing float and froth products primarily targeting ash contents of approximately 8%, but also taking into account yield values. For the 3/8" X 60 M material, floats were selected over the 1.40 to 1.70 S.G. range. For the 60 M X 0 fraction, froths were selected over a range of 30 to 120 seconds frothing time.

- For most of the CCC's the following were determined: Proximate Analysis, S%, FSI, HGI, Calorific Value, Light Transmittance (%), % Phosphorous in Coal, Ultimate Analysis, Gieseler Fluidity, Rhur Dilatation and Mineral Analysis of Ash. Split samples taken from the CCCs were sent to Pearson & Associates for Petrographic analysis. Due to sample mass or elevated ash contents, some CCC's underwent an abbreviate selection of the analyses listed above.

The results of the analyses and testing performed on the HQ core samples obtained during 2011 are presented in Appendix IV.

3.4.6.2 Large Diameter Core Analysis Procedures

Large diameter drilling carried out in 2011 provided 6" (152 mm) and 3.3" (83.6 mm) diameter cores for sampling. The holes were drilled in the northern part of the Middle Block;

one core each of Seams 9, 8, 6L, 5 (sampled as 6" cores), Zone 2 and Seam 1 (sampled as 3.3" (PQ) cores) were obtained.

The samples were acquired during October 2011 and sent to Birtley Coal & Mineral Testing, in Calgary, Alberta, where full washability tests were carried out as follows:

- Drop shatter and attrition tests were conducted between January and February, 2012.
- Bulk washing and analysis were carried out between March and early April, 2012.
- Clean coal analyses were completed and simulated clean coal composite (SCCC) samples obtained by mid-May, 2012.

Due to poor core recovery of Seam 1 (PQ core) from HLD11-04, a blended SCCC was produced by adding all the clean coal from this intersection to a portion of the clean coal obtained from HD11-12 (HQ core from the North Block). This blended SCCC was composed of 28% (HLD11-04) and 72% (HD11-12), by weight. Further, to obtain sufficient mass for a SHO test, the resultant Seam 1 SCCC was blended with the SCCC from Seam 2A (PQ core from HLD11-03, Middle Block). The resulting Seam 1 + Seam 2A SCCC consisted of 80% from (the combined) Seam 1 and 20% Seam 2A, by weight. The SCCC's were sent to CanmetENERGY for carbonization on May 22, 2012 and all the Sole-Heated Oven (SHO) tests were completed by mid-July. No indication of oxidation was reported from the coal petrography. Consequently, the results obtained from the cores are considered reliable, with the exception of those reported for Gieseler fluidity, which are considered to be abnormally low, and possibly for associated dilatation results from those same samples.

Clean coal values reported for 2011 are within or close to the ranges reported from historical drilling, and from sampling carried out in 2008.

Summaries of all analytical processes from the samples taken during the 2011 program from large diameter (6" and 3") coring are illustrated in Figure 3-3 and the results obtained are presented in Appendix IV.

The details of the analytical processes and the results available to date are further discussed in Section 6 of this report.

3.4.7 Surveying

During the 2011 exploration program all the 2011 drillholes and the historical re-dug trenches were surveyed by Colonial geological field staff using a GPS Topcon HiPer Plus RTK system. The coordinates of the 2011 drillholes are provided in Appendix II, while those for the re-dug trenches are shown in Table 3-4.

3.4.8 Trail Construction and Maintenance

In order to access those 2011 drillholes located at lower elevations, temporary drill trails totalling approximately 3.35 km were constructed. These trails were accessed from existing forestry trails modified in places by trail construction undertaken by Colonial in 2008 and 2010. These new trails were located as follows:

- within the North Block, four short trails totalling approximately 1.56 km; and,
- within the Middle Block (along Pika Creek, where the 2011 large diameter drilling program was conducted), one main trail plus two short spur trails totalling approximately 1.79 km.

The locations of the trails on the Huguenot property as of the end of 2011 are shown in Figure 3-1.

3.4.9 Reclamation

During 2011, the total area of ground disturbance associated with temporary access trails, trail and helicopter supported drill set-ups and helicopter landing sites totalled 2.369 hectares. Reclamation of the helicopter pads, trail-supported drill sites and certain portions of the access trails amounted to 1.669 hectares. Details of the areas of disturbance and reclamation are summarized in Table 3-7.

Table 3-7: Huguenot 2011 Ground Disturbance

Disturbance Type	Length (km) / Number of Sites	Disturbed Area (ha)	Reclaimed Area (ha)
Excavated Trail Construction (Constructed / Modified)	2108 / 1240	1.265 / 0.744	0.871 / 0.448
Drill Sites (Constructed / Modified)	31	0.29 / 0.03	0.29 / 0.02
Helicopter pads (Constructed)	4	0.04	0.04
Totals (Constructed / Modified):		**1.595 / 0.774**	**1.201 / 0.468**

Note: the term "modified" refers to disturbance within an already disturbed area (such as a reclaimed pre-existing trail).

3.4.10 Project Management, Personnel, and Contractors

The Huguenot Project is owned by Colonial Coal International Corp. and managed through its subsidiary company, Colonial Coal Corp. The professional and technical members of Colonial's staff as well as the contractors that contributed to the 2011 exploration program are listed in Tables 3-8 and 3-9, respectively.

Table 3-8: Huguenot 2011 Colonial Coal Corp. Personnel

Name	Position
John Perry, P.Geo.	Chief Operating Officer
Duane Lucas, P.Geo	Project Manager
Adriana Matesoi	Geologist
Ikena Theodore Oramah	Geologist
Dave Edwards	Geologist
Nikki Johnston	Junior Geologist
Fairnia Farokhi	Field Accounting
Hanson Wang	Geological Assistant
John Tejada	Geological Assistant
Mike Freer	Geological Assistant

Trevor Wirtz	Geological Assistant
Hunter Bellows	Senior Field Assistant
Farhan Aminudin	Field Assistant
Darren Lucas	Field Assistant
Cristina Solano	Drafting/CAD services
Evangelina Deligero	Coal Quality Database

Table 3-9: Huguenot 2011 Contractors

Type of Work Performed	Contracting Company
Field Related	
Drilling (Skid Mounted Rotary & Large Diameter Coring)	DEREX Drilling Services Ltd.
Drilling (Diamond & Rotary)	ATLAS Drilling Limited
Geophysical Logging	Century Wireline Services
Heavy Equipment Operations	CanWest Exploration Services Ltd.
Trail Construction/Timber Falling and Slashing	CanWest Exploration Services Ltd.
Drill Pad Construction	CanWest Exploration Services Ltd.
Bridge Rental	Great Northern Bridgeworks Ltd.
Helicopter	Highland Helicopters Ltd.
Radio Communications Rental	GLENTEL
Truck Rental	Driving Force
First Aid Services	CanWest Exploration Services Ltd.
Field Camp and Catering	P.T.I. Premium Camp Services
Fuel	Blue Wave Energy
Freight	Canadian Freightways
Field Supplies	Northern Metallic Ltd & IRL Supplies
Analytical Work and Consulting Services	
Drill Core Analysis	GWIL Industries – Birtley Coal and Minerals Testing Division
Coal Petrography	Pearson & Associates
Carbonization Testing	CanmetENERGY Carbonization Research
Geological Modelling/Resource Estimates	Norwest Corporation (Salt Lake)

The company retained Norwest Corporation (Norwest) to act as an Independent Qualified Person for the preparation of a Technical Report, in accordance with N.I. 43-101, Form 43-101F1. Previous coal resource estimations for the North Block of the Huguenot property were carried out by Moose Mountain Technical Services (MMTS). Norwest conducted data validation, and reviewed the geological interpretation, formatting and treatment of data to support geologic model development and provided an independent coal resource estimate and coal resource classification for each of the North, Middle and South Blocks.

672000 E
674000 E
676000 E
678000 E
680000 E
6044000 N
6042000 N
UTM
NAD 83
BD7801
BD7814
BD7803
BD7811
BD7906
BD7601
BD7805
BD7804
BD7914
STAGING AND CORE LOGGING AREA
METEOROLOGICAL STATION
BRIDGE
PIKA CREEK
HOLTSLANDER CREEK
HOLTSLANDER NORTH THRUST
HOLTSLANDER SOUTH THRUST
HUGUENOT THRUST
NORTH BLOCK
MIDDLE BLOCK
SOUTH BLOCK
APPROVED COAL LICENSE BOUNDARY
COAL LICENSE APPLICATION BOUNDARY
HD11-12
HD11-11
HD11-10
HD11-10A
HD11-06
HD11-08
HD11-07
HD11-05
HD11-04
HD11-03
HD11-09
HD11-01
HD11-02
HR08-06
HR08-07
HR08-5A
HR08-5B
HR08-08
HR08-05
HR08-03
HR08-04
HR08-8A
HR08-8B
HR08-8C
HR08-01
HR08-02
HR08-14
HR08-17
HR08-16
HR08-15
HR08-13
HR08-12
HR08-10
HR08-09
HR08-11
HB08-6CA
HB08-6CB
HB08-6AA
HB08-5B
HB08-1B
HB08-1A
HR11-03
HR11-01
HR11-02
HR11-10
HLD11-01
HR11-11
HR11-15
HR11-06
HR11-16
HR11-09
HLD11-02
HLD11-03
HLD11-04
HR11-14
HR11-12
HR11-13
HR11-08
HR11-05
HR11-04

LEGEND:

- Topography
- River
- Property Boundary (Approved / Under Application)
- Road - Main Access
- 2011 Drill Trails Completed
- 2011 Drill Trails Reclaimed
- Pre-2011 Drill Trails
- Fault Thrusts
- 2011 Drill Holes
- 2008 Drill Holes
- Pre-2011 Drill Holes
- Pre-2011 Trenches (used for Geological modelling)

200m 0 200 400 600 800 1000m
scale

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

Drawn by:	CVS
Checked by:	JHP
Approved by:	JHP
Revision No.	
Dwg No. HUG-B-2011AR-DH-2	
Date:	2015-17-12

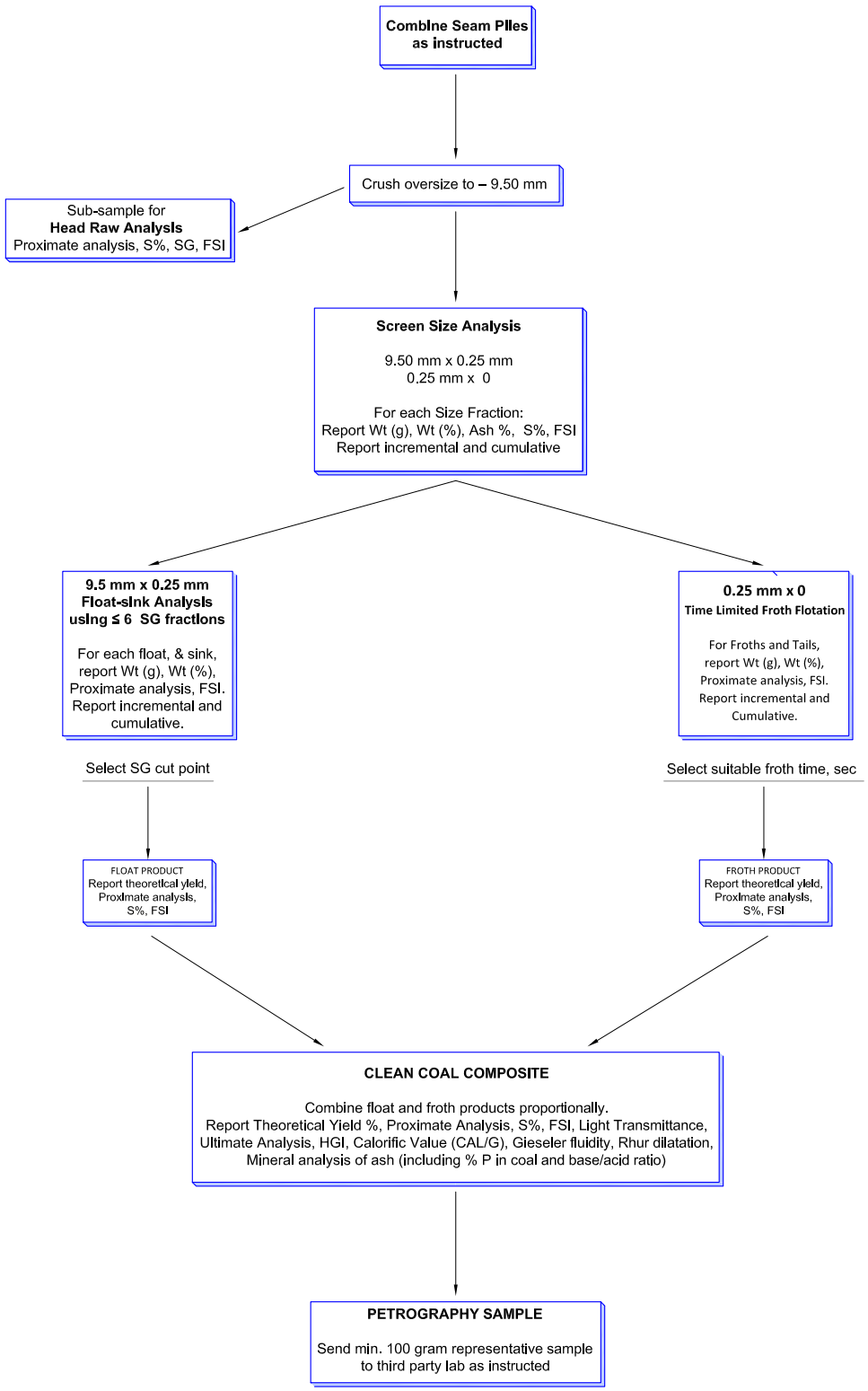
DRILL HOLE, TRENCH AND TRAIL LOCATIONS

Document: 2011 AR

Figure No: 3-1

11/17/15 - 01:09:49pm K:\HUGUENOT\Drill_Hole_1\2011_AR\HUG-B-2011AR-DH-2\HUG-B-2011AR-DH-2.dwg Xrefs: x-Lidar_Hug_20m X-HugMid&S Projected Outcrop Traces E-43101 x-TRIMHugDrainage-B x-2008dh-updated-2010-08-22 x-Trenches 2011AR

HUGUENOT 2011 HQ CORE WASHABILITY FLOWSHEET



Screen Sizes		
mm	Inches	Mesh
9.50	3/8	
0.25	0.0098	60

Gravity Separations for Float-sink analysis:

-1.40
1.40 - 1.50
1.50 - 1.60
1.60 - 1.70
1.70 - 1.80
+1.80

For floats and sink, report Wt (g), Wt(%), Proximate analysis and FSI
Report incremental and cumulative wash tables

Revised by:
ER Deligero
26 March 2015

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

Drawn by:	CVS
Checked by:	JHP
Approved by:	JHP
Revision No.	
Dwg No.	HUGA-2011AR-CQ-WF
Date:	2015-11-18

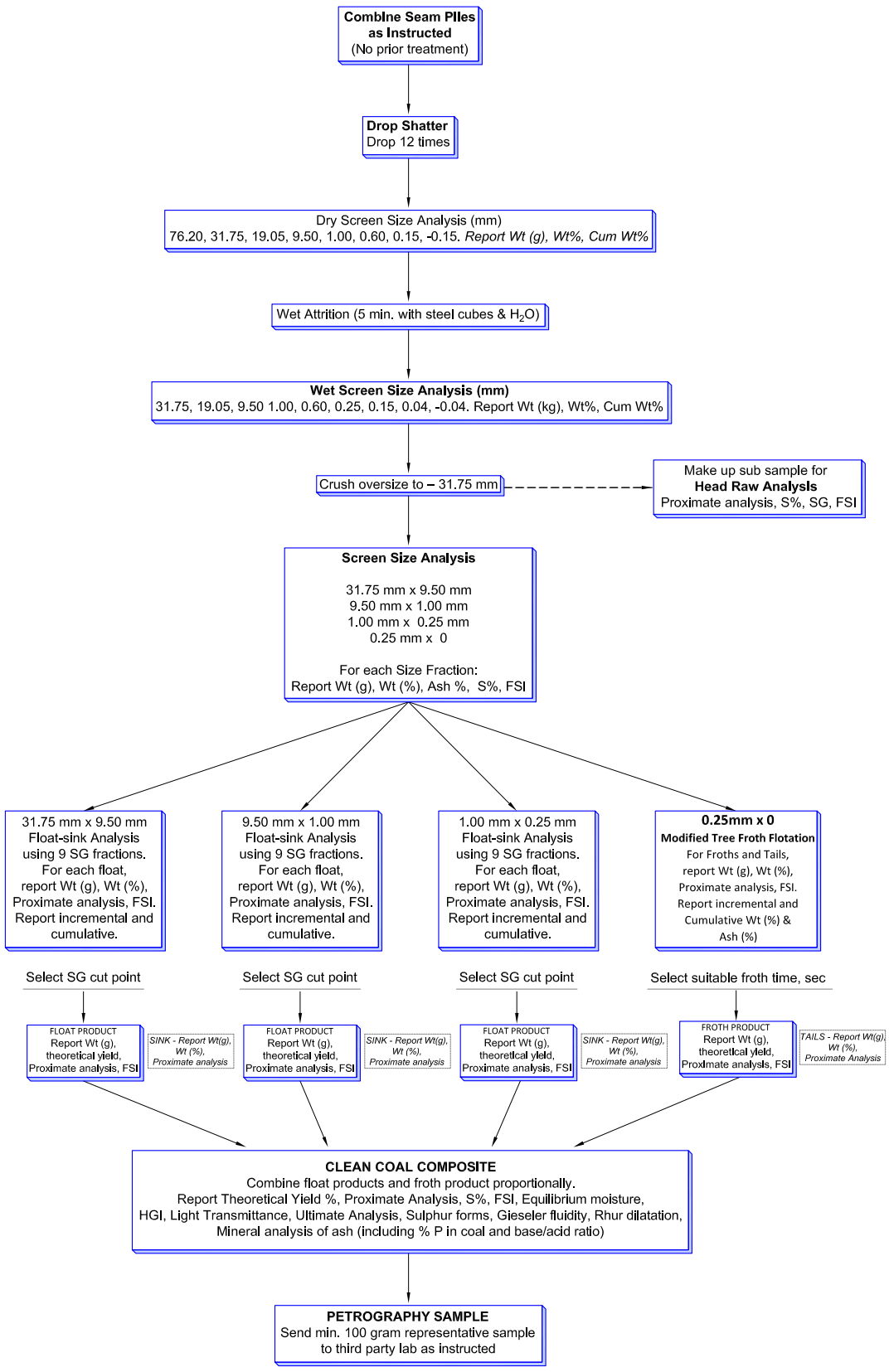
2011 HQ CORE WASHABILITY FLOWSHEET

Document: 2011 AR

Figure No. 3-2

11/18/15 – 09:41:07am K:\HUGUENOT\Coal Quality\2011_AR\HUGA-2011AR-CQ-WF.dwg Xrefs:

HUGUENOT 2011 LARGE DIAMETER CORE WASHABILITY FLOWSHEET
(Wet Attrition)



Screen Sizes		
mm	Inches	Mesh
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31.75	1-1/4	
19.05	3/4	
9.50	3/8	
1.00	0.0394	16
0.60	0.0234	28
0.25	0.0098	60
0.15	0.0059	100
0.04	0.0017	325

Gravity Separations for Float-sink analysis:

-1.30
1.30 - 1.35
1.35 - 1.40
1.40 - 1.45
1.45 - 1.50
1.50 - 1.60
1.60 - 1.70
1.70 - 1.80
+1.80

For floats and sink, report Wt (g), Wt(%), Proximate analysis and FSI
Report incremental and cumulative wash tables

Updated by:
ERDeligero
25 March 2015

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

Drawn by:	CVS
Checked by:	JHP
Approved by:	JHP
Revision No.	
Dwg No.	HUGA-2011AR-CQ-WFW
Date:	2015-11-18

2011 LARGE DIAMETER CORE WASHABILITY FLOWSHEET WET ATTRITION

Document: 2011 AR

Figure No. 3-3

11/18/15 – 09:47:10am K:\HUGUENOT\Coal Quality\2011_AR\HUGA-2011AR-CQ-WFW.dwg Xrefs:

SECTION 4 GEOLOGICAL SETTING

The Huguenot Coal Project lies within a belt of Mesozoic strata situated along the eastern flank of the Rocky Mountains of northeastern British Columbia. These strata were uplifted during the Laramide Orogeny and now form part of the Rocky Mountain Foothills. Intense folding and thrust faulting strongly affected the strata during the mountain-building. The coal seams of greatest potential are found within Lower Cretaceous strata, consisting of the Bullhead and Fort St. John Groups. These strata can be characterized as alternating sequences of marine and non-marine clastic lithologies deposited from a series of transgressive - regressive sedimentary cycles in response to periodic uplift of the Cordillera.

The thickest coal seams are contained within the Gates and Gething Formations and are believed to have formed within deltaic and marine strand-plain depositional environments. Marine strata of the Moosebar Formation separate these two phases of continental sedimentation. Minor coal seams are present within stratigraphically lower (Minnes Group) and higher (Boulder Creek Formation) units. However, these coals are thin and are not considered to have potential. The stratigraphic sequence in the study area is shown in Figure 4-1 while regional correlation of coal seams at Huguenot correlated with those present to the northwest (at Belcourt) and to the southeast (at Omega) is illustrated in Figure 4-2. The regional geology shown in Figure 4-3 illustrates the relationships between the various formations that occur within and adjacent to the Huguenot property and shows the main structural geological features.

The stratigraphic succession exposed in the Huguenot area ranges in age from late Triassic to Upper Cretaceous. Triassic rocks are of limited distribution, and are restricted to small areas where the major drainages have exposed the core of a regional anticlinorium (the Belcourt Anticlinorium). These are overlain by an Upper Jurassic to Upper Cretaceous sequence of interbedded clastic lithologies of both marine and continental origin, some of which contain coal seams. Brief descriptions of the Upper Jurassic and Cretaceous formations encountered in this region are presented below.

4.1 REGIONAL STRATIGRAPHY

4.1.1 Minnes Group

This is a thick sequence that ranges in age from Upper Jurassic to Lower Cretaceous. The lower portion of this unit contains massive sandstones and conglomerates while the upper part mostly comprises cyclic beds of argillaceous, fine-grained sandstone, siltstone, carbonaceous shale and coal seams. Coal seams are numerous but they are usually less than one metre thick and are discontinuous. The change from Minnes Group strata to the overlying Cadomin Formation is abrupt. Locally, the contact is disconformable, although there is a marked angular discordance regionally.

4.1.2 Cadomin Formation (Bullhead Group)

The Cadomin Formation is the basal unit of the Lower Cretaceous Bullhead Group and mainly consists of massive to poorly-bedded, coarse- to very coarse-grained conglomerate. A layer of coarse-grained sandstone, located immediately below the conglomerate, is included within this formation. Typically, the conglomerate is poorly sorted and contains well-rounded pebbles, cobbles and boulders of black, white, and green chert, white and grey quartzite, quartz, and (locally) minor limestone. The clasts are set within a siliceous matrix of fine- to coarse-grained sandstone, although portions of the conglomerate may also be clast supported. Discontinuous, lenticular, sandy horizons may be present. Owing to its highly resistant nature, particularly in comparison with

contiguous units, the Cadomin is usually well exposed and forms a prominent marker horizon throughout the region. This, together with the rust colored gravel weathering of the conglomerate, makes the Cadomin Formation one of the best stratigraphic markers in the region. The thickness of this formation is highly variable; on the property it appears to be in the order of 10 m thick.

4.1.3 Gething Formation (Bullhead Group)

The Gething Formation conformably overlies the Cadomin and forms the upper unit of the Bullhead Group. In the Huguenot area it ranges from 60 m to 100 m in thickness (averaging approximately 70 m) although, regionally, it may be considerably thicker due to various depositional factors. It is primarily a non-marine sequence composed of fine- to coarse-grained, calcareous sandstones, conglomerate, siltstone, carbonaceous claystone, and thin coal seams. Conglomeratic units typically occur in the lower and middle parts of this formation while a series of brown, calcareous, lithic, thinly-bedded (0.5 m to 1 m), and cross-laminated sandstones predominate in the upper parts. These upper sandstones commonly contain pebbles and coal stringers and often exhibit bioturbation and soft sediment deformation.

Historical exploration reports for the old Belcourt property and previous reports on the current Huguenot property describe three coal zones named, in ascending stratigraphic order, Zones A, B, and C, which are located near the base, middle and top of the formation, respectively. Although projected across the length of the property, correlations are tentative over large distances due to variable coal zone development and limited data. The lowermost zone (Zone A) appears to be the best developed. Zone C is located just below the Gething-Moosebar contact; the stratigraphic position of this coal zone is similar to that of the Bird-GT Zone which is believed to have economic potential to the north, at the Trend South Mine.

The presence of thin interbeds of bentonite characterize the uppermost part of the formation, while the upper contact of the Gething is defined by a thin bed of pebble conglomerate with clasts set within a mudstone matrix that contains aphanitic glauconite. This glauconitic horizon is considered equivalent to the Bluesky Formation found further east, and signifies the start of marine sediments belonging to the overlying Moosebar Formation.

4.1.4 Moosebar Formation (Fort St. John Group)

The Moosebar Formation is the lowermost formation of the Fort St. John Group. The Moosebar - Gething contact is abrupt and is placed at the base of a thin glauconite-bearing conglomerate, which represents the onset of the Moosebar marine transgression. The Moosebar is separated into two zones; a lower claystone/shale zone and an upper zone composed of alternating claystone, siltstone, and sandstone layers. The lower part consists of approximately 20 m of monotonous dark grey to black shale grading upward to laminated siltstone and claystone; numerous sideritic concretions are present throughout. These beds grade upwards into a sequence of alternating claystone, siltstone, and very fine-grained sandstone which form the upper part of the formation. The sandstone beds thicken and become more numerous upwards (together with an overall increase in grain size) with an attendant decrease and gradual disappearance of siltstone and claystone. This inter-layered sequence of sandstone, siltstone, and claystone represents the prodeltaic transition from marine sediments to massive continental sands at the base of the overlying Gates Formation.

The top of the Moosebar Formation is taken at the base of the first thick sandstone unit (typified by the first sandstone bed that is at least one metre in thickness) within the Gates Formation. The

arbitrary selection of the Moosebar - Gates contact contributes to regional variability in formation thickness. Consequently, the thickness of this formation is somewhat variable across the property, but averages about 70 m.

The Moosebar shales are recessive weathering and exposures are normally restricted to areas of high relief where creek channels or gullies often cut along the strike of the easily eroded beds.

4.1.5 Gates Formation (Fort St. John Group)

The Gates Formation conformably overlies the Moosebar Formation. This formation contains the largest systematically explored coal resources within the North-East Coal Block and is the main coal-bearing unit within the project area. To the north, in the Quintette–Bullmoose area, the Gates is divided into three informal sub-divisions; namely, Torrens member, middle Gates and upper Gates. The main coal seams occur within the middle Gates while thinner, non-economic, coal seams are present within the upper Gates. No sub-division of the formation has been attempted in the Huguenot area, other than recognition of the Torrens member. However, significant coal seams are present in the equivalents of both the middle and upper Gates. At Huguenot, this formation averages approximately 310 m in thickness. A generalized stratigraphic section through the Gates Formation is illustrated in Figure 4-4.

Gates coal seams appear to have developed directly on marine strandplains. Longshore drift of sand played an important role in the formation of these strandplains, which became isolated behind barrier bar delta fronts. Extensive freshwater lagoons developed, which became sites of significant peat formation (Legun, 2002). Thick, lateral accumulations of peat developed shoreward of thick, regionally extensive sheets of shoreface sand and gravel, traceable along strike for about 230 km (Lamberson and Bustin, 1989).

The Torrens member forms the lowermost sub-division of the Gates Formation. It includes the transition zone strata above the Moosebar contact plus an overlying, resistive, sandstone unit that forms prominent cliffs and ridges that can be used to outline the various structural configurations of the coal measures. At Huguenot, the Torrens member ranges from approximately 40 m to 45 m thick.

The Torrens member is overlain by several cycles of coal deposition represented by fining-upward sequences culminating with coal deposition. Coal seams developed in the lower cycles, particularly Seams 1 and 5, typically show the greatest seam thickness and continuity (see Section 4.2). In the Quintette area, the middle Gates is overlain by a massive medium-to-coarse-grained, conglomeratic sandstone and pebble conglomerate sequence, informally called the Babcock member. At Huguenot, what may be the lateral equivalent of this unit appears to be represented by a thick, sandstone-dominated sequence with occasional conglomeratic lenses, located immediately above Seam 5.

This sandstone unit is overlain by predominantly finer-grained lithologies consisting mostly of intercalated fine-grained sandstone, siltstone and claystone with several thin coal seams (Seam 6 to Seam 10). A very thin bed of chert pebbles with ferruginous cement marks the contact with the overlying marine sediments of the Hulcross Formation.

4.1.6 Hulcross Formation (Fort St. John Group)

The Hulcross Formation is a marine sequence predominantly composed of blocky, medium to dark grey, sandy shale with thin interbeds of siltstone and very fine-grained, often laminated or cross-laminated, sandstone. While there is some similarity between the Hulcross and Moosebar shales they can usually be distinguished by their relationships to surrounding strata and the absence of glauconitic sandstones at the base of the Hulcross. Across the Huguenot property, the Hulcross varies in thickness from approximately 30 m to 40 m.

The contact of the Hulcross with the underlying Gates Formation is distinct, and often marked by a very thin, chert-pebble conglomerate with ferruginous cement. The sequence becomes increasingly silty towards the top, and thicker sandstone interbeds develop, resulting in a gradational contact with the overlying Boulder Creek Formation.

4.1.7 Boulder Creek Formation (Fort St. John Group)

The Boulder Creek Formation is composed of three lithological units. The lower unit consists mainly of light grey, fine- to coarse-grained sandstone and is approximately 20 m thick; coarse-grained sandstones, conglomerates and carbonaceous beds are common. The middle unit is approximately 30 m thick and consists of predominantly grey to black claystone and siltstone with occasional coaly and carbonaceous horizons. The upper 35 m consists mostly of fine- to coarse-grained, grey to brown, sandstone and grey siltstone. A thin pebble conglomerate with a siltstone to claystone matrix marks the upper contact.

The thickness of the Boulder Creek Formation tends to increase as the Hulcross thins; in the Huguenot area it ranges between approximately 85 m and 90 m in thickness.

4.1.8 Shaftesbury Formation (Fort St. John Group)

The Shaftesbury Formation can be divided into three units which, mapped elsewhere, are referred to, in ascending stratigraphic order, as the Hasler, Goodrich, and Cruiser Formations. The historical coal assessment reports for the Huguenot area indicate that Denison's geologists were able to differentiate between these units, but there was no attempt to map them separately.

The lower unit consists of dark grey to black, sideritic claystone, siltstone, minor sandstone and localized thin, pebble conglomerates. The unit is almost homogenous and bedding is discernible only by the occasional appearance of thin beds of resistant sandstone. The middle unit is predominantly a grey to brown, medium-grained, laminated to medium-bedded to massive, micaceous sandstone. Carbonaceous claystone and siltstone occur as interbeds. The upper unit comprises dark grey to black, laminated to thin interbeds of silty claystone, siltstone and fine-grained sandstone. Pebble bands occur locally. This unit is characteristically light orange to red in colour due to weathering of ferruginous horizons.

4.2 COAL SEAM DEVELOPEMENT

Exploration conducted by Denison throughout the old Belcourt property concentrated upon defining potentially economic coal resources contained within the Gates Formation. Localized potential for Gething coal seams is indicated by several thin seams typically in the order of 1 m to 2.5 m thick. The potential for coal seams in other formations appears very limited. The exploration work conducted in 2008 also focussed on Gates Formation coal seams, although one drillhole to test Gething coal seams was also

completed. Exploration conducted by Colonial in 2011 concentrated on the coal resource potential of the Gates Formation.

4.2.1 Gething

On the Huguenot property, the Gething Formation typically contains three coal zones. Historically, in ascending order, these have been referred to as Zones A, B, and C. The best developed of these is Zone A, which is situated just above the contact with the Cadomin Formation. This zone contains up to four coal splits, the thickest two of which occur near the top of the zone. These splits can exceed 1.5 m in thickness, while the others are generally less than 1.0 m thick. In one instance, Denison trenched an 8.2 m coal seam within this lower zone. However, this occurrence is believed to be thickened due to faulting.

Thick sandstone separates Zones A and B; this latter coal zone consists of several thin, poorly developed coal seams. Zone C is close to the Gething - Moosebar contact and consists of two or three thin coal splits. The stratigraphic position of this upper coal zone appears to be similar to that of the Bird-GT Zone (which is mined at the Trend Mine).

Within the North Block, the Gething seams are designated, in ascending order, GT1, GT2, and GT3. Seam GT1 ranges from 1.75 m (BD7811) to 2.17 m (HR08-05), Seam GT2 varies from 0.32 m to 0.61 m, and GT3 is 1.2 m thick. Although geological mapping, trenching, and drilling suggest that the Gething coal seams offer limited potential, additional work is warranted to fully evaluate these coal measures.

4.2.2 Gates

The Gates Formation is well established as being the most prolific coal-bearing formation in northeastern British Columbia. From northwest to southeast, significant thicknesses of Gates coal first occur in the Bullmoose Mountain area and continue southeast to the provincial border (a distance of almost 140 km) and beyond.

On the Huguenot property, coal seams and coal zones are numbered in ascending stratigraphic order with 1 representing the oldest and 10 the youngest. The term ‘coal zone’ has been used historically to encompass a number of closely-spaced coal horizons within a distinct lithological unit. Such units were used for correlation in areas where individual coal seams were difficult to recognize due to changes in seam characteristics or their transition into carbonaceous and coaly intervals. Individual coal splits within a coal zone were distinguished by letter (e.g., Seams 6A, 6B, 6C, and 6D). Wherever possible, historical seam/zone/split designations have been maintained, although some modifications have occurred based upon results from the more recent work.

Correlations have been established for the main coal seams across the entire property although correlations have not always been definitively demonstrated for some of the minor seams, particularly in the southern half of the property. Seam correlations are well established between the North Block and the adjoining Belcourt South deposit (situated immediately of the north property). The Torrens sandstone provides a marker horizon for the base of the Gates coal measures.

4.3 STRUCTURE

Structural geology within the region is characterized by large-scale folding and associated thrust faulting within alternating layers of competent sandstone and incompetent mudstone and coal. The regional

structural trend is NW-SE, parallel to the Rocky Mountain structural belt. Structural style may vary along and across this trend, reflecting differences between lithologies and distance from the Front Ranges of the Rocky Mountains.

Folding within stratigraphic units dominated by finer-grained lithologies can be extremely complex, and is often typified by short-wavelength, chevron folds. More competent sequences, such as those containing the coal measures, typically form macroscopic, long-wavelength folds ranging from relatively tight anticline-syncline pairs to open, box folds. Less competent strata, contained within the broader competent sequences, maintain the same structural style as the unit as a whole. Typically, the major fold axes plunge gently to moderately to the northwest or southeast. Folding of major fold limbs is uncommon but, where present, varies from gentle warps to chevron fold pairs.

Often, the macroscopic folds are cut by thrust faults that slice longitudinally through the belt of coal-bearing strata. Commonly, these structures dip towards the southwest, although smaller, northeasterly-dipping thrusts may be present. Within the major thrust sheets, faulting preceded folding; older thrusts are folded, resulting in northeasterly-dipping, but northeasterly-verging, thrusts. On a regional scale, the large thrust faults display staircase-type geometry, characterized by wide “flats” sub-parallel to bedding, joined by narrow “ramps” oblique to bedding. The “flats” are often developed in less competent strata whereas “ramps” are generally contained within competent lithologies. The major faults tend to maintain a constant angle of about 30° to bedding. However, this is not always the case, particularly where smaller structures are involved and where thrusts die out. Minor thrusts frequently splay from the major faults.

The Huguenot Coal Project is located along the northeastern limb of a broad, northwest-plunging anticlinorium (the Belcourt Anticlinorium). Lower Cretaceous coal measures are located along the western and eastern margins of this structure, while Triassic and Jurassic strata occupy the central portions. The western extent of the anticlinorium is defined by a major, westerly-dipping thrust fault that emplaced Palaeozoic rocks upon the Lower Cretaceous strata. Eastward from the core of the Anticlinorium, the Cretaceous succession is continuous, the youngest strata being those of the Kaskapau Formation. The Huguenot property is located within a narrow, northwesterly-trending belt of tight to relatively open folds and associated northeasterly-verging thrust faults that have placed older units upon younger.

The Gates coal measures are repeated by two easterly-dipping and easterly-verging thrust faults, the Holtslander North and Holtslander South Thrusts. The geology of the Lower Cretaceous succession within the property is shown in Figure 4-5; cross-sections illustrating the main structural elements are presented in Figure 4-6 and 4-7. For descriptive purposes, the three structural slices formed by the two main thrusts are referred to as the North, Middle, and South Blocks.

The North Block sits structurally above the Holtslander North Thrust and therefore sits structurally above the Middle and South Blocks. The Holtslander North Thrust is interpreted to be the oldest thrust fault on the property. Within the North Block, the coal measures occupy the western limb of a broad synclinal structure called the Holtslander Synclinorium. This limb is near homoclinal with moderate to steep northeasterly dips. Dip values decrease somewhat at depth, towards the axis of the fold.

The Middle Block, situated between the Holtslander North and Holtslander South Thrust Faults, exhibits moderate to steep, northeast-dipping, near-homoclinal strata that decreases in dip towards the south. A north-south-trending, upright, open, anticline-syncline pair is present along the eastern limit of mapping. Fault imbrications in the floor of the Holtslander South Thrust are also present, but are not currently included within either the Middle or South Block. A high-angle, eastward-dipping reverse fault, referred to as the Pika Fault, bisects the central portions of this block, repeating the Seams 1 to 6L.

The South Block lies structurally below the Holtslander South Thrust. Here, the coal measures occur as steep to very steep, mostly easterly-dipping beds that form the eastern limb of an asymmetric anticline (which is possibly the eastern portion of an asymmetric box fold). Vertical to steep, westerly-dipping, overturned beds occur within the eastern limb of this anticline and in the footwall of the thrust.

The main elements of the property geology are depicted in Figure 4-5.

Series	Group	Formation		Lithology	Unit Thickness (Meters)
LOWER CRETACEOUS	FORT ST. JOHN	Shaftesbury		Dark grey marine shales, sideritic concretions, some sandstone grading to silty, dark grey marine shale, siltstone and sandstone in lower part, minor conglomerate.	+450
		COMMOTION	Boulder Creek	Fine-grained, well sorted, non-marine sandstone, mudstone and carbonaceous shale, conglomerate, few thin coal seams.	115
			Hullcross	Dark grey marine shale in the north grading to extremely fossileferous shady beds interlayered with sandstone and thin coal seams in the south.	35
			Gates	Fine-grained marine and non-marine sandstones; conglomerate, coal, shale and mudstone.	365
		Moosebar		Dark grey marine shale with sideritic concretions, glauconitic sandstones and pebbles at base.	60
	BULLHEAD	Gething		Fine to coarse brown calcareous sandstone, coal, carbonaceous shale, and conglomerate.	70
		Cadomin		Massive conglomerate containing chert and quartzite pebbles.	10
	MINNES	Nikanassin		Thin-bedded grey and brown shales and brown sandstones, containing numerous thin coal seams.	

NOTE:

MODIFIED FROM DENISON MINES LIMITED (1979b)

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

Drawn by:	CVS
Checked by:	JHP
Approved by:	JHP
Revision No.	
Dwg No.	HUG-A-2011AR-FORM
Date:	2015-06-23

TABLE OF FORMATIONS

Document: 2011 AR

Figure No. 4-1

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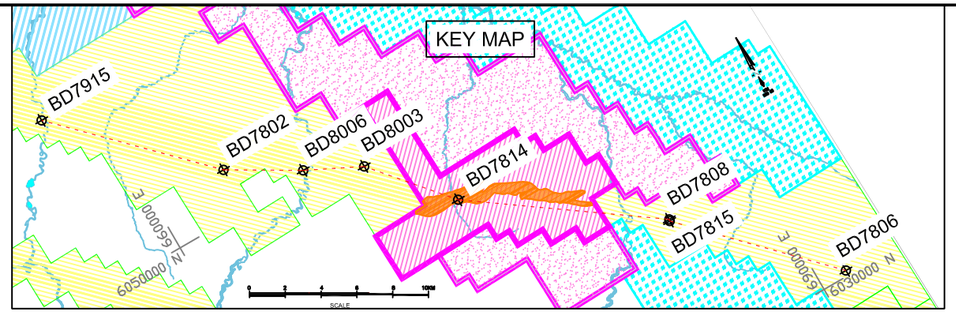

BELCOURT NORTH

BELCOURT SOUTH

BD7802

BD8003

HUGUENOT

BD7814

OMEGA

BD7808

BD7806

BD7915

BD8006

BD 7815

NO. 9 SEAM

NO. 8 ZONE

NO. 7 ZONE

NO. 6 ZONE

NO.5 SEAM

NO. 4 SEAM

NO. 3 ZONE

NO. 2 ZONE

NO. 1 SEAM

BOULDER CREEK MEMBER (KCmb)

HULCROSS M. (KCmg)

GATES MEMBER (KCmg)

COMMOTION FORMATION

MOOSEBAR FORMATION (KMb)

GETHING FORMATION (KGt)

Note: coal zone/coal seam correlations are taken from Denison (1981)

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

Drawn by:	CVS
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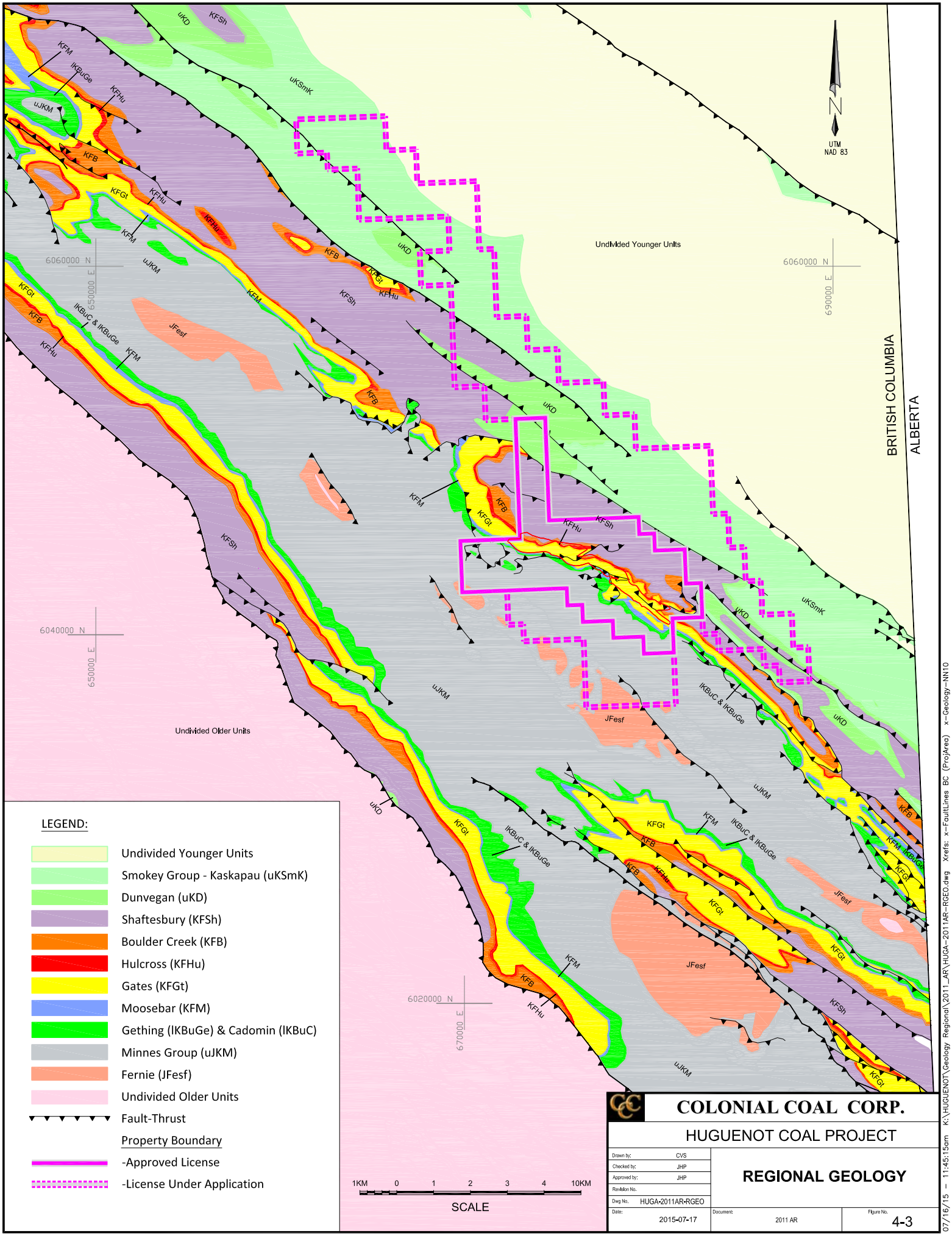
Approved by:	JHP
Revision No.	
Dwg No.	HugB-2011AR-2012RCorr
Date:	2012-08-02

REGIONAL CORRELATION CHART

Document: 43-101 (2011AR)

Figure No. 4-2



LEGEND:

- Undivided Younger Units
- Smokey Group - Kaskapau (uKSmK)
- Dunvegan (uKD)
- Shaftesbury (KFSh)
- Boulder Creek (KFB)
- Hulcross (KFHu)
- Gates (KFGt)
- Moosebar (KFM)
- Gething (lKBuGe) & Cadomin (lKBuC)
- Minnes Group (uJKM)
- Fernie (JFesf)
- Undivided Older Units
- Fault-Thrust

Property Boundary

- -Approved License
- -License Under Application

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

REGIONAL GEOLOGY

Drawn by:	CVS
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Approved by:	JHP
Revision No.	
Dwg No.	HUGA-2011AR-RGEO
Date:	2015-07-17
Document:	2011 AR
Figure No.	4-3

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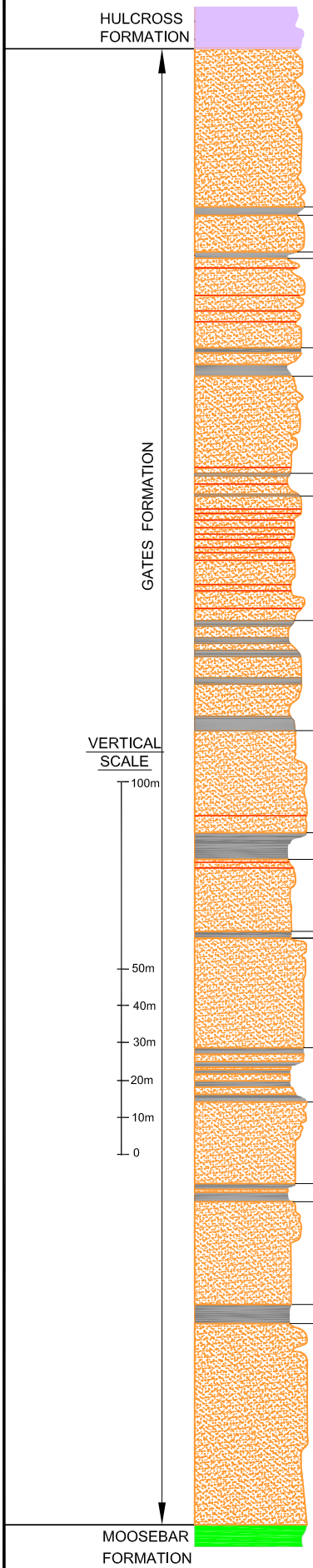


Seam 10	Single Coal Seam with one or two rock bands. 8 - 13 m interbedded siltstone and claystone with sandstone horizons which sometimes demonstrate a subtle coursing-upward sequence just below Seam 10.
Seam 9	Single coal seam with a carbonaceous floor. 15-19 m fine-grained sandstone, grading upward into siltstone and claystone, then carbonaceous claystone at the base of Seam 9.
Zone 8	Includes Seams 8 and 8B. 25 - 33 m sandstone, siltstone, and claystone.
Zone 7	Consists of two to three coal plies. Not of economic interest. 17 - 29 m sandstone, siltstone, and claystone.
Zone 6	Composed of a lower section (6L and 6A) and an upper section of Seams 6B, 6C, and 6D. 13 - 17 m Claystone, carbonaceous claystone and siltstone.
Seam 5	Single Coal Seam present throughout the property. 8-22 m fine-grained sandstone with silty laminae.
Seam 4	Consists of an upper section (4U) and lower section (4L). 15-57 m sandstone and interbedded siltstone with conglomerate lenses. Fining upward to a carbonaceous zone at the base of Seam 4.
Zone 3	Composed of coal plies 3A, 3B, 3C and 3D. Plies 3B and 3D have economic potential in the north. 3A is of interest in the Middle Block. 7 - 11 m sandstone and interbedded siltstone between Seam 2 and Zone 3 in the north, and 23 - 36 m of sandstone, siltstone, and claystone in the south.
Seam 2	Comprises several thin coal plies separated by thin rock bands. In the north, the upper portion becomes a coaly zone and only the lower ply (2A) is of economic interest. 14 - 17 m sandstone, siltstone and interbedded claystone at top. Section thickens to 41 m sandstone in the south.
Seam 1	Single Coal Seam present throughout the property. 45 m Sandstone ("Torrens Member").

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

Drawn by: CVS	GENERALIZED STRATIGRAPHIC SECTION - GATES FORMATION
Checked by: JHP	
Approved by: JHP	
Revision No.	
Dwg No. HUGA-2011AR_STR	
Date: 2015-07-16	Document: 2011 AR
	Figure No. 4-4

670000 E
675000 E
680000 E
6050000 N
6045000 N
6040000 N
6045000
UTM NAD 83
Holtslander Creek
Belcourt Creek
NORTH BLOCK
MIDDLE BLOCK
SOUTH BLOCK
HOLTSLANDER NORTH THRUST
HOLTSLANDER SOUTH THRUST
HOLTSLANDER NORTH THRUST
HOLTSLANDER SOUTH THRUST
HUGUENOT THRUST

LEGEND :

- SHAFTESBURY FORMATION
- BOULDER CREEK FORMATION
- HULCROSS FORMATION
- GATES FORMATION
- MOOSEBAR FORMATION
- GETHING FORMATION
- CADOMIN FORMATION
- MINNES GROUP
- 5 — COAL SEAM
- THRUST FAULT
- CREEK
- TOPOGRAPHY
- ROAD (RECLAIMED)
- PROPERTY BOUNDARY
- - Approved License
- - License Application

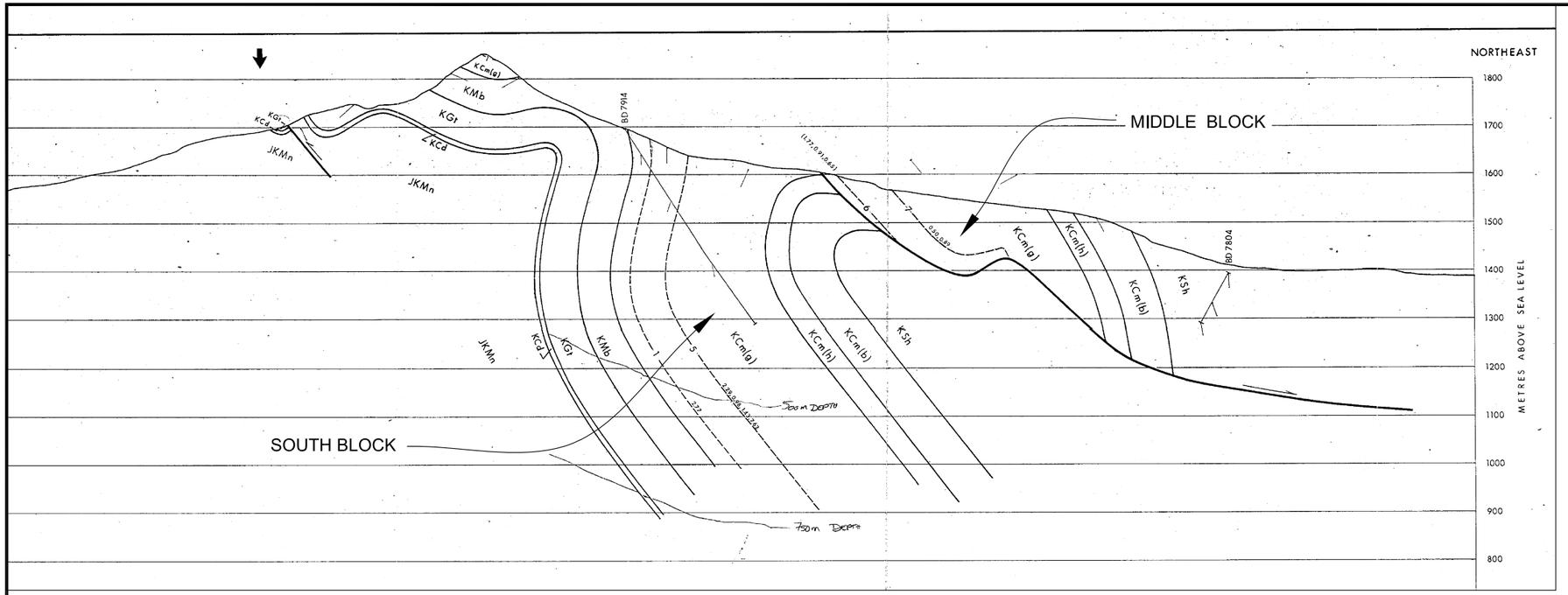
COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

Drawn by:	CVS
Checked by:	JHP
Approved by:	JHP
Revision No.	
Dwg No.	HugB-2011AR-PGeo
Date:	2015-06-23
Document	2011 AR
Figure No.	4-5

PROPERTY GEOLOGY

07/16/15 – 03:14:17pm K:\HUGUENOT\Geology Property\2011_AR\HugB-2011AR-PGeo.dwg Xrefs: x-GeologyProperty x-2011-SmsOutcrops (Projected) rpt x-Seams North Block x-roads x-2011-FaultTraces (Projected) rpt x-Rivers Major V-Rpt x-TRIM-Hug-Contours rpt



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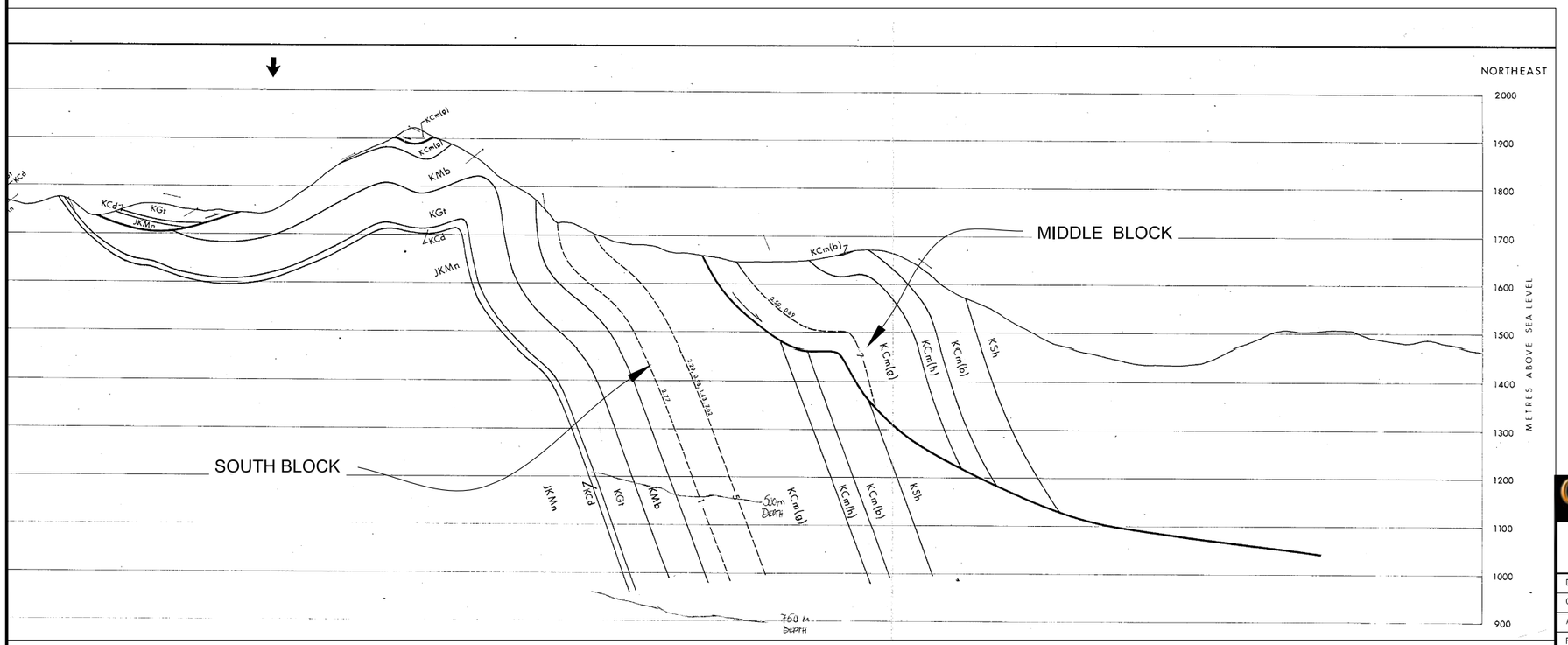

SECTION T22800

LEGEND:

KSh	SHAFTESBURY FORMATION
KCm(b)	BOULDER CREEK FORMATION
KCm(h)	HULCROSS FORMATION
KCm(g)	GATES FORMATION
KMb	MOOSEBAR FORMATION
KGt	GETHING FORMATION
KCd	CADOMIN FORMATION
JKMn	MINNES GROUP
BD7914	DRILL HOLE
↓	BASELINE LOCATION
⟍	THRUST FAULT
⟋	BEDDING
2.77	TRUE THICKNESS OF COAL SEAM OR INDIVIDUAL COAL SPLIT

SCALE

0 50 100 200 300 400
METRES

NOTE:

THE LOCATIONS OF THE CROSS-SECTIONS ARE SHOWN ON FIGURE 8.1

TAKEN FROM DENISON (1979b)

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

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Checked by:	JP
Approved by:	JP
Revision No.	
Dwg No.	HUGB-2011AR - XT21000-T22800

STRUCTURAL CROSS-SECTIONS T21000 - T22800

Date: 2015-06-23

Document: 2011 AR

Figure No. 4-6

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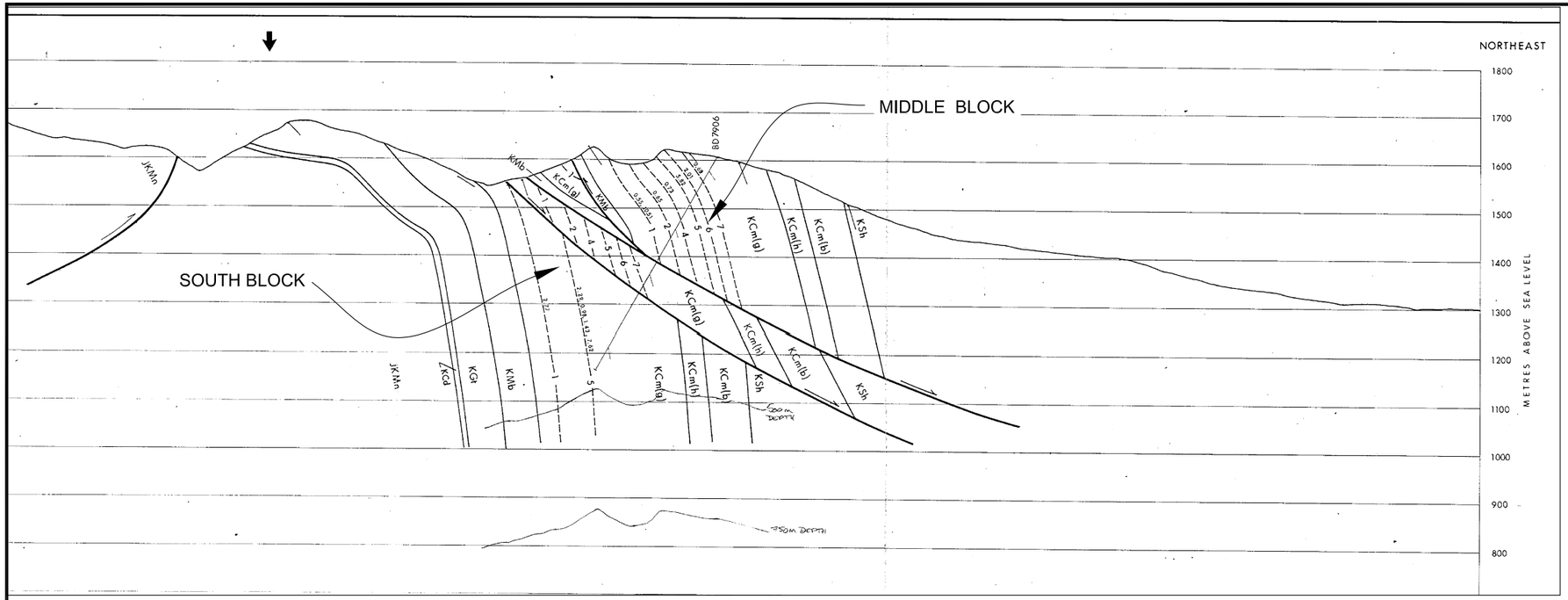

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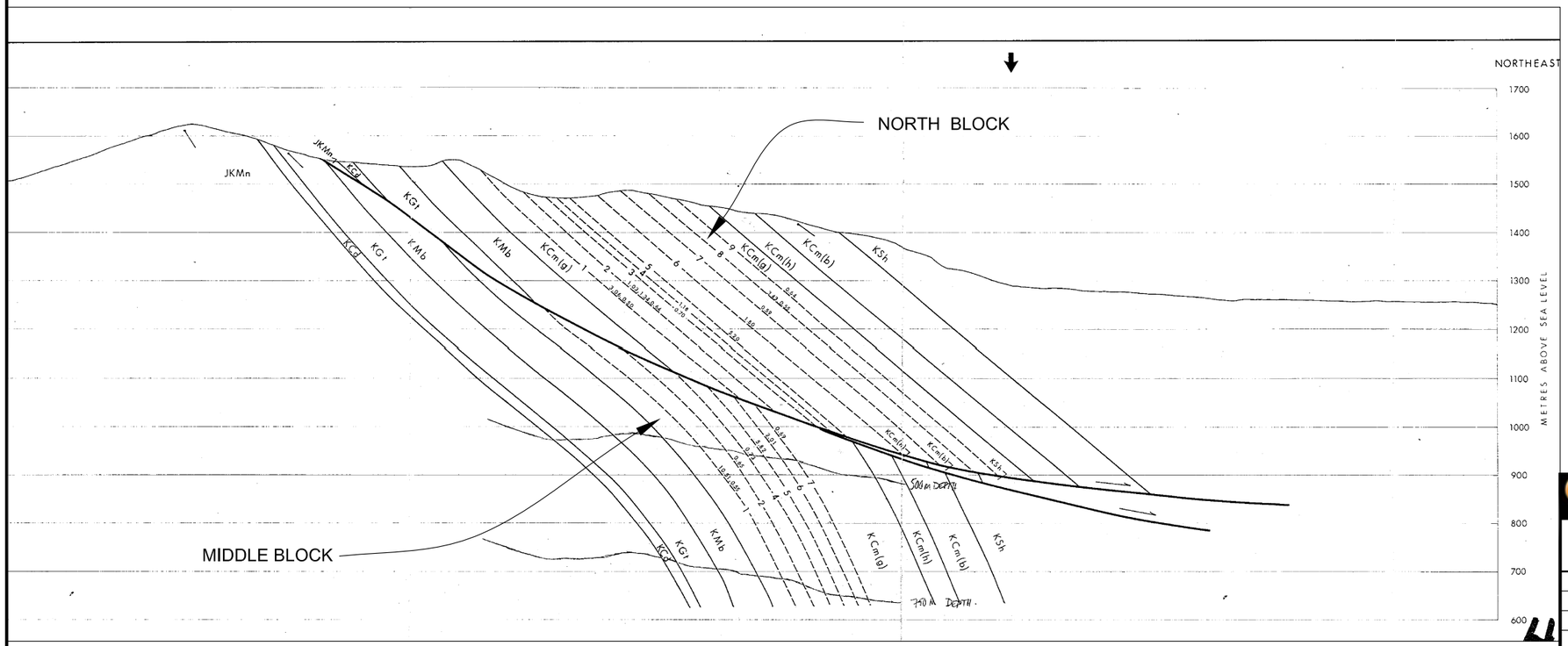

SECTION T27600

LEGEND:

KSh	SHAFTESBURY FORMATION
KCm(b)	BOULDER CREEK FORMATION
KCm(h)	HULCROSS FORMATION
KCm(g)	GATES FORMATION
KMb	MOOSEBAR FORMATION
KGt	GETHING FORMATION
KCd	CADOMIN FORMATION
JKMn	MINNES GROUP
BD7914	DRILL HOLE
↓	BASELINE LOCATION
	THRUST FAULT
	BEDDING
2.77	TRUE THICKNESS OF COAL SEAM OR INDIVIDUAL COAL SPLIT

SCALE

0 50 100 200 300 400
METRES

NOTE:

THE LOCATIONS OF THE CROSS-SECTIONS ARE SHOWN ON FIGURE 8.1

TAKEN FROM DENISON (1979b)

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

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Approved by:	JP
Revision No.	
Dwg No.	HUGB-2011AR-XT24200-T27600

STRUCTURAL CROSS-SECTIONS T24200 - T27600

Date: 2015-06-23 | Document: 2011 AR | Figure No. 4-7

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SECTION 5 COAL SEAM DESCRIPTIONS

The following summary of coal seam descriptions and structural geology is divided into three parts. The first part deals with the North Block which was the focus of exploration in 2008 the second part deals with the Middle Block and the third part deals with the South Block. As a result of the 2011 exploration program, detailed information is available for all three blocks; resources have been estimated and reported using N.I. 43-101 requirements. In the discussion below, the term 'mining section' refers to that part of a coal seam or coal zone that is considered to be potentially minable. Mining sections have been defined either from discrete coal seams where all, or most, of the coal-bearing interval forms a single mining section, or as parts of a coal zone where one or more coal layers occurring in relatively close proximity to one another, form separate mining sections. Thin, internal, rock bands, if present, are included in the mining sections but thicker rock bands (in this instance 0.31 m or more, as defined in GSC Paper 88-21) have generally been omitted even though, in practice, some would almost certainly be mined with coal in medium- to large-scale production scenarios. Exceptions were made in the coal horizon 4_{U+L} in the South Block and for portions of the 6B-6C horizon in the North Block. In the discussions presented below, the mining sections are taken to a minimum true thickness of 0.60 m.

5.1 NORTH BLOCK

A total of 10 coal seams and coal zones are present within the North Block. Seam/coal zone nomenclature follows that used by Denison across their old Belcourt property; in ascending order they are numbered 1 through 10. The main coal splits that form part of a coal zone are assigned the number of the zone plus a letter. The letter 'A' indicates the lowermost coal split in a series; however, this is complicated in Coal Zone 6 by the presence of coal splits below Seam 6A. Consequently, this part of the zone is referred to as 6 Lower (6L).

All seams/coal zones except Coal Zone 7 provide potentially mineable coal intervals. The main coal seams are Seams 1, 5, 6B, and 8; these are the thickest and most laterally continuous of the coal seams. Typically, the minor seams (i.e., 2/2A, 3B, 3D, 4, 6La, 6A, 6D, and 9) meet seam thickness or coal/rock ratio minimums only over portions of the blocks. Where not considered to be potentially mineable, the seams can still be traced geologically throughout the remainder of the block. Other coal seams/splits, such as 3A, 8B and some splits above Seam 9, might locally exceed 0.60 m in thickness but are not currently deemed to be persistent enough to present mineable targets across the deposit.

The distributions of the main Gates coal seams are illustrated in Figure 4-5 while correlations of each of these coal seams are shown in Figures 5-1 to 5-3. Thickness ranges for the coal seams, together with mining section thicknesses extracted from those seams, are presented in Table 5-1. There is no evidence of thickening or thinning of coal seams due to structural deformation.

Table 5-1: North Block Coal Seam & Mining Section True Thickness Ranges

Seam	Seam Thickness (m)		Mining Section (m)		Mining Section Average Thickness
	Overall Minimum	Overall Maximum	Min. (>0.60 m)	Max	>0.6 m
9	0.22	1.20	0.66	0.71	0.73
8	2.85	3.37	2.85	3.37	3.12
6D	0.37	0.77	0.61	0.77	0.70
$6C_L$	0.21	0.60	0.60	0.60	0.60
6B	1.68	2.76	1.68	2.76	1.96
6L	1.08	3.28	1.08	3.28	1.72
5	3.39	8.34	3.39	8.34	5.87
4_U	0.34	0.84	0.60	0.84	0.71
3D	0.34	0.72	0.66	0.72	0.68
$3B/3B_L$	1.25	1.44	0.73	1.44	1.37
2A	0.52	0.85	0.61	0.85	0.72
1	1.49	4.39	1.49	4.39	3.41

Note: The above seam true thicknesses are from drill data only.

5.1.1 Seam 1

This is the basal seam within the Gates Formation and occurs approximately 40 m to 46 m above the Moosebar Formation contact and is persistent throughout the property. Seam 1 is consistent throughout the North Block. The true seam thicknesses are the same as those used for the mining sections and range from 1.49 m (HR11-01) to 4.39 m (HR08-14).

Seam 1 is characterized by a thick, comparatively clean lower section and a thinner (0.50 m to 1.50 m) upper section that contains one to two thin, carbonaceous claystone bands (Figure 5-1). The top 0.30 m to 0.40 m of the seam appears to increase in ash toward the southeast end of the block. The roof of the seam is generally composed of carbonaceous claystone to claystone, while the floor comprises 0.40 m to 0.50 m of claystone with carbonaceous bands that overlie the typically fine- to medium-grained, resistant sandstone of the Torrens member. This seam correlates to Belcourt South's Seam 1 lower.

The inter-seam separation between Seams 1 and Zone 2 varies between approximately 14 m to 17.5 m. The strata consist of almost equal thicknesses of interlaminated, fine-grained sandstones and siltstones at the bottom, fine- to medium-grained, calcareous sandstone in the middle and interbedded siltstone and claystone at the top.

5.1.2 Zone 2 (Seam 2A)

Coal Zone 2 typically varies from approximately 3 m to 5 m thick. It consists of one main, relatively clean, basal coal split (2A) overlain by three, thin, coaly splits separated from one another by thin rock bands (Figure 5-1). Only Seam 2A is considered to be potentially economic. It always exceeds minimum thickness criteria except in the middle of the block (as seen in HR08-14 and BD7814). Where this seam exceeds minimum thickness cut-off, it ranges from 0.61 m (HR08-01) to 0.85 m (HR11-01) thick.

Zone 2 and Zone 3 are separated by approximately 6 m to 20 m of interlaminated siltstones and sandstones and beds of bioturbated, fine-grained, calcareous sandstone. The inter-seam thickness increases from north to south.

5.1.3 Zone 3 (Seams 3B/3B$_L$ and 3D)

This coal zone is composed of four coal splits separated by rock bands of variable thickness. In ascending order, the coal splits are named 3A to 3D (Figure 5-1). The overall thickness of the zone varies from 7.5 m (HR08-07) to 13.5 m (HR11-01): most of this thickness range is due to variations in the 3C/3D rock band. Only Seams 3B and 3D; are considered to be of potential economic importance.

Seam 3B lies approximately 1 m to 2 m above 3A. A thin rock band is often present in the middle of the seam; when present, it ranges between approximately 0.15 m to 0.39 m in thickness. Northwest from BD7814, only the lower portion of this seam is considered to be potentially economic and is referred to as Seam 3B lower (3B$_L$); where it exceeds the thickness minimum, this split ranges from 0.73 m (HR08-01) to 0.75 m (HR08-14) thick. To the southeast of BD7814, the mining section is represented by the full 3B coal split where it ranges in thickness from 1.25 m (HR11-03) to 1.44 m (HR11-01). This seam is correlated with Seam 3 at Belcourt South.

Seam 3D is located approximately 2 m and 7 m above 3B. It forms a clean seam which ranges from 0.34 m (HR08-07) to 0.72 m (HR11-03) in thickness, but forms a mining section only in the central portion of the block, between BD7814 (0.66 m) and HR11-03 (0.72 m).

The inter-seam separation between Zone 3 and Seam 4 ranges from approximately 57 m in the northwest to approximately 30 m around Holtslander Creek, to approximately 18.5 m in the southeast. The lower half of the sequence is predominantly composed of calcareous, fine-grained sandstones with siltstone inter-beds; occasional conglomeratic lenses are present in the northwestern portion of the block. The sandstone-siltstone sequence is overlain by approximately 9 m to 10 m of claystone with several thin coal splits; this coaly horizon persists throughout the southern half of the North Block and throughout the Middle and South Blocks. This, in turn, is followed by fine-grained, bioturbated, calcareous sandstone which is in contact with a carbonaceous zone below Seam 4.

5.1.4 Seam 4

Seam 4 typically consists of a lower, high-ash coaly horizon, referred to as 4 lower (4$_L$), overlain by a relatively clean coal split called 4 upper (4$_U$) (Figure 5-2). (Only in the South Block is 4$_L$ incorporated into a mining section with 4$_U$). Other than in the northwestern portion of the North Block, Seam 4$_U$ always forms a mineable thickness, ranging from 0.60 m (HR08-01) to 0.84 m (HR11-03).

Seam 4 is separated from Seam 5 by approximately 8.5 m to 19.5 m of clean, fine-grained, calcareous sandstones with occasional silty laminae. This sequence thickens from northwest to southeast.

5.1.5 Seam 5

Seam 5 is one of the most consistently developed coal seams on the property and maintains potentially mineable thickness over the entire length of the Huguenot deposit. Within the North Block, prospective mining sections vary from 3.39 m (HR08-07) to 8.34 m (HR11-03) although most

intersections are between 5 m and 6 m thick. Seam 5 is characterized by a relatively clean lower section (typically, 3.0 m to 3.5 m) and an upper section which contains one to three carbonaceous rock or poor coal bands (Figure 5-2). The most distinctive of these is situated immediately above the lower section and ranges in thickness between approximately 0.15 m and 0.29 m. One to two thinner rock bands sit above this horizon. Both the floor and roof lithologies of Seam 5 consist of coaly/carbonaceous claystone with occasional thin coal stringers. Seam 5 correlates with Seam 5 at Belcourt South.

The inter-seam separation between the top of Seam 5 and the bottom of Zone 6 varies between approximately 12.5 m and 27.5 m. It is thinnest around drillhole HR08-01 but thickens to the northwest and southeast. The sequence is commonly composed of inter-layered claystone and carbonaceous claystone with minor siltstone and fine-grained sandstone lenses. In the southeast, where the sequence is thickest, the inter-seam sequence is dominated by a fining-upward sequence of coarse- to medium-grained sandstone; thin conglomeratic lenses may also be present.

5.1.6 Zone 6 (Seams 6L, 6B, 6C$_L$ and 6D)

Coal Zone 6 contains five main coal splits separated by rock bands and, often, thin coal plies. This zone exhibits variable thickness. In most of the drillholes, it is approximately 20 m thick, although it thickens to about 27 m in HR08-01, due to the presence of a sandstone lens between the 6A and 6B coal splits. In ascending order, the coal splits of interest are named 6L, 6A, 6B, 6C, and 6D. The vertical separation between these splits varies across the block. In the north, Seams 6L and 6A form a lower coal interval while Seams 6B, 6C, and 6D form an upper interval, with a 9 m (HR08-07) to 16 m (HR08-01) 6A/6B separation. The thickness between the upper and lower coal intervals decreases towards the central parts of the block such that, around Holtslander Creek, the main coal splits have a more regular distribution through the zone, being separated from one another by between approximately 2 m and 5 m. South of Holtslander Creek, 6L separates from 6A, which appears to stay closer to 6B.

For previous resource estimations (Perry & Morris 2010), the 6B-6D coal interval was considered to form two mining sections. In the northwest of the block, the lower coal split of Seam 6C (6C$_L$) was added to Seam 6B to form the composite mining section 6BC$_L$. In the central and southern areas, the interval between 6B and 6C$_L$ thickens such that each coal split was evaluated separately; Seam 6D was always reported separately. However, for resource estimations included herein, each coal split is evaluated separately. It should be noted that in most practical mining scenarios, the 6BCD interval represented in the northwest of the block would almost certainly be mined in its entirety. Here, the 6B – 6D interval ranges between 3.84 m (HB08-6C-A) and 5.71 m (HR08-01) in thickness. As the 2008 “bulk” sample was taken within the northwest part of the North Block, the entire 6BCD interval was sampled and tested as one continuous mining section (see Section 6). The 6BCD interval correlates with 6 Upper at Belcourt South.

Seam 6L is the lowest seam of potential economic importance within this Coal Zone 6. Within the North Block, 6L forms a concentration of coal splits and highly carbonaceous claystone and coaly bands that increase in coal content towards the southeast (Figure 5-2). This interval was cored during 2008 (HB08-6A-A) in order to confirm its potential for providing a mining section. Throughout most of the block, the 6L mining section is composed of two coal splits separated by a thin (approximately 0.15 m to 0.30 m) rock band. The mining sections vary in thickness from 1.08 m (HR08-10) to 3.28 m (HR11-03); they increase in thickness towards the southeast, eventually

incorporating higher coal splits due either to a thickening of these splits or thinning of the intervening rock band, or both. The 6L horizon continues to degrade northwesterly to become a carbonaceous-coaly zone at Belcourt South (BD7801).

Seam 6A in the northern part of the block is situated just above Seam 6L, being separated only by a thin (<1 m) rock band. In the central and southern portions of the block, 6L and 6A are separated by approximately 3 m to 5 m. Seam 6A is characterized by a "main", central, coal split with either thinly interlayered coal and rock bands, or poor coal bands in the immediate roof and floor. It meets mining thickness criteria in the northwest of the block (0.99 m in HR08-06 and 1.11 m in HT08-6A-2) but has not been included in the resource estimates presented herein. The 6A-6B interval is quite variable in thickness, ranging from 8.8 m (HR08-06) to 15.6 m (HR08-01) in the north to 2.4 m (BD7814) in the center of the North Block. It is poorly developed or absent in the southern half of the North Block. At Belcourt South, 6A Seam is called 6 Lower.

Seam 6B consistently forms a mining section throughout the North Block. Typically, it has a clean lower half and an upper half that contains one to two thin rock bands (Figure 5-3); the thickness of 6B ranges from 1.68 m (HR08-02) to 2.76 m (HR11-03). Northwest of Holtslander Creek, the 6B-6C parting deceases to between approximately 0.23 m to 0.30 m such that the lower split of 6C could be added to 6B, resulting in the composite mining section, $6BC_L$. Such a mining section would range in thickness from 2.41 m (HB08-6C-B) to 3.32 m (HR08-01)

Seam 6C is usually composed of two coal splits separated by a relatively thin rock band. The seam ranges from 0.85 m (HB08-6C-B) to 1.58 m (HR08-14) in thickness. The lower coal split ($6C_L$) represents good coal while the upper split ($6C_U$) is high in ash. The $6C_L$ split meets the 0.60 m thickness cut-off only in HD11-11 and HD11-12. As stated above, data from other drillholes demonstrates instances where thinner intersections of $6C_L$ could be incorporated with Seam 6B to form a $6BC_L$ mining section. Where incorporated into the composite mining section $6BC_L$, the $6C_L$ split varies between approximately 0.23 m and 0.58 m in thickness.

Seam 6D is the uppermost seam in Zone 6. It is a relatively clean seam which occasionally has a thin band of high-ash coal or coaly rock near its center. This seam is consistently developed throughout the block although thicknesses locally drop below mining section cut-off (HR08-03 at 0.42 m, and BD7814 at 0.54 m). Mining sections vary between 0.61 m (HR08-07) and 0.77 m (HR08-01 and HB08-6-B).

The inter-seam separation between Zone 6 and Zone 8 typically ranges between approximately 66 m and 79 m. The inter-seam strata are composed of a sequence of fine-grained sandstones with siltstone inter-beds which fine upward into a claystone to carbonaceous claystone sequence. It should be noted that within the claystone sequence, several uneconomic coal splits and a series of small carbonaceous bands are present; these are loosely referred to as Zone 7. The strata above Zone 7 contain occasional sandstone and siltstone interbedded lenses.

5.1.7 Zone 8 (Seam 8)

This coal zone is composed of two component seams called 8 and 8B. Overall, this zone ranges in thickness from approximately 5 m (HR08-06) to 7 m (HR11-11). In previous reports on the Huguenot property prepared by or on behalf of Colonial, Seam 8 was referred to as Seam 8A.

Seam 8 ranges from approximately 2.85 m (HD11-11) to 3.37 m (HB08-8A and HB08-8-C) and is characterized by relatively thick lower and upper coal splits, separated by a rock band (Figure 5-3).

The sum of the upper and lower coal splits range in thickness from 2.45 m (HR08-04) to 2.93 m (HB08-8A). The lower coal split varies in thickness from approximately 1.20 m to 2.10 m, contains a 0.15 m to 0.25 m rock band near its top and has a thick, relatively clean, bottom section. The main rock band varies between approximately 0.33 m and 0.73 m and sometimes contains a thin coal ply. The upper split ranges in thickness from approximately 0.80 m to 1.28 m, has a clean top half and a high-ash bottom section due to one or two thin rock bands. A thin rider is situated approximately 0.21 m to 0.44 m above the main seam. It has been omitted from all Seam 8 mining sections with the exception of HD11-11, where it lies closer to the main seam and, therefore, has been included.

Although there are instances where the internal rock band exceeds GSC Paper 88-21 guidelines (Hughes, et al, 1989), in most practical mining scenarios Seam 8 can be expected to be mined in its entirety. The 2008 bulk sample treated the entire coal seam accordingly. Seam 8B is situated approximately 1.5 m to 4 m above Seam 8 (Figure 5-3). It is a thin, relatively clean coal split that always falls below the 0.60 m true thickness cut-off.

The separation between Zone 8 and Seam 9 ranges between approximately 12.5 m and 19 m, although for most of the block it is at the higher end of this range. The strata consist of fine- to medium-grained, siliceous sandstone which grades upward into a claystone/siltstone sequence, followed by a carbonaceous interval which forms the floor of Seam 9.

5.1.8 Seam 9

Seam 9 is a thin coal seam that tops a coaly to carbonaceous interval (Figure 5-3). Mining thicknesses are restricted to the southern half of the North Block and range from 0.66 m (BD7814) to 0.71 m (HD11-11).

The separation between Seam 9 and Zone 10 is approximately 18 m and consists of variable thicknesses of interbedded siltstone and claystone with sandstone horizons.

5.1.9 Zone 10

Zone 10 has been intersected only in holes HD11-11 and HD11-12 where it comprises a pair of thin coal seams separated from one another by approximately 1 m. Neither of these thin seams offers economic potential.

5.1.10 Structure

The structural geology of the North Block is illustrated on the structure contour maps for Seams 1, 5 and 8 (Figure 5-4) and is shown on the cross-sections (Figures 5-5 to 5-8). The North Block sits structurally above the Holtslander North Thrust Fault. Here, Gates Formation coal measures occupy the western limb of a broad synclinal structure called the Holtslander Synclinorium. In the northwest, the strata are near homoclinal with moderate (approximately 45°) northeasterly dips. To the south, the strike swings easterly such that, in the southeast, dips are to the north. They are also steeper in the southeast, reaching approximately 50°. Dip values decrease at depth to between 30° and 35°, reflecting proximity to the axial zone of the syncline.

5.2 MIDDLE BLOCK

A total of 10 coal seams and/or coal zones are present within the Middle Block. All seams/coal zones with the exception of Coal Zone 7 provide potentially mineable coal intervals. The main coal seams are Seams

1, 5, 6L, and 8; these are the thickest and most laterally continuous of the coal seams. Apart from Seam 10 (locally high in ash) and Seam 6D (usually high ash) all other, minor seams (i.e., 2A, 3B, 4_U, 6L, 6D and 9) meet seam thickness or coal/rock ratio minimums across the Middle Block. Where Seams 10 and 6D are not considered potentially mineable, they can still be traced geologically. Coal seams in the Middle Block are terminated towards the south by the Holtslander South Thrust Fault such that the lowermost seams only extend as far south as the central portion of the block. Only seams stratigraphically higher than Seam 6B are present in the southern end of the block.

The distributions of the main Gates coal seams are illustrated in Figure 4-4 while correlations of each of these coal seams are shown in Figures 5-9 to 5-11. Thickness ranges for the coal seams, together with mining section thicknesses extracted from those seams, are presented in Table 5-2. Occasional fault repeats are present in the section as are some instances of fault-thinning. Seam thicknesses provided below exclude any fault-thickened or -thinned values.

Table 5-2: Middle Block Coal Seam & Mining Section True Thickness Ranges

Seam	Seam Thickness (m)		Mining Section (m)		Mining Section Average Thickness
	Overall Minimum	Overall Maximum	Min (>0.60 m)	Max	>0.6 m
10	0.60	0.98	0.60	0.98	0.73
9	0.64	0.96	0.64	0.96	0.76
8	1.27	2.71	1.27	2.71	1.91
6D	0.48	0.83	0.66	0.83	0.74
6B	0.64	1.24	0.64	1.24	0.89
6L	1.86	4.94	1.86	4.94	3.28
5	4.37	9.71	4.37	9.71	6.45
4_U	0.75	1.39	0.75	1.39	1.04
3B	0.61	0.97	0.61	0.97	0.83
2A	0.70	2.70	0.70	2.70	1.20
1	3.77	9.13	3.77	9.13	7.16

Note: The above seam true thicknesses are from drill data only.

5.2.1 Seam 1

In the Middle Block, Seam 1 is essentially the same as seen in the North Block, that is, it is a consistently developed seam characterized by a thick, comparatively clean lower section and a thinner upper section that contains one to two thin, carbonaceous claystone bands (Figure 5-9). Mining sections range from 3.77 m (HR11-09) to 9.13 m (BD7906) and the seam thickens from north to south. Thinner Seam 1 sections, similar to that seen in the southeastern portion of the North Block (HR11-01) do not appear to be present. Seam 1 is not present in the southern half of Middle Block as it is truncated to the south, against the Holtslander South Thrust Fault. Inter-seam separation between Seams 1 and 2 measures approximately 2.5 m to 8 m. The strata consist of a coarsening-upward sequence of claystones with some thin coaly horizons at the base, to interlaminated, fine-grained sandstones and siltstones at the top.

5.2.2 Zone 2 (Seam 2A)

Coal Zone 2 typically varies from approximately 3.75 m to 4.5 m thick and is similar to the North Block in that it consists of one main, relatively clean, basal coal split (2A) overlain by three, thin, coaly splits separated from one another by thin rock bands (Figure 5-9). Only Seam 2A is considered to be of potential economic importance. It exceeds minimum thickness criteria across the block, ranging from 0.70 m (HR11-06) to 2.70 m (HR11-12) thick. As with Seam 1, it is not present in the southern half of the block as it terminates against the Holtslander South Thrust Fault.

Zone 2 and Zone 3 are separated by between approximately 3.8 m to 22 m of interlaminated siltstones and sandstones. Claystone horizons occur a few metres below Zone 3.

5.2.3 Zone 3 (Seam 3B)

This coal zone is composed of four coal splits separated by rock bands of variable thickness. In ascending order, the coal splits are named 3A to 3D (Figure 5-9). The overall thickness of the zone varies from approximately 5.3 m (HR11-09) to 6.3 m (HLD11-03). Within the Middle Block, only Seam 3B is considered to be of economic importance.

Seam 3B lies approximately 1.5 m above 3A. It varies between 0.61 m (BD7906) to 0.97 m (HLD11-03) in thickness and exhibits similar characteristics to those in the southern half of the North Block, particularly the presence of a thin rock band near the middle of the seam.

The inter-seam separation between Zone 3 and Seam 4 ranges from approximately 35 m in the northwest to approximately 50 m in the central-south part of the block. This is a mixed sequence of sandstone with occasional thin conglomeratic lenses, and inter-bedded siltstone and claystone horizons. At Pika Creek, the sandstones likely represent channels as they vary from only a few metres in thickness to approximately 16 m to 20 m over short distances (as may be seen in HLD11-03, HR11-09 and HR11-06). Such thick sandstones have not yet been encountered elsewhere within this sequence. Typically, a coaly zone consisting of three to four coal splits over a 3 m to 5 m interval is present just below Seam 4. This horizon (named CZ4L) persists throughout the southern half of the North Block and throughout the Middle and South Blocks.

5.2.4 Seam 4

Seam 4 typically consists of a lower, high-ash coaly horizon, referred to as 4 lower (4_L) overlain by a relatively clean coal split called 4 upper (4_U) (Figure 5-9). Throughout the Middle Block, Seam 4_U always forms a mineable thickness, ranging from 0.75 m (BD7906) to 1.39 m (HR11-02).

In the northern part of the Middle Block, Seam 4 is separated from Seam 5 by approximately 26 m. This comprises a coarsening-upward sequence of siltstone, silty sandstones, and sandstones, eventually succeeded by 2 m to 4 m of interbedded claystone/siltstone and sandstone that immediately underlies Seam 5. The inter-seam sequence thins to the southeast, such that, in the mid-portion of the block, it is approximately 12.5 m thick. Here, while the sequence still coarsens upward, the strata are finer grained and the sandstones are essentially missing.

5.2.5 Seam 5

Seam 5 mining sections vary from 4.37 m (HD11-04) to 9.71 m (BD7805). From north to south, this seam extends approximately three-quarters of the way through the Middle Block and terminates against the Holtslander South Thrust Fault southeast of drillholes HD11-04 and BD7805.

As seen in the North Block, Seam 5 is characterized by a relatively clean lower half and an upper half that contains one to three carbonaceous rock or poor coal bands (Figure 5-10). The most distinctive of these is situated immediately above the lower half and ranges in thickness between approximately 0.15 m and 0.29 m. One to two thinner rock/poor coal bands sit above this, the most distinctive of which is near the top of the seam. Both floor and roof lithologies of Seam 5 consist of coaly/carbonaceous claystone with occasional thin coal stringers.

The inter-seam separation between the top of Seam 5 and the bottom of Zone 6 varies between approximately 12 m and 50 m although it mostly varies between 23 m and 36 m. It is thinnest around drillhole BD7805 and thickest in drillhole HD11-08. The sequence is commonly composed of inter-layered claystone, siltstone and sandstone lenses; thicker sandstone units, possibly representing channel sands are often present at differing horizons within this sequence. A thin coal horizon may occasionally be present near the middle of the sequence.

5.2.6 Zone 6 (Seams 6L, 6B and 6D)

The most important coal seams within Coal Zone 6 are Seams 6L, 6B and 6D. The other seams (6A and 6C) are often represented but, where present, they either do not attain potentially economic thickness or contain too many (or thick) rock bands. This coal zone varies in thickness from approximately 30 m to 49 m; the wide thickness range is often due to the presence of sandstone lenses. Seam 6L is separated from 6A - 6D; this separation typically comprises 65 % to 75 % of the overall zone thickness.

Seam 6L is the lowest seam of potential economic importance within Coal Zone 6. It forms a far more “coherent” coal seam than is present throughout most of the North Block, although coal splits are often present in the roof and/or floor. Throughout most of the block, the 6L mining section contains two to three rock bands. Mining section thickness varies from 1.86 m (BD7805) to 4.94 m (HR11-08).

Seam 6B, while thin, consistently forms a mining section throughout the block. It is a relatively clean seam and ranges in thickness from 0.64 m (HR11-04) to 1.24 m (HR11-15).

Seam 6D is the uppermost seam in Zone 6. It forms a mining section only at the southeastern end of the property in drillholes BD7805 (0.66 m) and HD11-03 (0.83 m). Figures 5-10 and 5-11 depict seams in Zone 6.

The inter-seam separation between Zone 6 and Zone 8 typically ranges between approximately 64 m and 86 m. The inter-seam strata are composed of a sequence of fine-grained sandstones with siltstone inter-beds, and interbedded siltstone and claystone. A number of coal splits are present over a wide interval; these form a loosely defined Zone 7. None of the Zone 7 coal splits are currently considered to have economic potential.

5.2.7 Zone 8 (Seam 8)

This coal zone is composed of two component seams called 8 and 8B. Overall, this zone ranges in thickness from approximately 5 m (HR08-06) to 8 m (HR11-11).

Seam 8 ranges from approximately 1.27 m (HR11-04) to 2.71 m (HLD11-01); in most drillhole intersections it is characterized by a relatively thick lower coal split, and a thinner, higher ash, upper coal split (Figure 5-11). In the northern half of the Middle Block, Seam 8 is essentially the same as that described for the North Block. In the southern half, rock bands in the mid- and upper

parts of the seam thicken, such that the potential mining sections need to be reduced in thickness to eliminate one or more rock bands. The thin rider seen in the North Block is sometimes present. Seam 8B is not present in the Middle Block.

The separation between Seam 8 and Seam 9 ranges between approximately 13 m to 20 m from north to south, along the entire length of the block. The strata mostly consist of finer-grained lithologies, with occasional thin sandstone horizons, except for the central area where thick sandstone occupies the lower part of this sequence.

5.2.8 Seam 9

Seam 9 is a consistent thin coal seam that occurs throughout the block. One or two thin coal splits are often present in the roof (Figure 5-11). Mining thicknesses ranges from 0.64 m (HR11-04) to 0.96 m (HR11-07).

The separation between Seam 9 and Seam 10 varies from approximately 7.5 m to 12.5 m and typically comprises variable thicknesses of interbedded siltstone and claystone with sandstone horizons which sometimes demonstrate a gentle coarsening-upward sequence until just below Seam 10.

5.2.9 Seam 10

Seam 10 has been intersected across the Middle Block. It forms a single seam with one or two very thin rock bands and ranges in thickness from 0.60m (HR11-11) to 0.98m (HD11-06).

5.2.10 Structure

The structural geology of the Middle Block is illustrated on the structure contour maps for Seams 1, 5 and 8 (Figure 5-12) and is shown on the cross-sections (Figures 5-13 to 5-19). The Middle Block sits structurally below the Holtslander North Thrust and above the Holtslander South Thrust. The coal measures occupy the western limb of a broad synclinal structure called the Holtslander Synclinorium. At the northern end of the Middle Block the strata dip northeasterly, between 45° and 55°. Dip values increase to between 50° and 85° towards the center of the block, decreasing to between 30° and 65° at the southern end. A northerly-trending, open, upright, anticline-syncline pair is mapped along the eastern edge of the thrust slice. These structures are interpreted to affect the Holtslander South Thrust as well as the overlying coal measures.

5.3 SOUTH BLOCK

Of the 10 coal seams and/or coal zones present within the South Block all except 3, 7 and 10 provide potentially mineable coal intervals. The thickest and most laterally continuous of the coal seams are Seam 1-Zone 2, 4_{U+L}, 5, and 6L; Seams 6B, 6D, 8 and 9 are present in the southern half of the block. Only Seam 3D is represented from Coal Zone 3 and, although it can be traced geologically across the block, it never forms a mining section. The distribution of the Gates coal measures within the South Block is largely determined by the presence and attitude of the Holtslander South Thrust Fault. Surface traces of the stratigraphically higher coal seams (above 6L) are progressively terminated towards the north by this structure; this fault also forms the northern limit of the coal seam traces and of the South Block as defined herein.

The distributions of the main Gates coal seams are illustrated in Figure 4-4 while correlations of each of these coal seams are shown in Figures 5-20 and 5-21. Thickness ranges for the coal seams, together

with mining section thicknesses extracted from those seams, are presented in Table 5-3. Occasional fault repeats are present in the section as are some instances of fault-thinning. Seam thicknesses provided below exclude any such fault-thickened or -thinned values. Structurally thickening other than by recognisable fault repeats has not been described within this block.

Table 5-3: South Block Coal Seam & Mining Section True Thickness Ranges

Seam	Seam Thickness (m)		Mining Section (m)		Mining Section Average Thickness
	Overall Minimum	Overall Maximum	Min. (>0.60 m)	Max	>0.6 m
9	0.42	0.62	0.62	0.62	0.62
8	0.64	1.95	0.64	1.95	1.11
6D	0.48	0.89	0.89	0.89	0.89
6B	0.64	1.31	0.64	1.31	0.98
6L	1.48	5.16	1.48	5.16	3.26
5	2.59	6.23	2.59	6.23	4.53
4_{U+L}	1.43	2.23	1.43	2.23	1.91
Zone 2	1.69	5.10	1.69	5.10	3.46
1	0.64	3.36	0.64	3.36	2.77

Note: The above seam true thicknesses are from drill data only.

5.3.1 Seam 1

Seam 1 mining sections range from 0.64 m (HD11-05) to 3.36 m (HD11-02), although throughout most of the South Block this seam exceeds 2.72 m in thickness. It is thinnest in the northern third of the block, where it ranges between 0.62 m and 1.44 m (HD11-07). Seam 1 is essentially the same as seen in the other two blocks (Figure 5-20), with the exception of HD11-05, where the seam is considerably thinner; it is not clear if this is due to stratigraphic or structural reasons.

Throughout the South Block, Zone 2 often lies in very close proximity to Seam 1, with the two coal horizons essentially forming a single coal zone. The thickest interval between the two seams is 2.30 m (HD11-05) but, typically, there is a rock band less than 0.40 m thick.

5.3.2 Zone 2

Coal Zone 2 typically consists of three main coal splits, separated by two rock bands; other minor rock bands may be found within each of the main coal splits. Individual coal split and rock band thicknesses vary, but the zone maintains reasonably constant characteristics throughout all of the drilled intersections (Figure 5-20). Overall zone thickness ranges from 1.69 m (HD11-07) to 5.10 m (HR11-05 and BD7914).

Zone 2 is separated from Seam 4 by approximately 60 m to 105 m. The lower strata are composed principally of interlayered sandstone and conglomerate while the upper strata comprise a mixed sequence of interbedded siltstone, claystone and sandstone. Coal Zone 3 is represented only by Seam 3D, which is always too thin to form a mining section. Seam 3D is situated in the upper parts of the sequence, approximately 9 m to 23 m below Seam 4. Seam 3D is overlain by the coaly zone referred to as CZ4L; the separation between this coaly zone and Seam 4 increases southward from approximately 2 m in HD11-05 to 13 m in HD11-02.

5.3.3 Seam 4

In South Block, Seam 4 is a combination of the upper and lower splits (Figure 5-20). The lower split typically consists of a lower, high-ash coaly horizon that is either composed of several, thinly-interlayered coal splits and rock bands, or two coal splits separated by one thin rock band, plus a thin rock band that separates 4_L from 4_U. Typically, this latter rock band is only one or two decimetres thick. The upper coal split is comparatively clean of rock bands. Overall, Seam 4_{U+L} ranges in thickness from 1.43 m (BD7914) to 2.23 m (HD11-07).

At the northern end of this block, Seam 4 is separated from Seam 5 by a coarsening-upward sequence of siltstone, silty sandstones, and sandstones, overlain by approximately 2 m to 4 m of interbedded claystone and siltstone that underlies Seam 5. Over much of the block, this inter-seam sequence is around 15.5 m thick but it thins rapidly to the southeast, such that south of HD11-05 the thickness stays within the range of approximately 2.0 m to 4.5 m.

5.3.4 Seam 5

Seam 5 mining sections vary from 2.59 m (HD11-01) to 6.23 m (HD11-05). As seen throughout the other blocks, this seam is characterized by a relatively clean lower half and an upper half that contains one to three carbonaceous rock and poor coal bands (Figure 5-20). The most distinctive of these is situated immediately above the lower half of the seam and ranges in thickness between approximately 0.15 m and 0.29 m. Seam 5 thins from north to south, due to the loss of the uppermost coal split(s) and associated rock band(s). The seam floor comprises a coaly zone consisting of thin coal splits and carbonaceous claystone.

The inter-seam separation between the top of Seam 5 and the bottom of Zone 6 (i.e. 6L) varies between approximately 31 m to 47.5 m, although most of the intersections extend over the narrower range of 31 m to 38 m. Seam 5 is overlain by a claystone. The bottom portions of the inter-seam sequence comprise claystone - siltstone unit that, in the south, contains a thin channel sandstone. This unit is overlain by a predominantly sandstone – siltstone, fining-upward sequence, with interbedded claystone at the top.

5.3.5 Zone 6 (Seams 6L, 6B and 6D)

Within the South Block, Seam 6L is the most important coal seam in Coal Zone 6. In the south, Zone 6 varies in thickness from approximately 32 m to 66 m. Most of this thickness range is attributed to the presence of sandstone lenses within the thicker intervals. Similar to the Middle Block, Seam 6L is separated from 6A - 6D; this separation typically comprises 75 % to 80 % of the overall zone thickness.

Seam 6L is the only seam of economic importance within Coal Zone 6 with mining section thickness varying from 1.48 m (BD7914) to 5.16 m (HD11-02). It typically contains two rock bands; one is located near the roof and the other just above the floor (Figure 5-21). The floor of this seam locally comprises a coaly zone consisting of thin coal splits and stringers and highly carbonaceous claystone.

Mining sections contained within the 6A to 6D interval are limited to the southern end of the block. Seam 6B, while thin, forms a mining section in drillholes HD11-01 and BD7914 and ranges in thickness from 0.64 m to 1.31 m respectively.

Seam 6D forms a mining section only in drillhole BD7914 (0.89 m).

From HD11-01, the inter-seam separation from the top of Zone 6 to Seam 8 is approximately 107 m. The sequence consists of interbedded claystone and siltstone with thin, fine-grained sandstone layers. A number of coal splits are present over a wide interval; these form a loosely defined Coal Zone 7; none of these coal splits are currently considered to have economic potential.

5.3.6 Seam 8

Seam 8 ranges from approximately 0.64 m (HD11-09) to 1.95 m (HD11-01). It is characterized by two coal splits separated by a rock band, each of similar thickness to one another. In some intersections, a thinner, rock band – coal split pair is present at the top of the seam (Figure 5-21); this might be equivalent to the rider seam seen elsewhere. Seam 8B is not present.

The separation between Seams 8 and 9 is approximately 15 m. The strata mostly consist of interbedded claystone and siltstone with occasional, thin, fine-grained sandstone layers.

5.3.7 Seam 9

Seam 9 is a consistent, thin coal seam that occurs throughout the block. One or two very thin rock bands may be present near the top of the seam. Seam thickness ranges from 0.42 m (HD11-04) to 0.62 m (HD11-01); the latter represents the mining section thickness for this block (Figure 5-21).

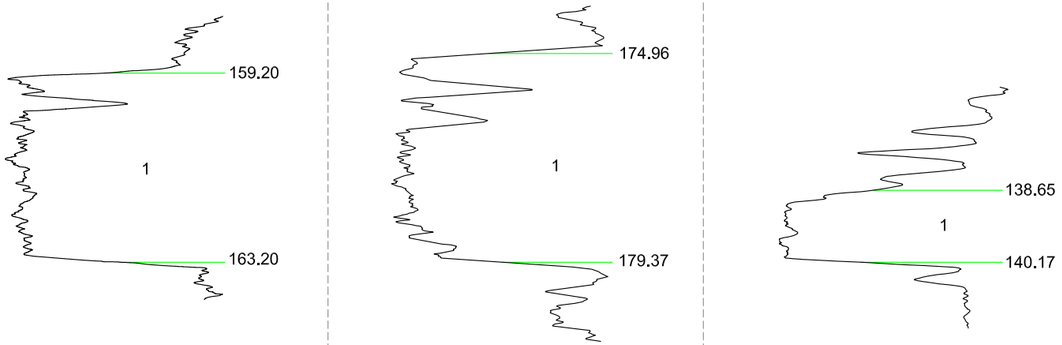
5.3.8 Structure

The structural geology of the South Block is illustrated on the structure contour maps for Seams 1, 5 and 8 (Figure 5-22) and is shown on the cross-sections (Figures 5-13 to 5-17). The South Block forms the lowest structural unit. Most of the coal seams are contained within steep, easterly dipping beds (60° and 75°) which steepen towards the south (70° and 85°). The beds become steeply overturned along their up-dip sections and form the eastern limb of an asymmetric anticline, the fold axis of which almost defines the western limit of the coal measures. This anticline may represent the eastern side of a large, northerly-trending, box fold.

NORTH BLOCK (SEAMS 1, 2A, 3B/3B$_L$ & 3D)

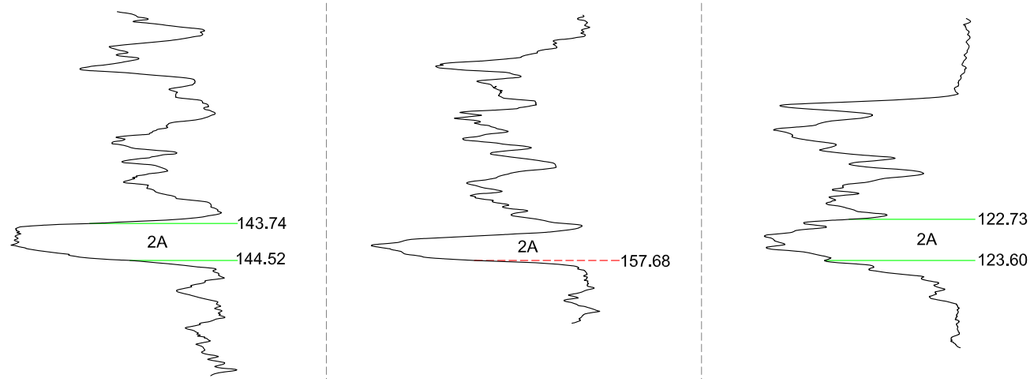
SEAM 1

HR08-07	HR08-14	HR11-01



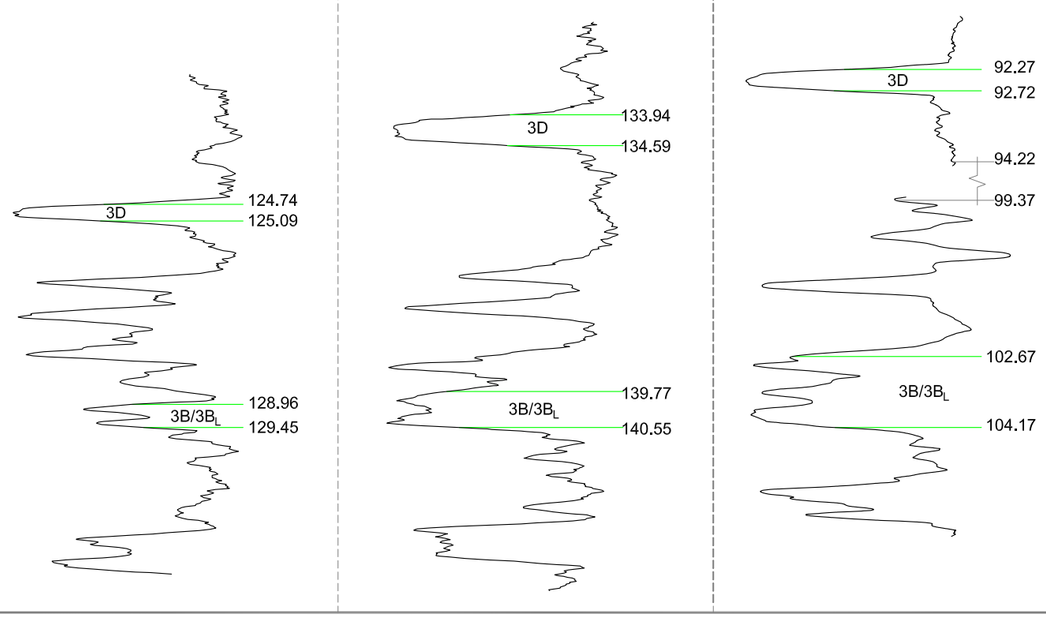
SEAM 2A

HR08-07	HR08-14	HR11-01



SEAMS 3B/3B$_L$ and 3D

HR08-07	HR08-14	HR11-01



LEGEND:

MINING SECTION

NON-MINING SECTION

NOTE:

SEAM TRACES TAKEN FROM
DETAILED DENSITY LOGS

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

Drawn by: CVS	SEAM CORRELATION (NORTH BLOCK) SHEET 1 OF 3
Checked by: JHP	
Approved by: JHP	
Revision No.,	
Dwg No., HugB-2011AR-2012SmCorr North 1 of 3	
Date: 2012-08-02	Document: 43-101 (2011AR)
	Figure No, 5-1

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NORTH BLOCK (SEAMS 4u, 5 & 6L)

SEAM 4u

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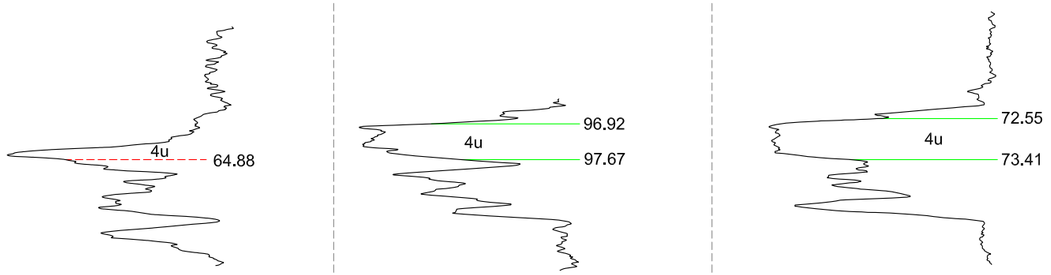
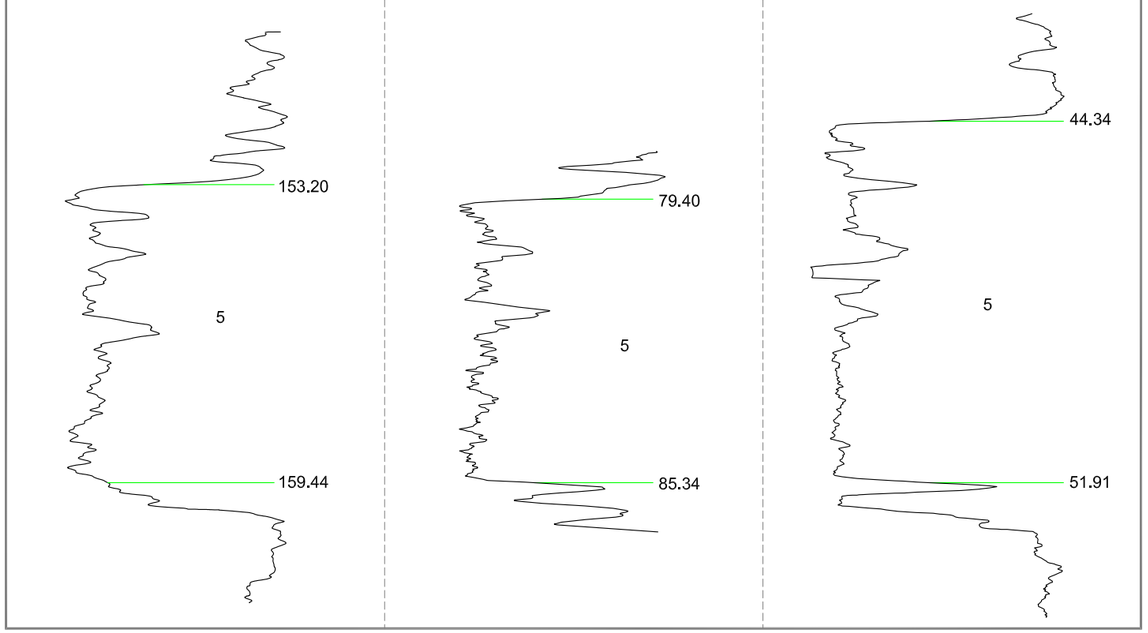


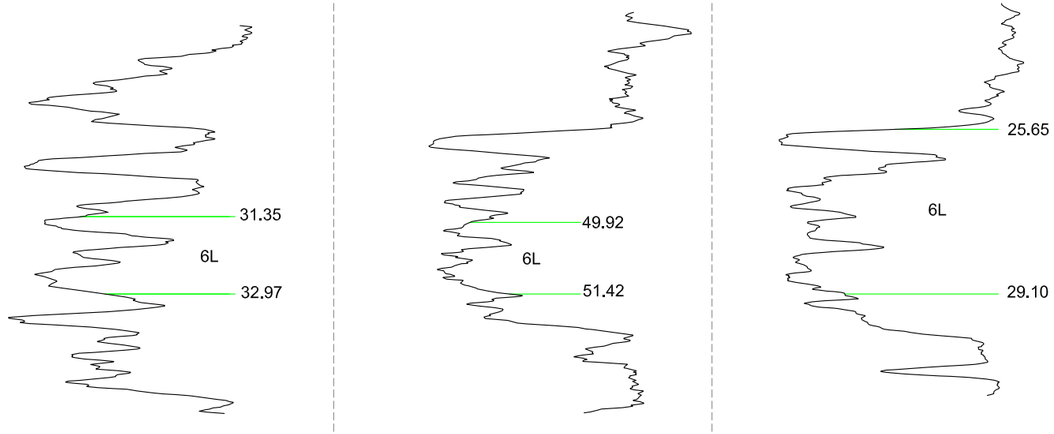
SEAM 5

HR08-06	HR08-14	HR11-01



SEAM 6L

HR08-07	HR08-14	HR11-03



LEGEND:

MINING SECTION

NON-MINING SECTION

NOTE:

SEAM TRACES TAKEN FROM
DETAILED DENSITY LOGS

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

Drawn by:	CVS
Checked by:	JHP
Approved by:	JHP
Revision No.	
Dwg No.	Hug8 2011AR 2012SmCorr North 2 of 3
Date:	2012-08-02

SEAM CORRELATION
(NORTH BLOCK)
SHEET 2 OF 3

Document: 43-101 (2011AR)

Figure No. 5-2

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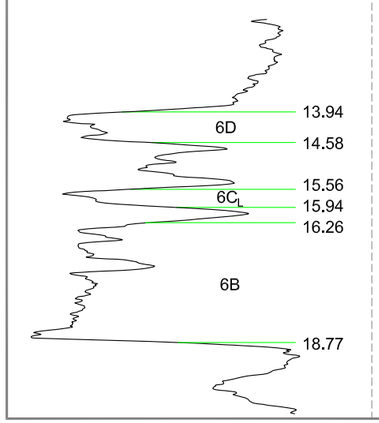
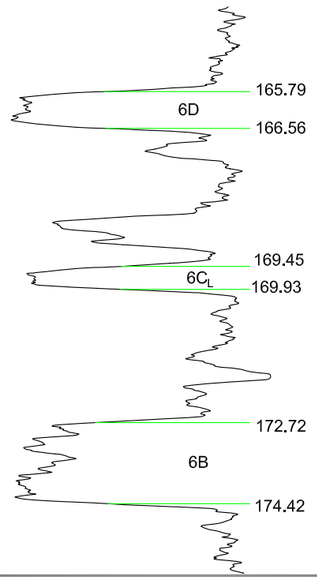
NORTH BLOCK (SEAMS 6B, $6C_L$, 6D, 8 & 9)

SEAMS 6B, $6C_L$ and 6D

HR08-07



HR08-02



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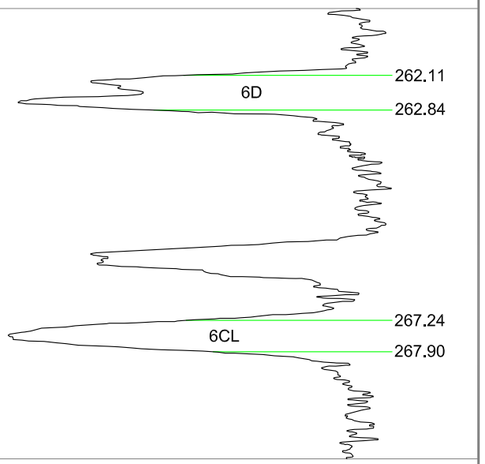

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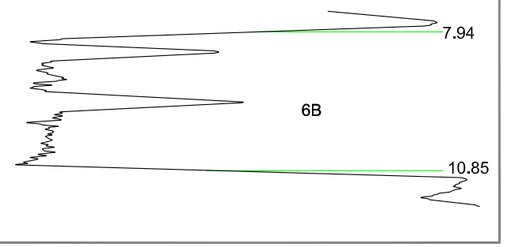
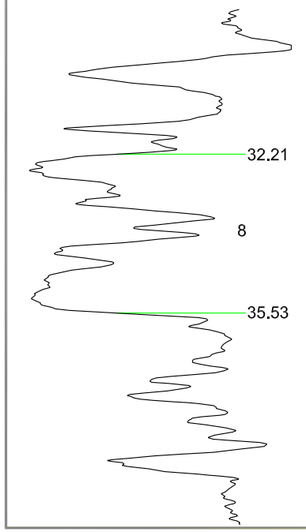


SEAM 8

HR08-06



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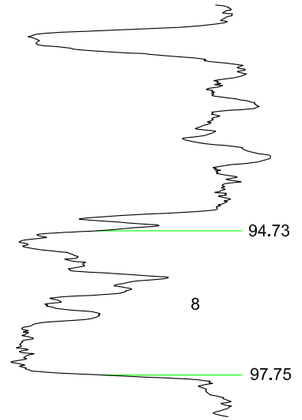

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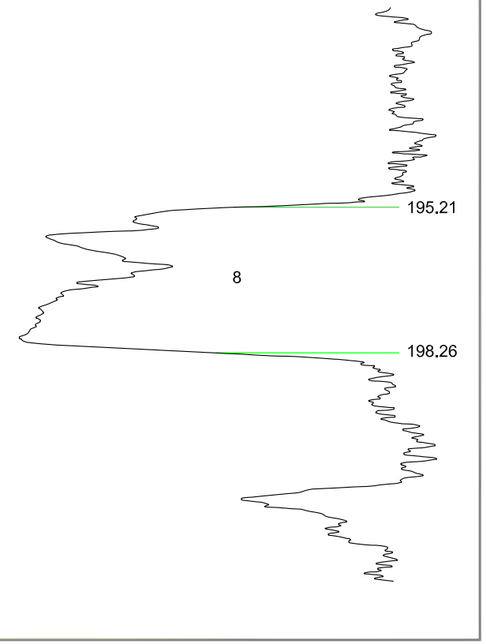

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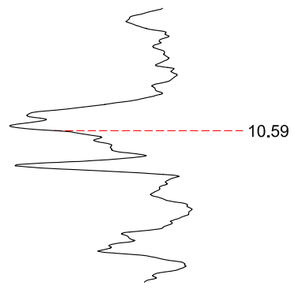

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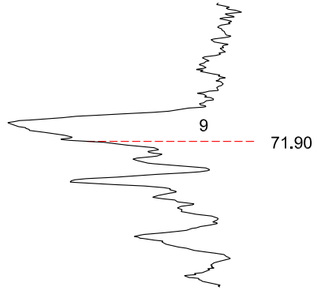

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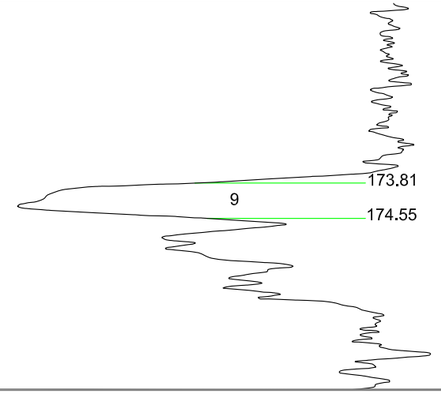

LEGEND:

MINING SECTION

NON-MINING SECTION

NOTE:

SEAM TRACES TAKEN FROM
DETAILED DENSITY LOGS

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

Drawn by:	CVS
Checked by:	JHP
Approved by:	JHP
Revision No.	
Dwg No.:	HugB 2011AR 2012SmCorr North 3 of 3
Date:	2012-08-02

SEAM CORRELATION
(NORTH BLOCK)
SHEET 3 OF 3

Document: 43-101 (2011AR)

Figure No. 5-3

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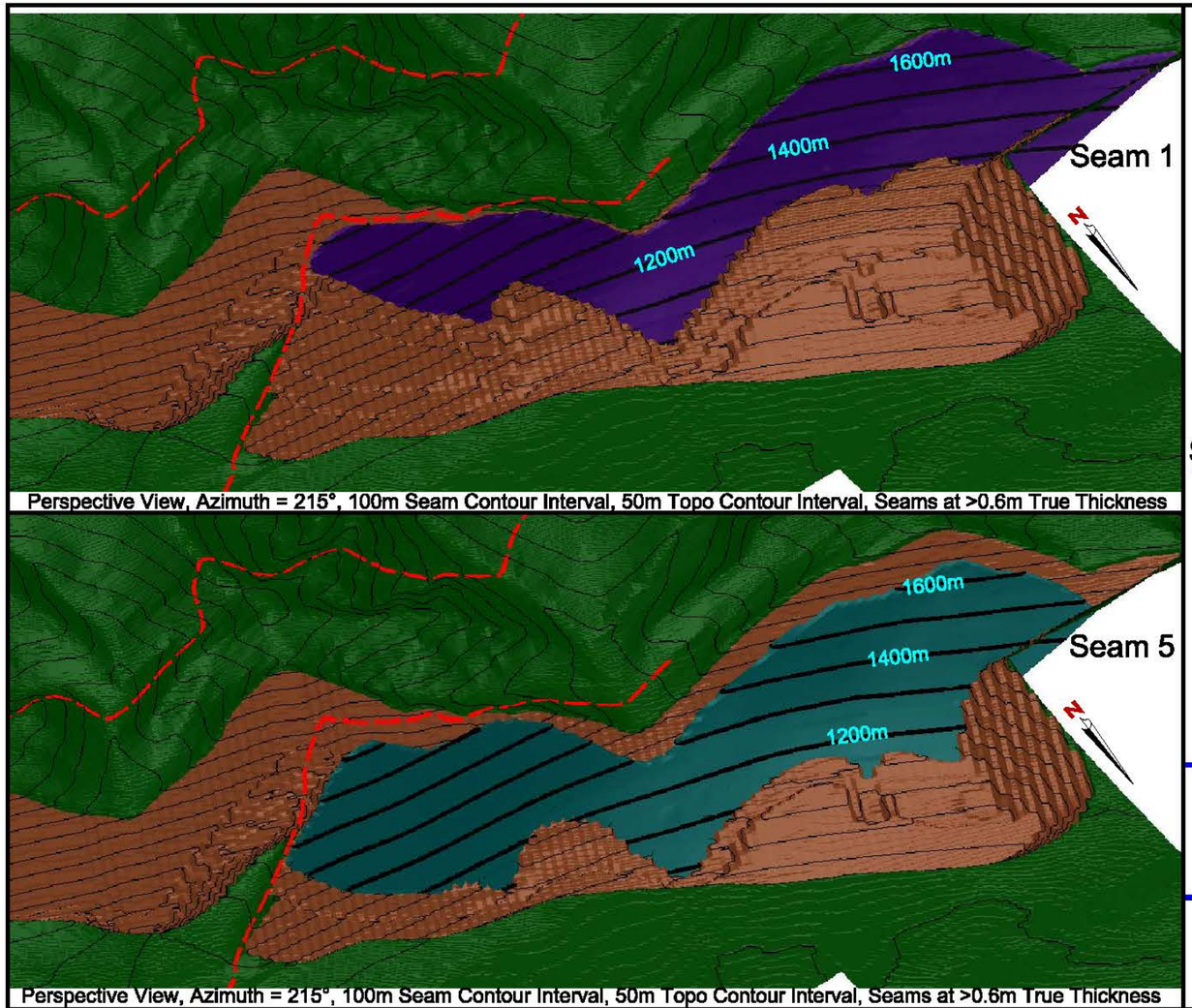
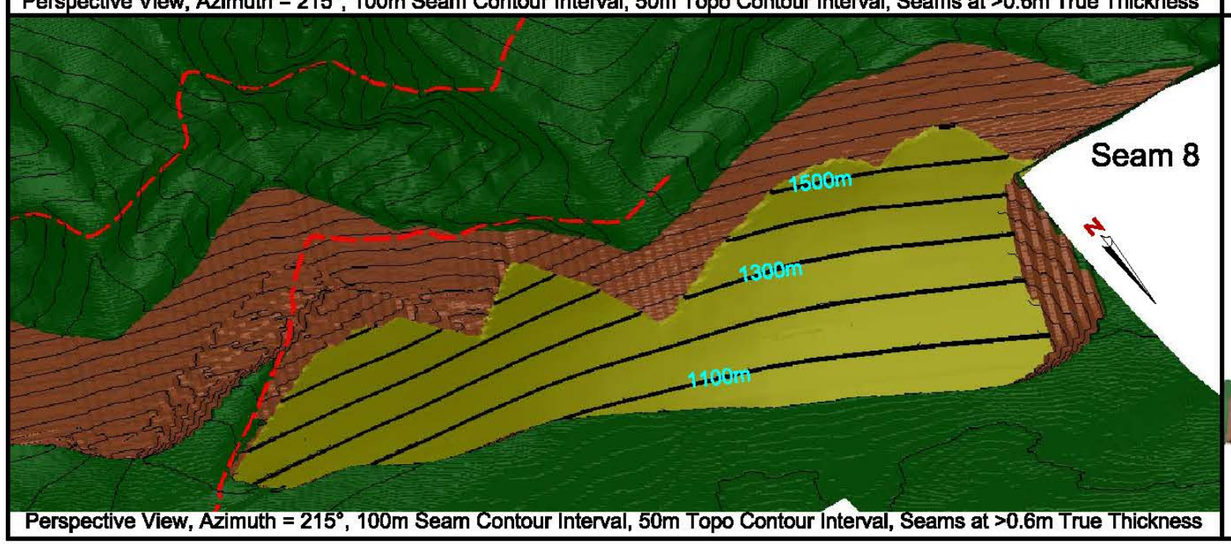
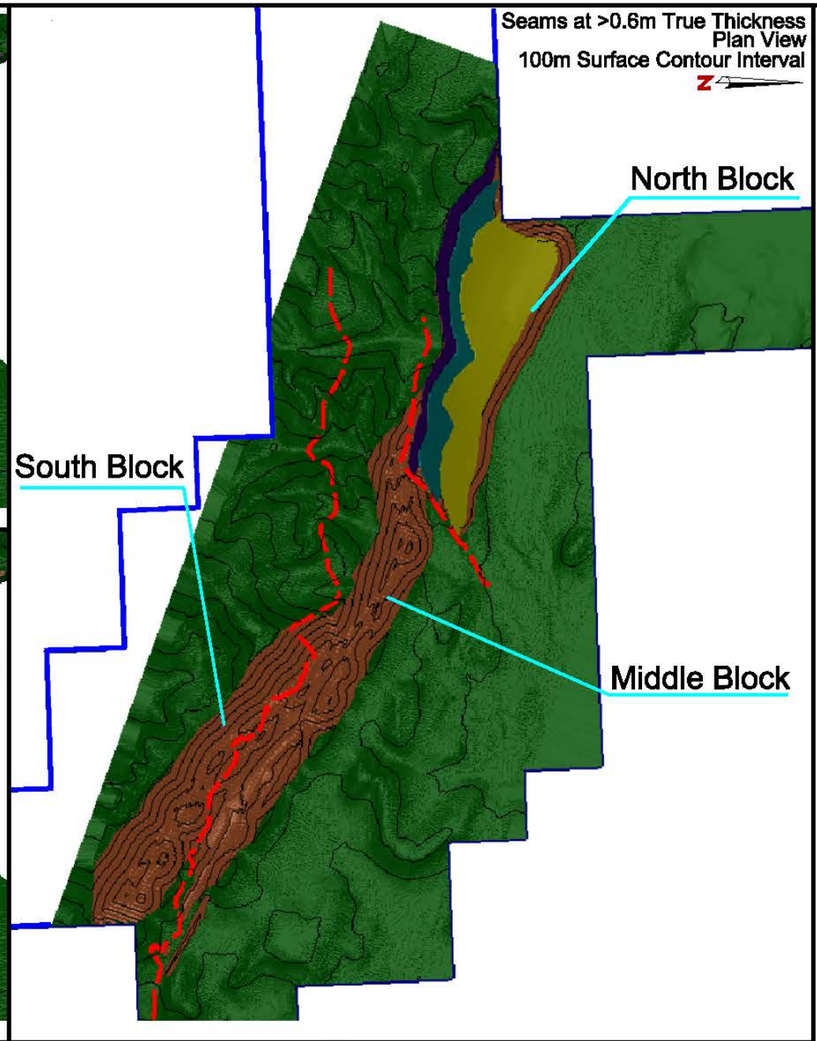
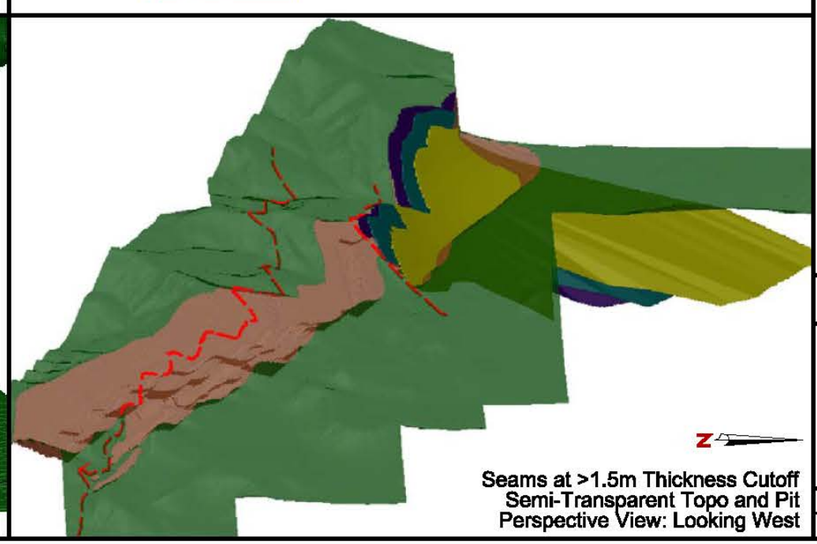








LEGEND

- Seam 1
- Seam 5
- Seam 8
- Topography
- Surface Pit
- Surface Projection of Major Faults Separating Fault Blocks
- Lease Boundary
- Topo/Pit Contours
- Seam Contour
- 1400m Contour Elevation

Figure 5-4

COLONIAL COAL
NORTH BLOCK
SEAM STRUCTURE

DATE: 08/08/2012
FILE: 497-1 FIGbq

NORWEST CORPORATION

Cross Section

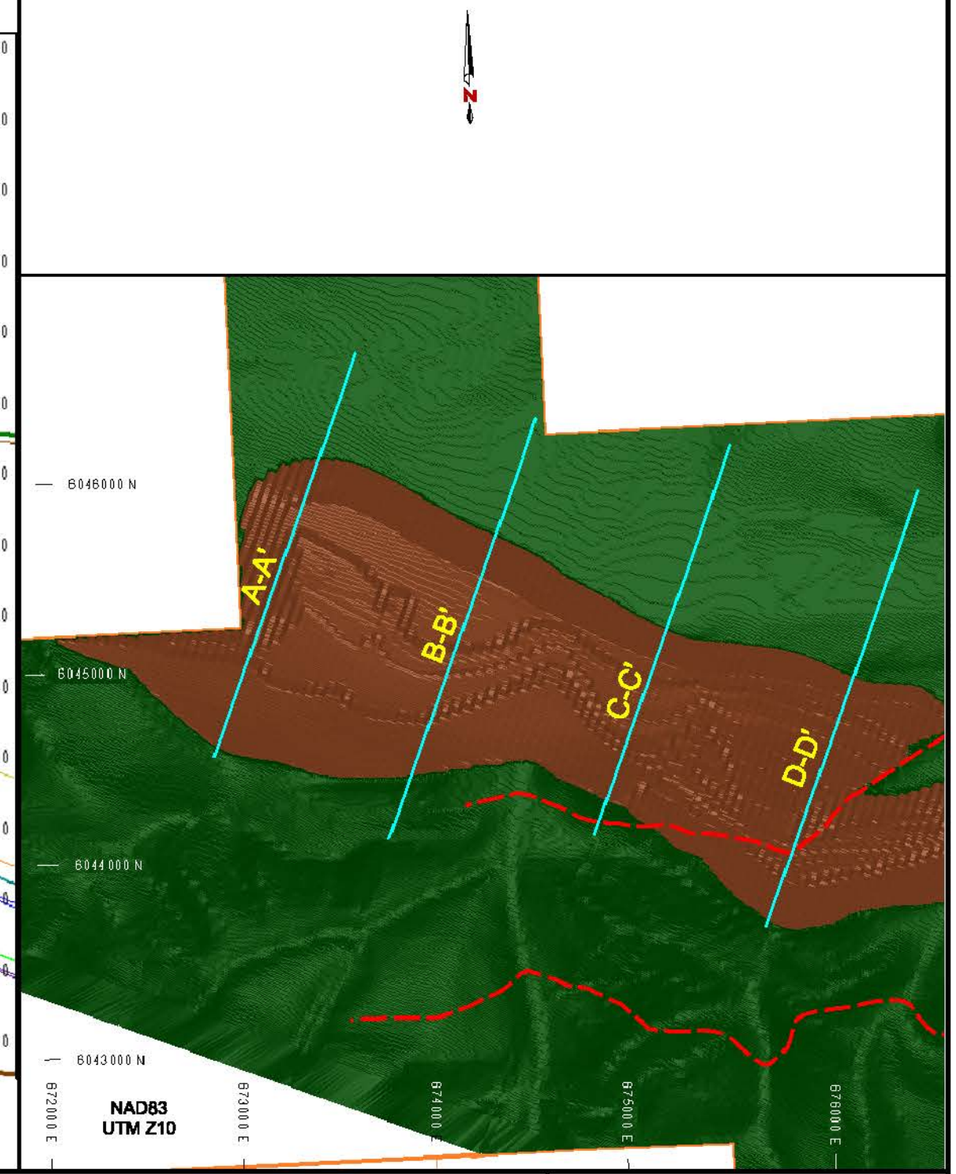
A

A'

mAMSL

1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400

PLAN VIEW



CROSS SECTION

- Fault
- Topography
- Pit Bottom
- Weathered Base
- Topo Minus 900m
- Seam 1
- Seam 2
- Seam 5
- Seam 6L
- Seam 6B
- Seam 8

PLAN VIEW

- Cross Section Line
- Fault at Surface
- Lease Boundary
- Topography
- Pit Bottom

Figure 5-5

COLONIAL COAL
NORTH CROSS SECTIONS
CROSS SECTION A-A'

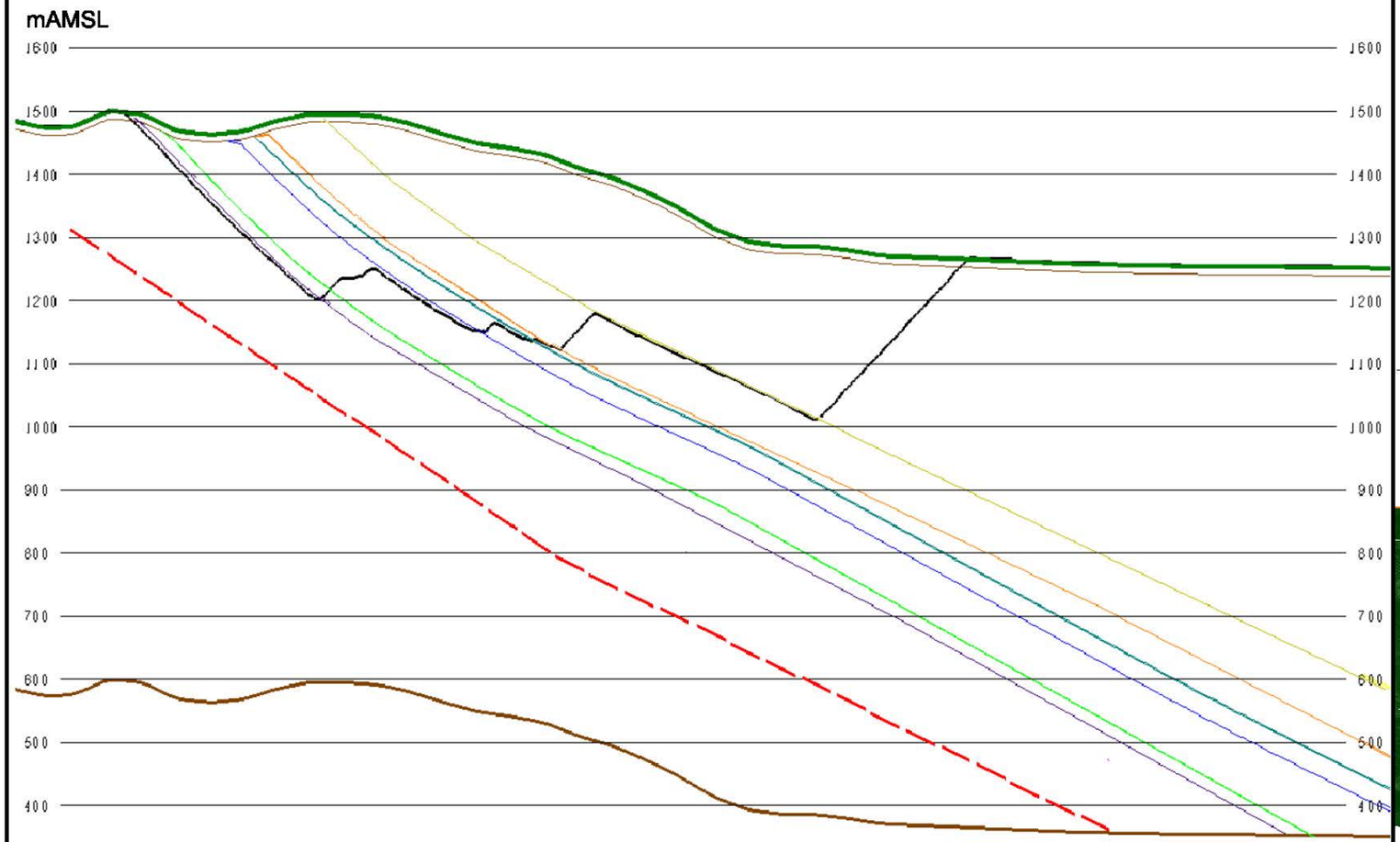
DATE: 08/14/2012
FILE: 497-1 No XS

NORWEST CORPORATION

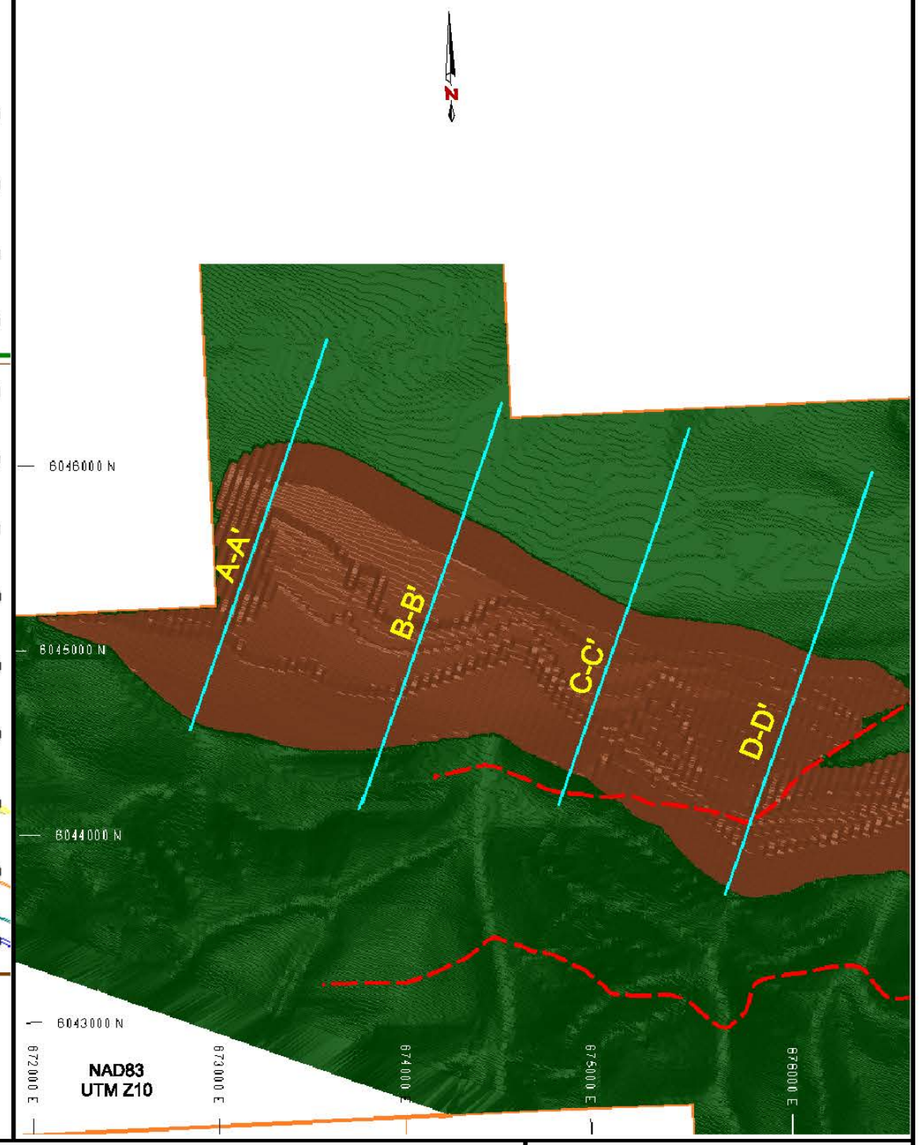
CROSS SECTION

B

B'



PLAN VIEW



CROSS SECTION

- Fault
- Topography
- Pit Bottom
- Weathered Base
- Topo Minus 900m
- Seam 1
- Seam 2
- Seam 5
- Seam 6L
- Seam 6B
- Seam 8

PLAN VIEW

- Cross Section Line
- Fault at Surface
- Lease Boundary
- Topography
- Pit Bottom

Figure 5-6

COLONIAL COAL
NORTH CROSS SECTIONS
CROSS SECTION B-B'

DATE: 08/14/2012
FILE: 497-1 No XS

NORWEST CORPORATION

CROSS SECTION

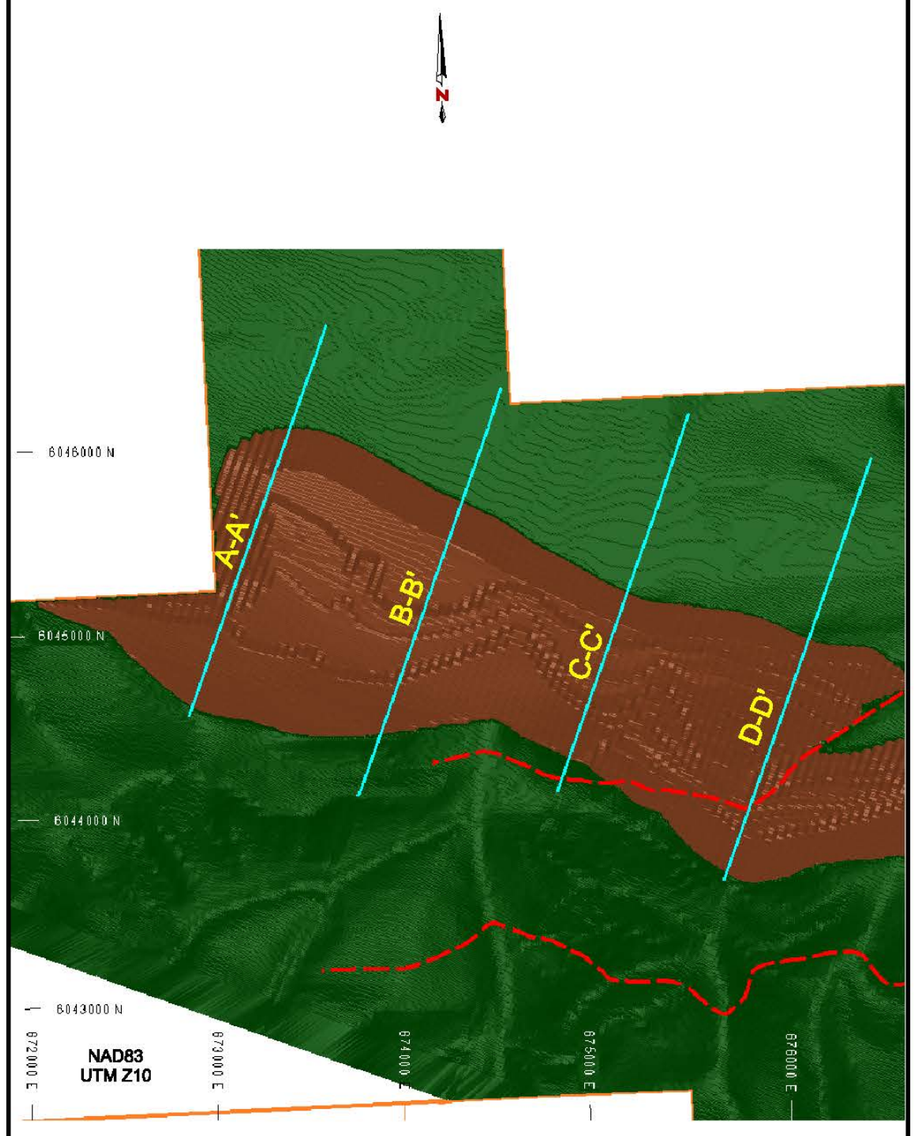
C

C'

mAMSL

1500
1400
1300
1200
1100
1000
900
800
700
600
500
400

PLAN VIEW



CROSS SECTION

- Fault
- Topography
- Pit Bottom
- Weathered Base
- Topo Minus 900m
- Seam 1
- Seam 2
- Seam 5
- Seam 6L
- Seam 6B
- Seam 8

PLAN VIEW

- Cross Section Line
- Fault at Surface
- Lease Boundary
- Topography
- Pit Bottom

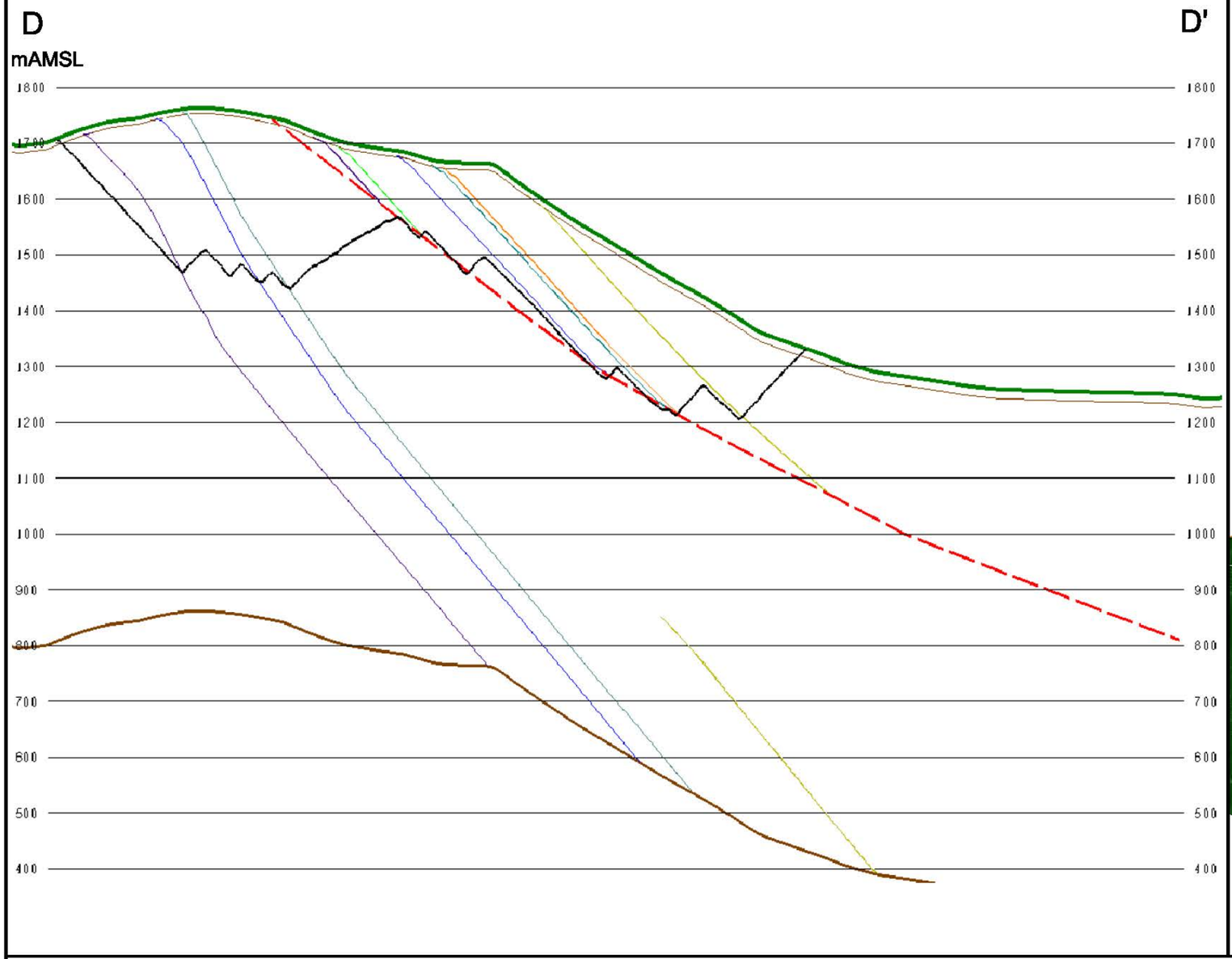
Figure 5-7

COLONIAL COAL
NORTH CROSS SECTIONS
CROSS SECTION C-C'

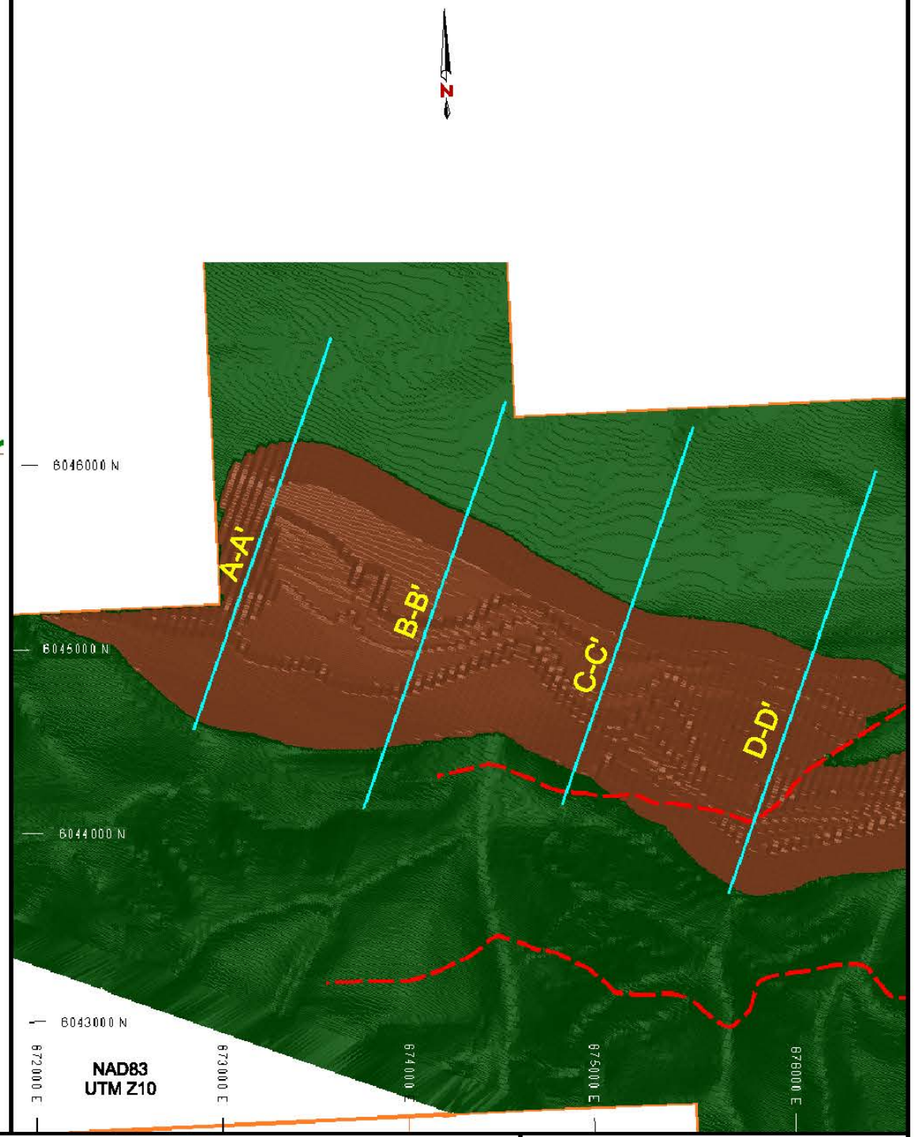
DATE: 08/13/2012
FILE: 497-1 No XS

NORWEST CORPORATION

CROSS SECTION



PLAN VIEW



CROSS SECTION

- Fault
- Topography
- Pit Bottom
- Weathered Base
- Topo Minus 900m
- Seam 1
- Seam 2
- Seam 5
- Seam 6L
- Seam 6B
- Seam 8

PLAN VIEW

- Cross Section Line
- Fault at Surface
- Lease Boundary
- Topography
- Pit Bottom

Figure 5-8

COLONIAL COAL
NORTH CROSS SECTIONS
CROSS SECTION D-D'

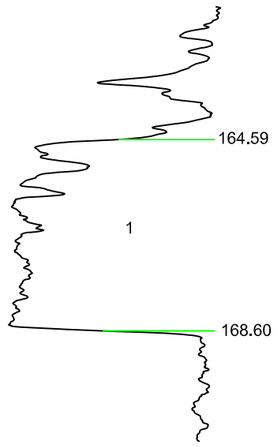
DATE: 08/14/2012
FILE: 497-1 No XS

NORWEST CORPORATION

MIDDLE BLOCK (SEAMS 1, 2A, 3B & 4u)

SEAM 1

HR11-09



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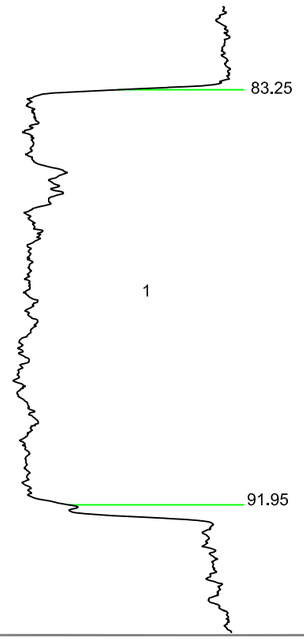
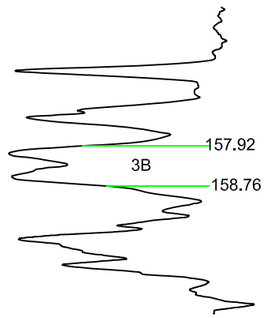


SEAM 3B

HR11-02



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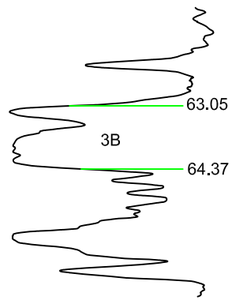

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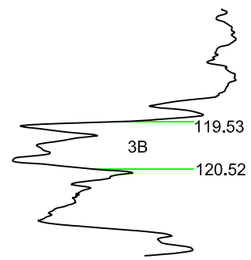
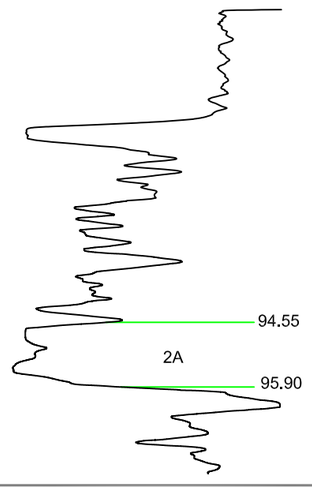


SEAM 2A

HLD11-03



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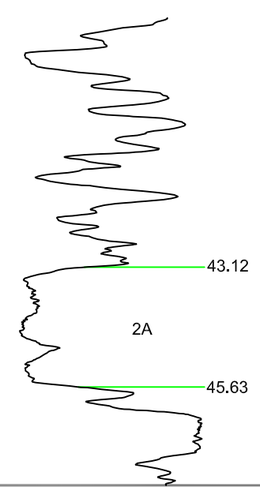
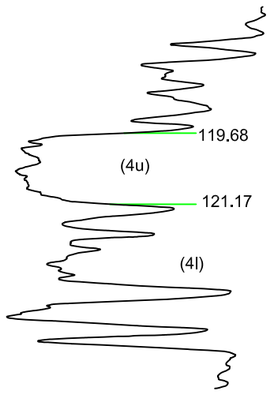


SEAM 4u

HR11-02



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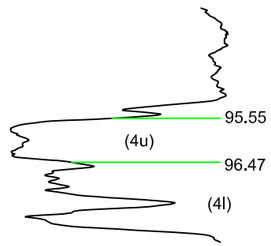

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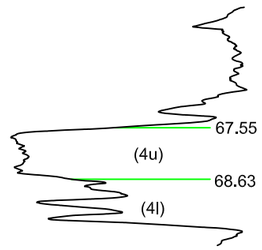

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MINING SECTION

NON-MINING SECTION

NOTE:

SEAM TRACES TAKEN FROM
DETAILED DENSITY LOGS

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

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Checked by: JHP	
Approved by: JHP	
Revision No.	
Dwg:H2011AR-2012SmCorr Mid 1 of 3	
Date: 2012-08-02	Document: 43-101 (2011AR)
	Figure No. 5-9

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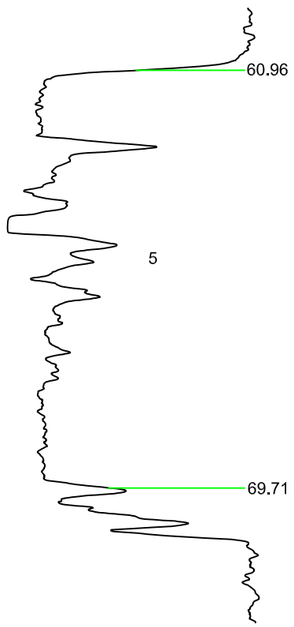
MIDDLE BLOCK (SEAMS 5, 6L & 6B)

SEAM 5

HR11-02



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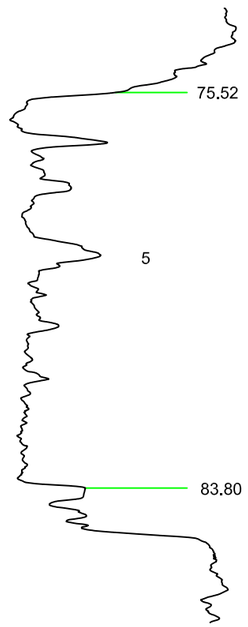

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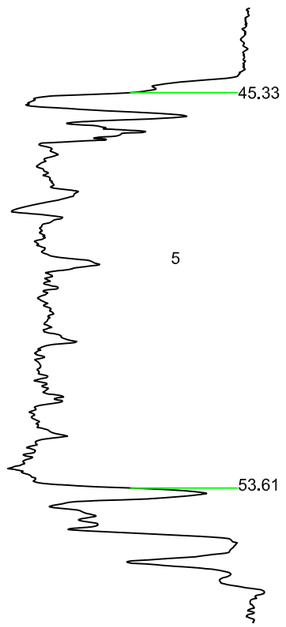
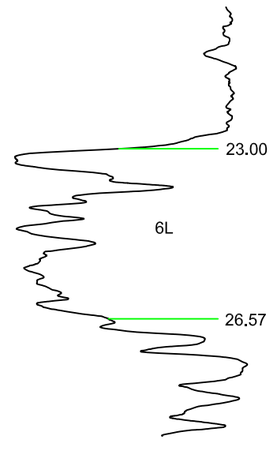


SEAM 6L

HR11-02



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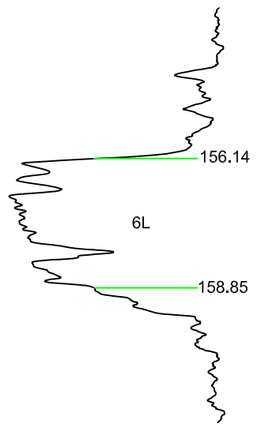

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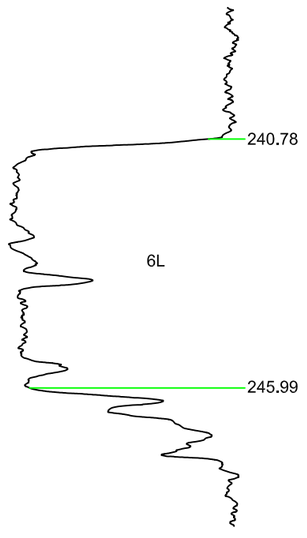

SEAM 6B

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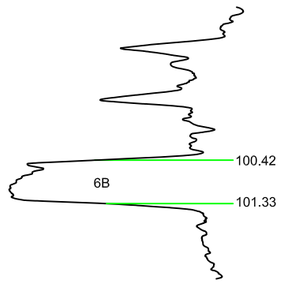

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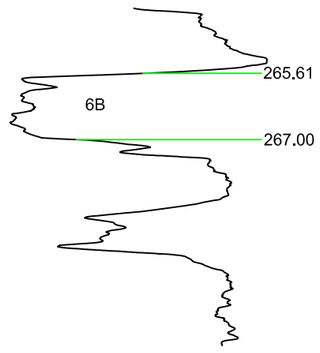

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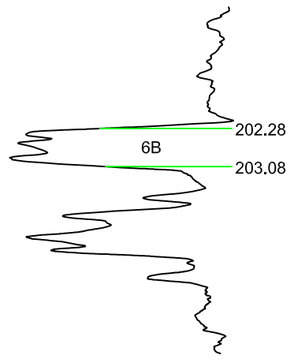

LEGEND:

MINING SECTION

NON-MINING SECTION

NOTE:

SEAM TRACES TAKEN FROM
DETAILED DENSITY LOGS

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

Drawn by: CVS	SEAM CORRELATION (MIDDLE BLOCK) SHEET 2 OF 3
Checked by: JHP	
Approved by: JHP	
Revision No.:	
Dwg No.: HugB-2011AR-2012SmCorr Mid 2 of 3	
Date: 2012-08-02	Document: 43-101 (2011AR)
	Figure No.: 5-10

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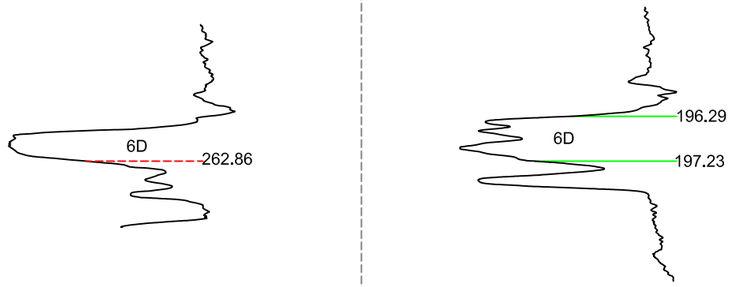
MIDDLE BLOCK (SEAMS 6D, 8 & 9)

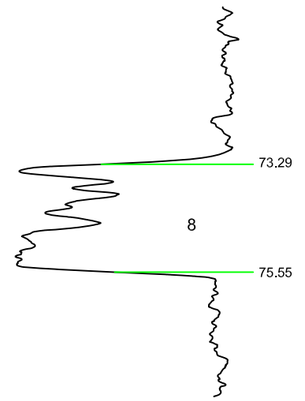
SEAM 6D

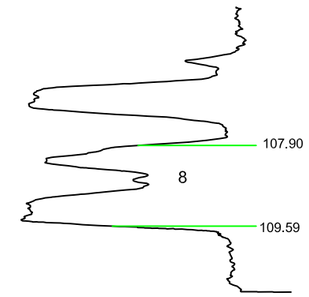
HD11-06	HD11-03

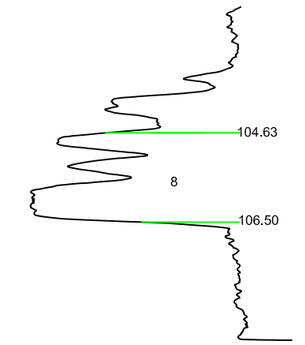


SEAM 8

HR11-10	HD11-06	HD11-03

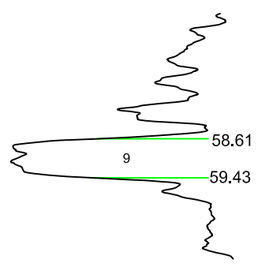


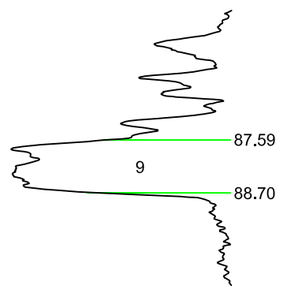


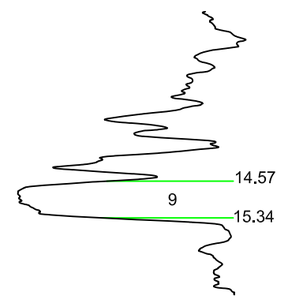


SEAM 9

HR11-10	HD11-06	HR11-04







LEGEND:

MINING SECTION

NON-MINING SECTION

NOTE:

SEAM TRACES TAKEN FROM
DETAILED DENSITY LOGS

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

Drawn by:	CVS
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Approved by:	JHP
Revision No.:	
Dwg No.:	HugB-2011AR-43-101SmCorr Mid 3 of 3
Date:	2012-08-02

SEAM CORRELATION
(MIDDLE BLOCK)
SHEET 3 OF 3

Document: 43-101 (2011AR)

Figure No. 5-11

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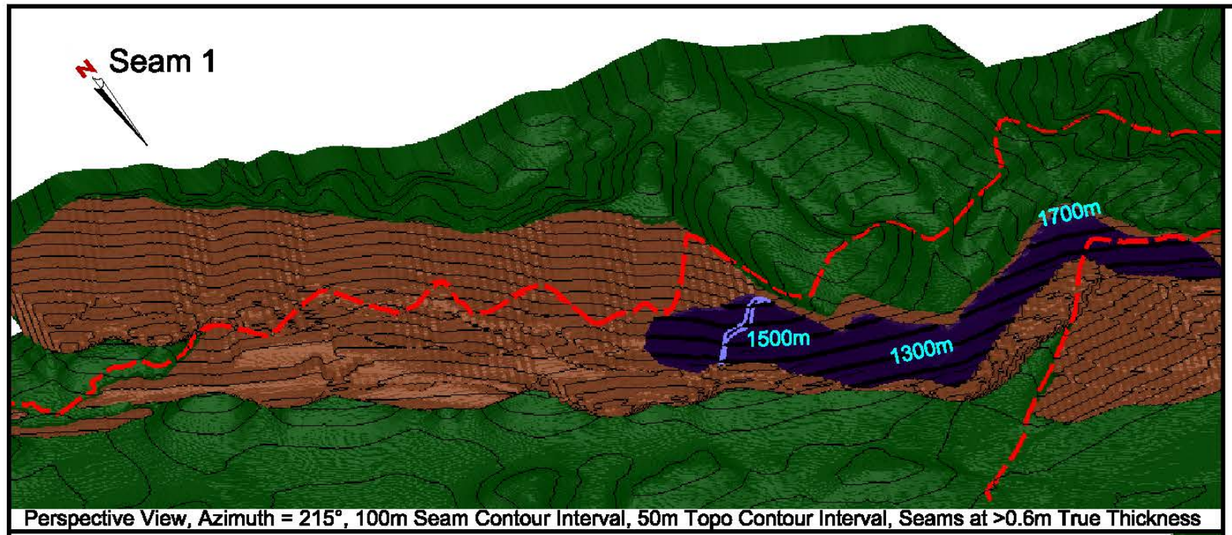
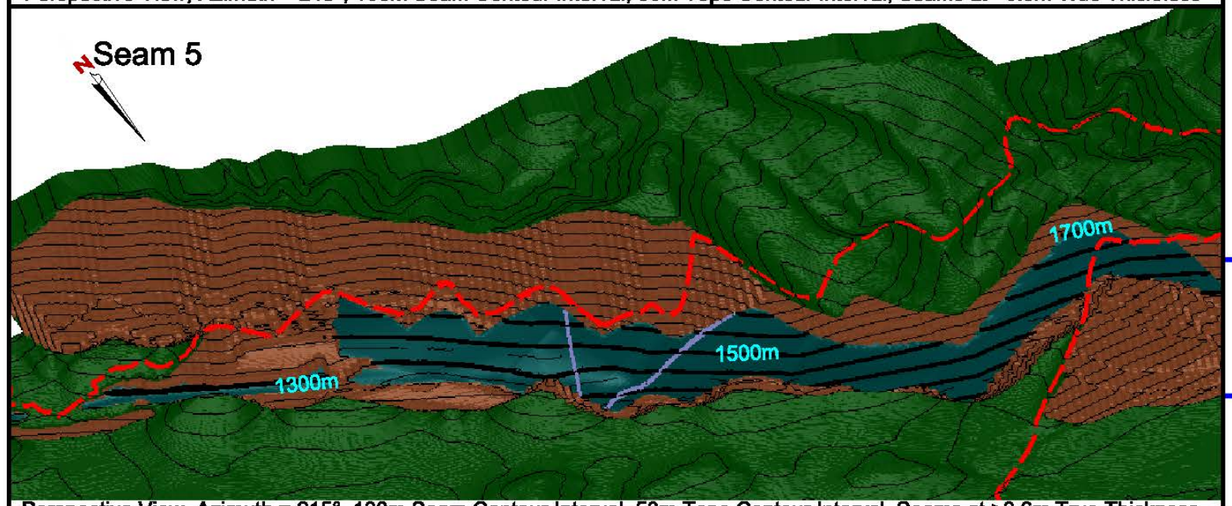
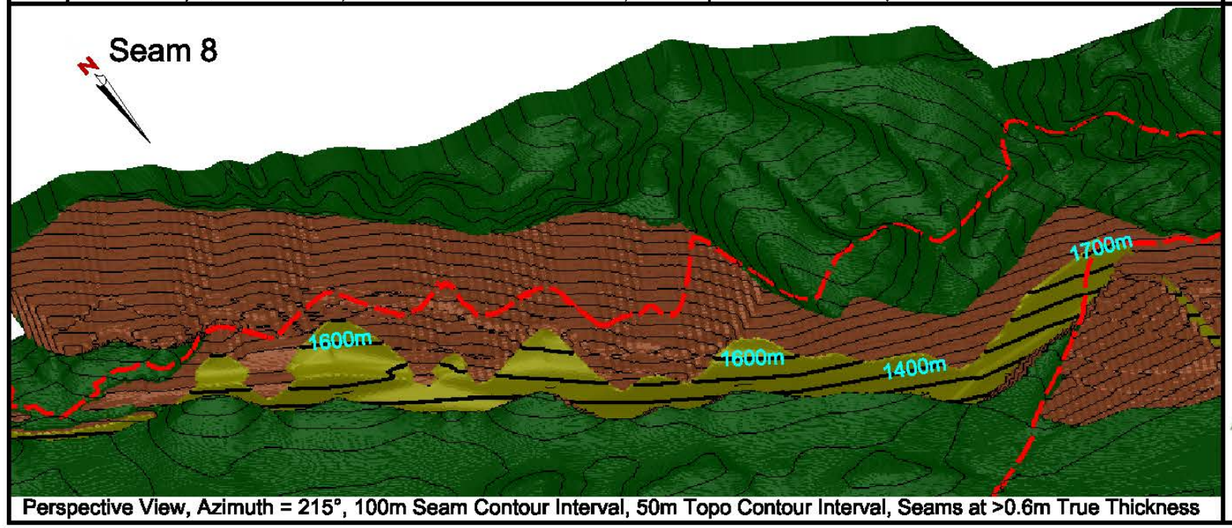


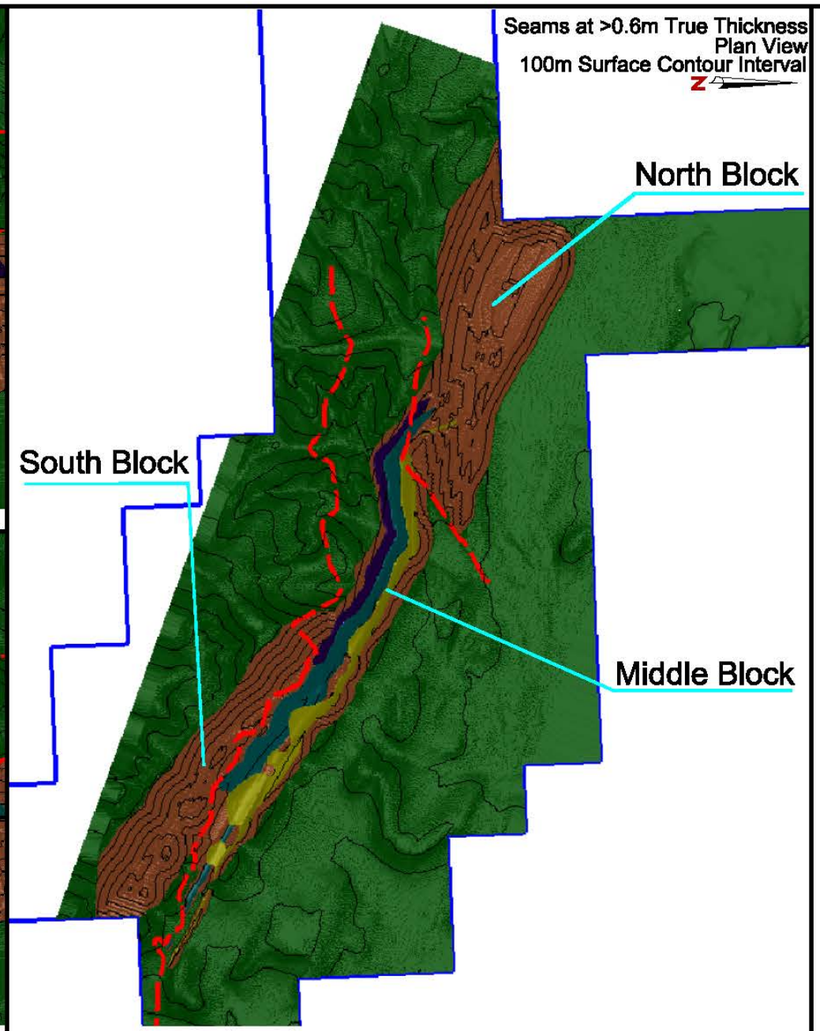
Perspective View, Azimuth = 215°, 100m Seam Contour Interval, 50m Topo Contour Interval, Seams at >0.6m True Thickness

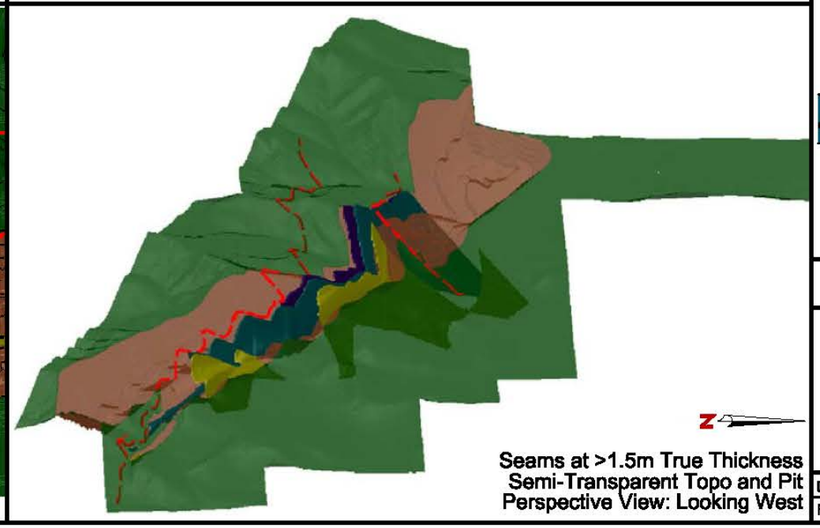


Perspective View, Azimuth = 215°, 100m Seam Contour Interval, 50m Topo Contour Interval, Seams at >0.6m True Thickness



Perspective View, Azimuth = 215°, 100m Seam Contour Interval, 50m Topo Contour Interval, Seams at >0.6m True Thickness





Seams at >1.5m True Thickness
Semi-Transparent Topo and Pit
Perspective View: Looking West

LEGEND

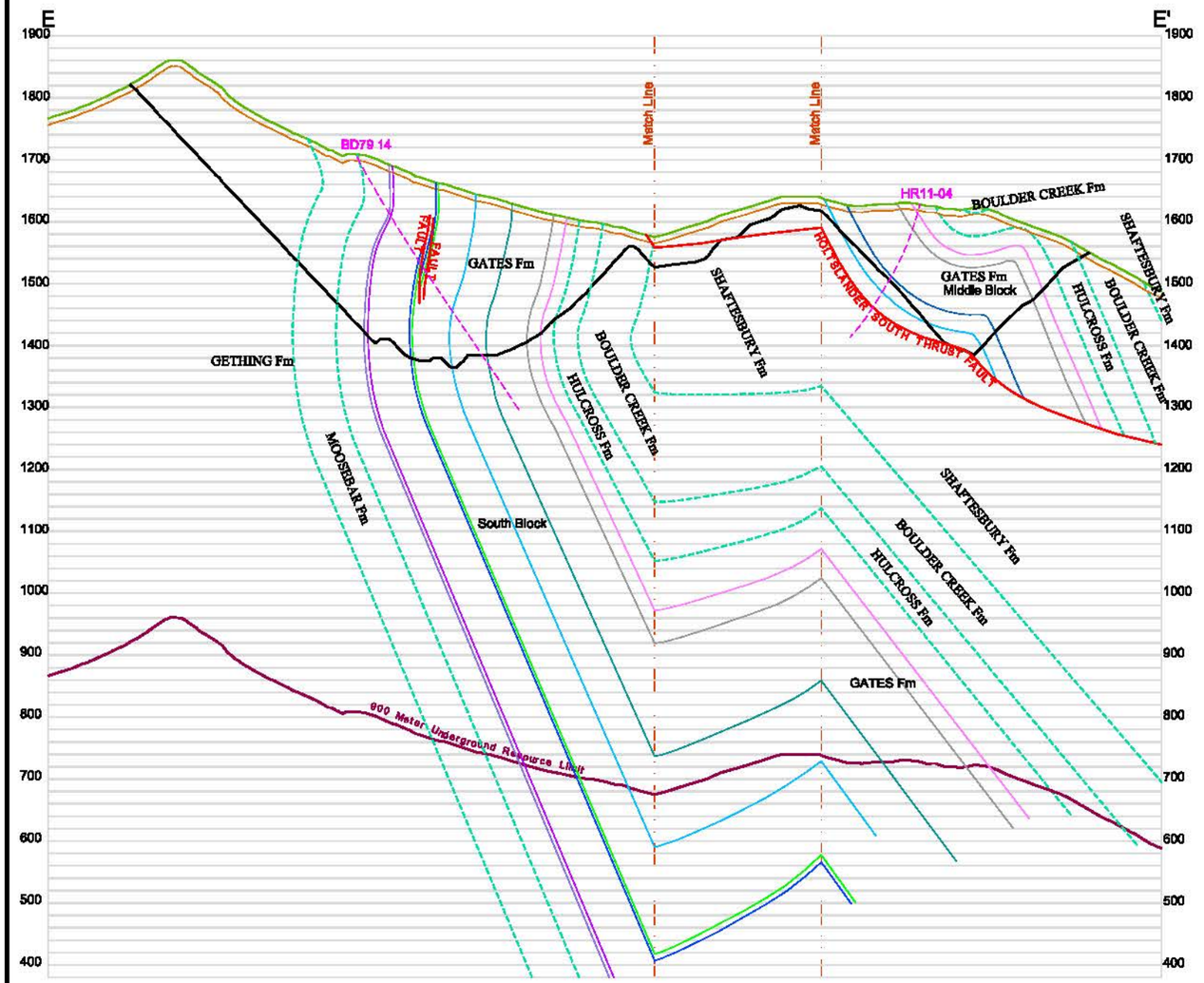
- Seam 1
- Seam 5
- Seam 8
- Topography
- Surface Pit
- Surface Projection of Major Faults Separating Fault Blocks
- Middle Block Fault Seam Intercept
- Lease Boundary
- Topo/Pit Contours
- Seam Contour
- 1400m Contour Elevation

Figure 5-12

COLONIAL COAL
MIDDLE BLOCK
SEAM STRUCTURE

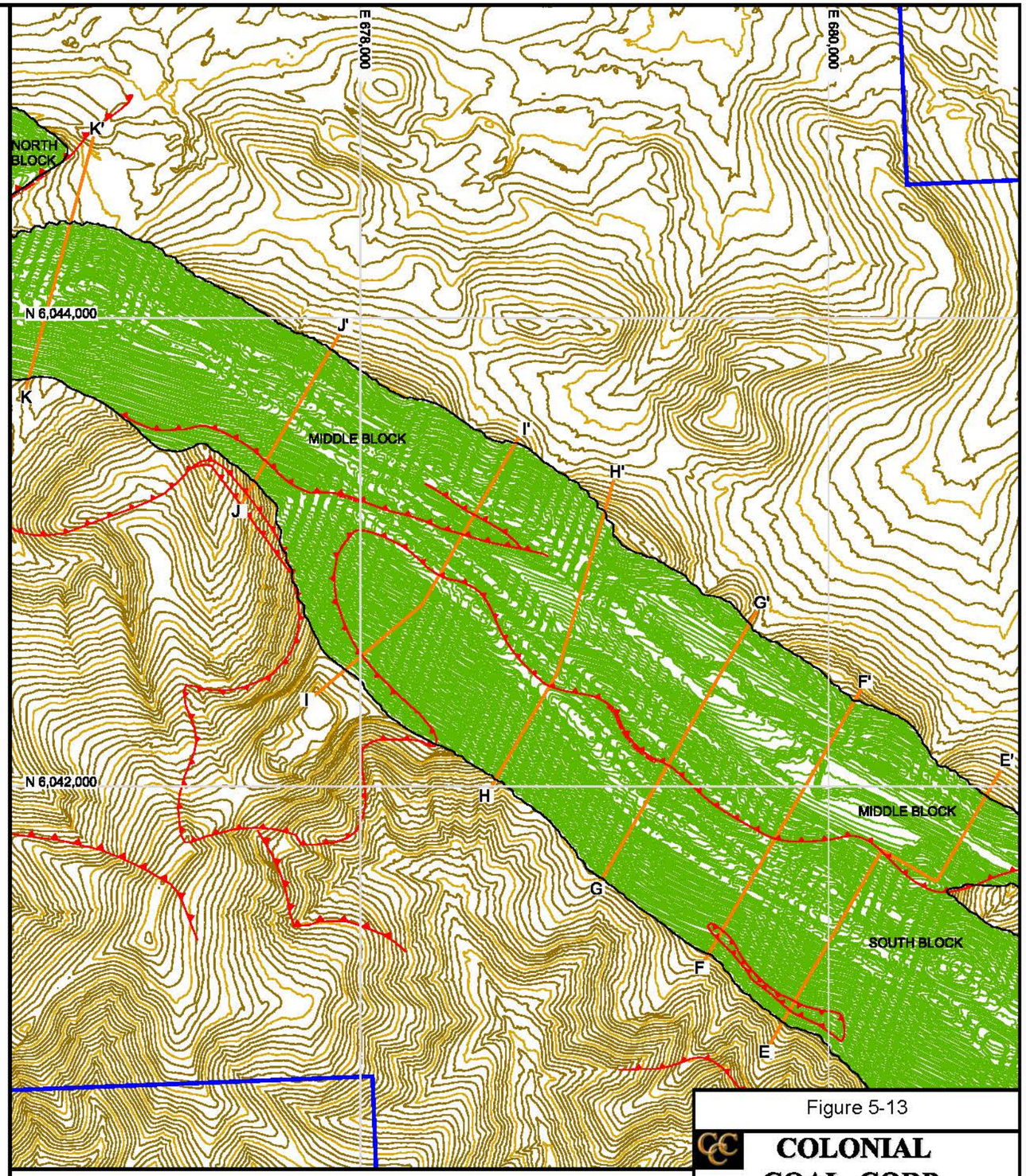
DATE: 08/08/2012
FILE: 497-1 FIGbc

NORWEST CORPORATION



CROSS SECTION

- Drillholes
- Topography
- Pit Bottom
- Weathered Base
- Formation Boundaries
- Seam 1
- Seam 2A
- Seam 4u
- Seam 5
- Seam 6B
- Seam 6D
- Seam 6L
- Seam 8
- Seam 9
- Topo Minus 900m



PLAN VIEW

- Cross Section Line
- Fault
- Lease Boundary
- Topography
- Pit Bottom

Figure 5-13

COLONIAL COAL CORP.

CROSS SECTION
E - E'

DATE: 08/20/2012	SCALE: N.T.S.	NORWEST CORPORATION
PROJECT: 497-1		

F

F'

HR11-05

HD11-09

HD11-03

South Block

BOULDER CREEK Fm

HULCROSS Fm

GATES Fm

GATES Fm

Middle Block

HOLTSLANDER SOUTH THRUST FAULT

GETHING Fm

MOOSEBAR Fm

SHAFTESBURY Fm

South Block

HULCROSS Fm

BOULDER CREEK Fm

SHAFTESBURY Fm

900 Meter Underground Resource Limit

1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500

CROSS SECTION

- Drillholes
- Topography
- Pit Bottom
- Weathered Base
- Formation Boundaries
- Seam 1
- Seam 2A
- Seam 4u
- Seam 5
- Seam 6B
- Seam 6L
- Seam 8
- Seam 9
- Topo Minus 900m

E 678,000

E 680,000

N 6,044,000

N 6,042,000

K'

K

J'

J

I'

I

H'

H

G'

G

F'

F

E'

E

NORTH BLOCK

MIDDLE BLOCK

MIDDLE BLOCK

SOUTH BLOCK

PLAN VIEW

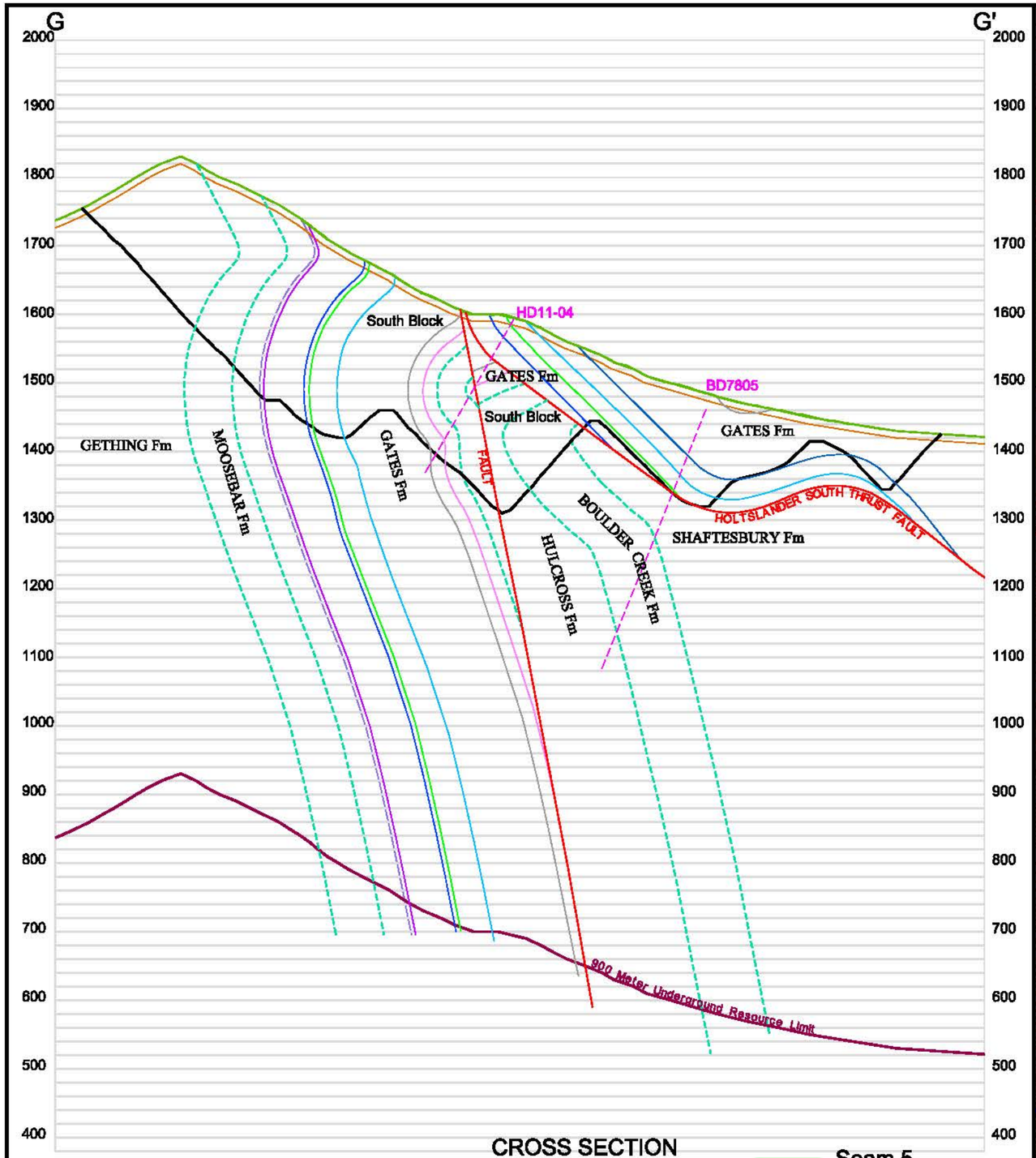
- Cross Section Line
- Fault
- Lease Boundary
- Topography
- Pit Bottom

Figure 5-14

COLONIAL COAL CORP.

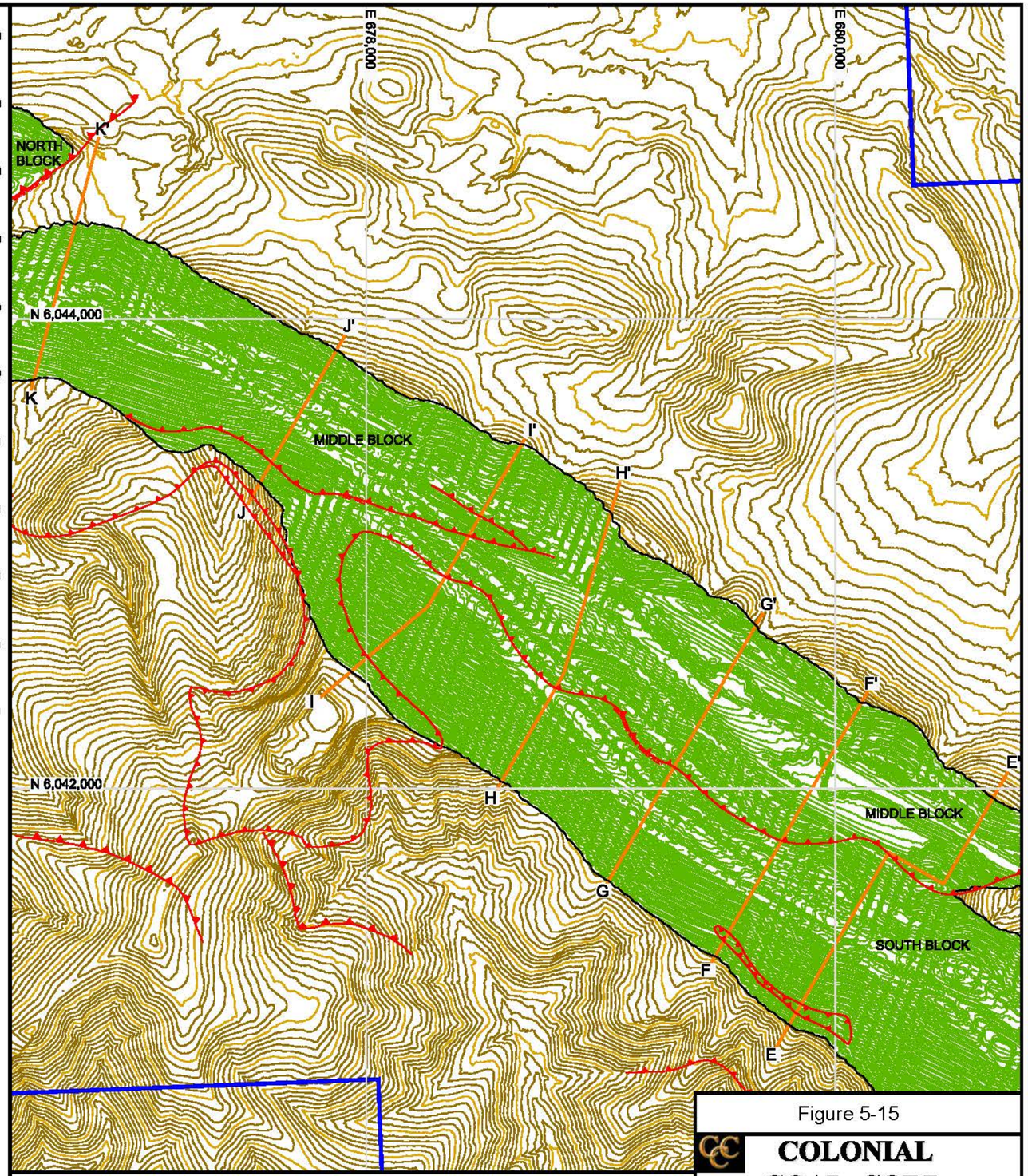
CROSS SECTION F - F'

DATE: 08/20/2012	SCALE: N.T.S.	NORWEST CORPORATION
PROJECT: 497-1		



CROSS SECTION

- Drillholes
- Topography
- Pit Bottom
- Weathered Base
- Formation Boundaries
- Seam 1
- Seam 2A
- Seam 3B
- Seam 3D
- Seam 4u
- Seam 5
- Seam 6B
- Seam 6L
- Seam 8
- Seam 9
- Topo Minus 900m



PLAN VIEW

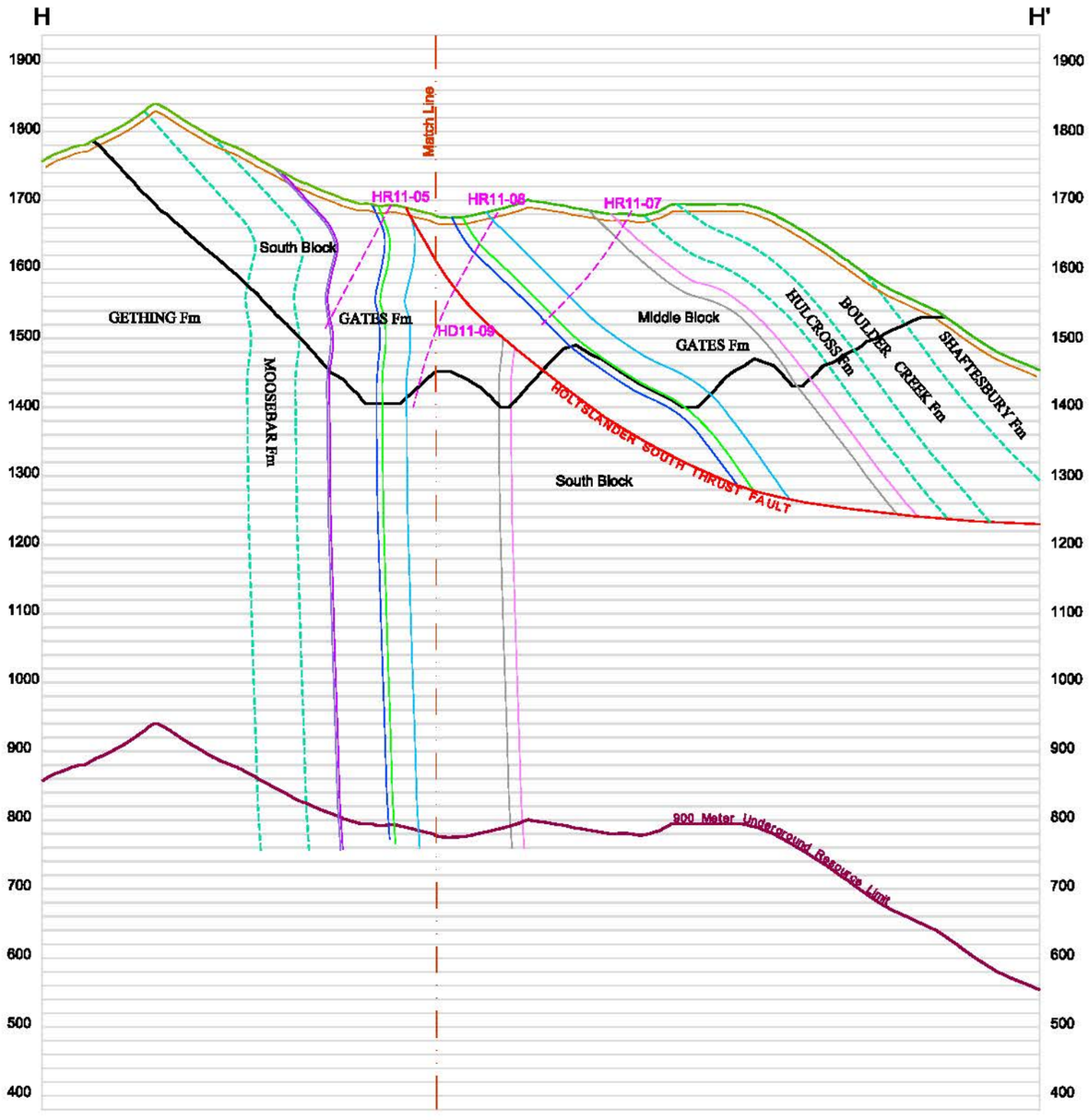
- Cross Section Line
- Fault
- Lease Boundary
- Topography
- Pit Bottom

Figure 5-15

COLONIAL COAL CORP.

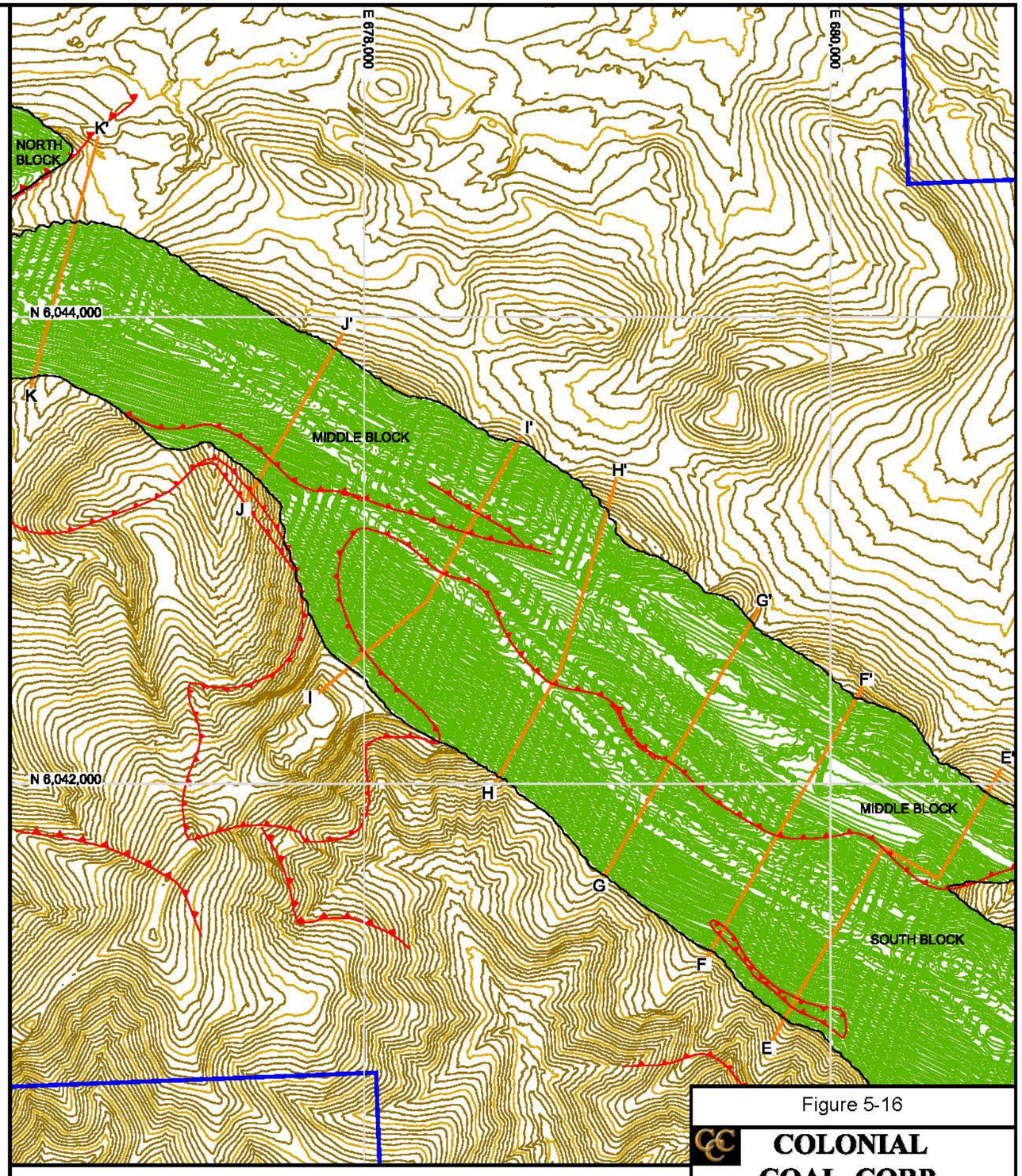
CROSS SECTION G - G'

DATE: 08/20/2012	SCALE: N.T.S.	NORWEST CORPORATION
PROJECT: 497-1		



CROSS SECTION

- Drillholes
- Topography
- Pit Bottom
- Weathered Base
- Formation Boundaries
- Seam 1
- Seam 2A
- Seam 4u
- Topo Minus 900m
- Seam 5
- Seam 6L
- Seam 8
- Seam 9



PLAN VIEW

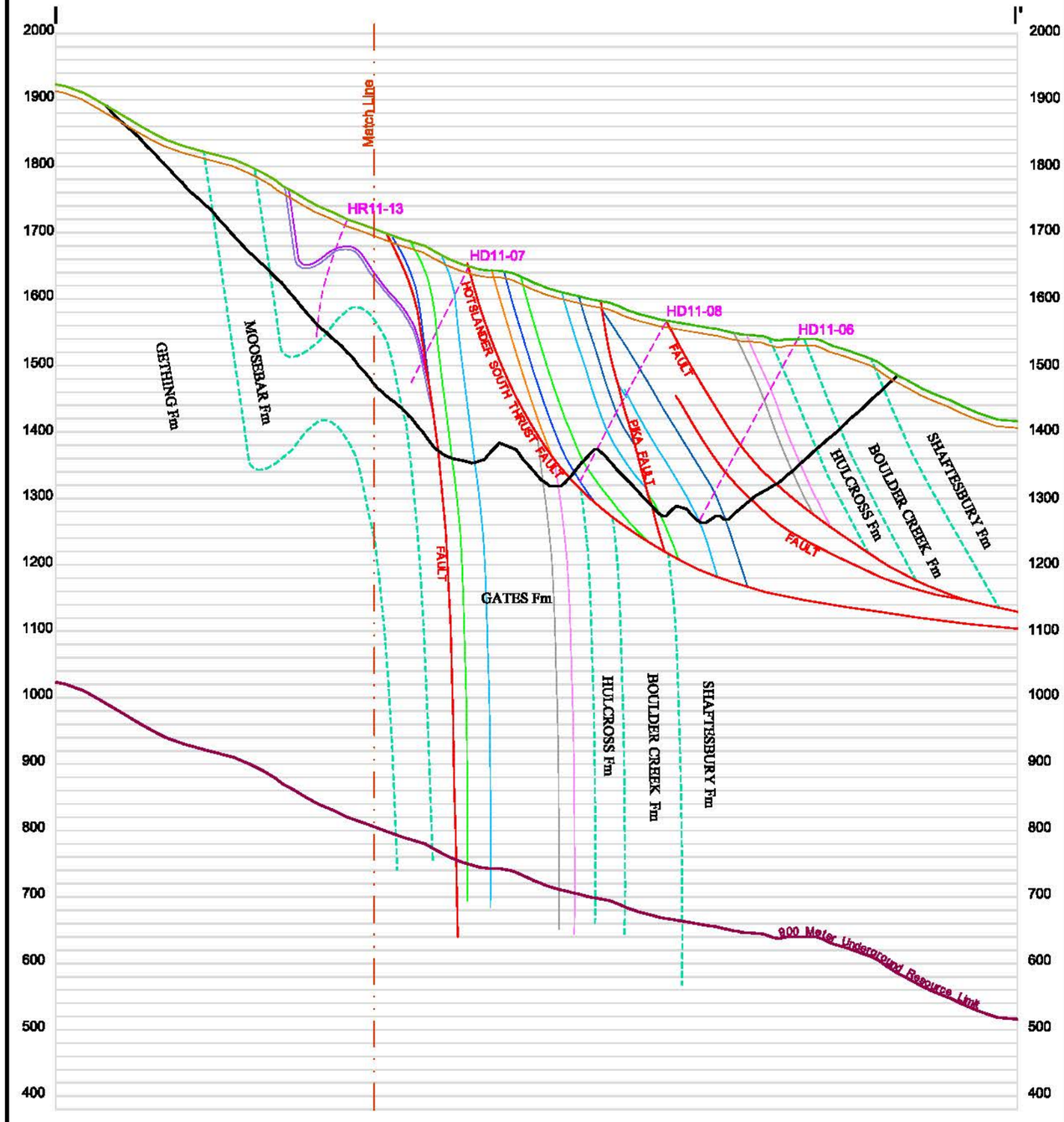
- Cross Section Line
- Fault
- Lease Boundary
- Topography
- Pit Bottom

Figure 5-16

COLONIAL COAL CORP.

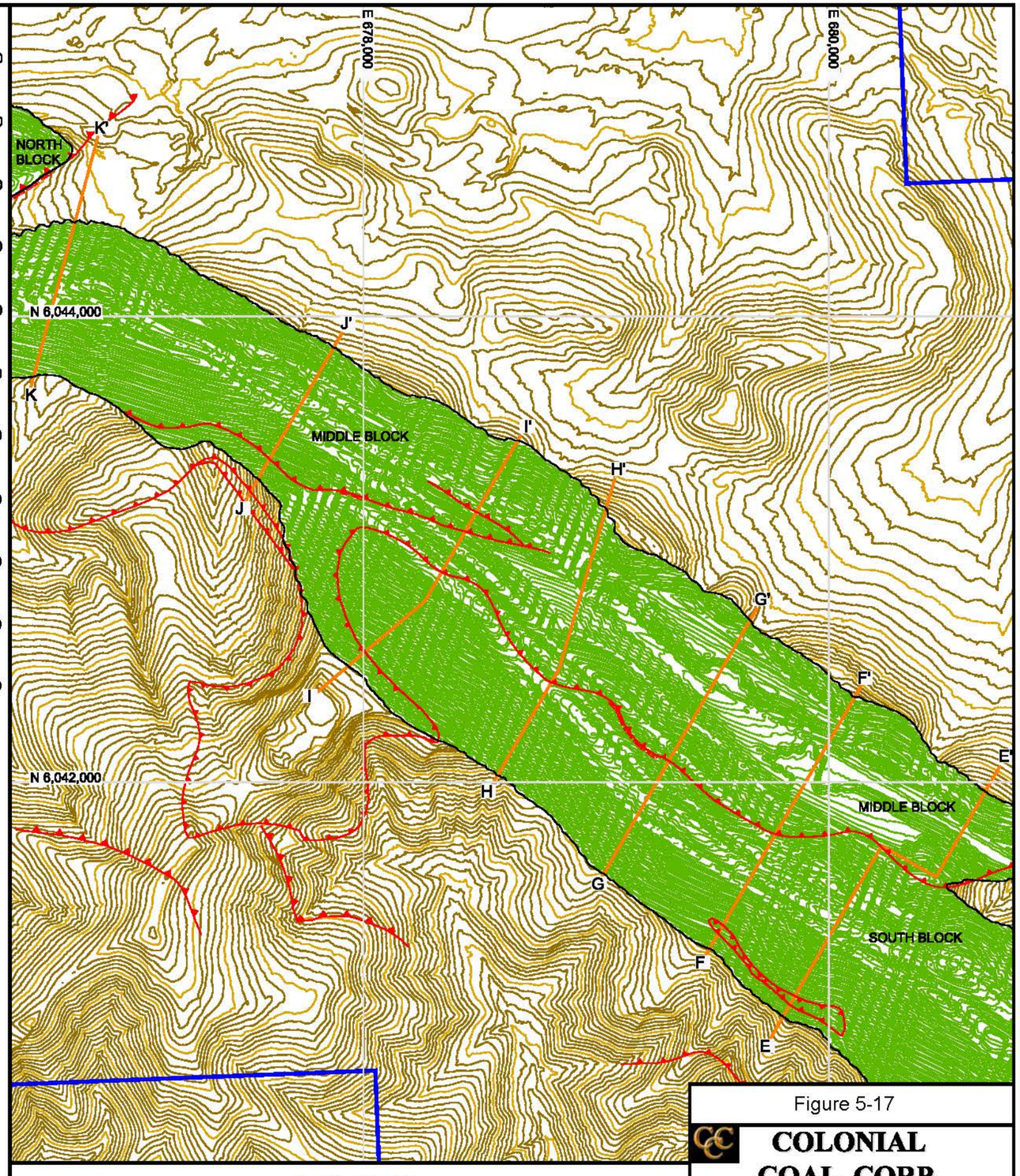
CROSS SECTION H - H'

DATE: 08/20/2012	SCALE: N.T.S.
PROJECT: 497-1	NORWEST CORPORATION



CROSS SECTION

- Drillholes
- Topography
- Pit Bottom
- Weathered Base
- Formation Boundaries
- Seam 1
- Seam 2A
- Seam 3D
- Seam 4u
- Seam 5
- Seam 6L
- Seam 6B
- Seam 8
- Seam 9
- Topo Minus 900m



PLAN VIEW

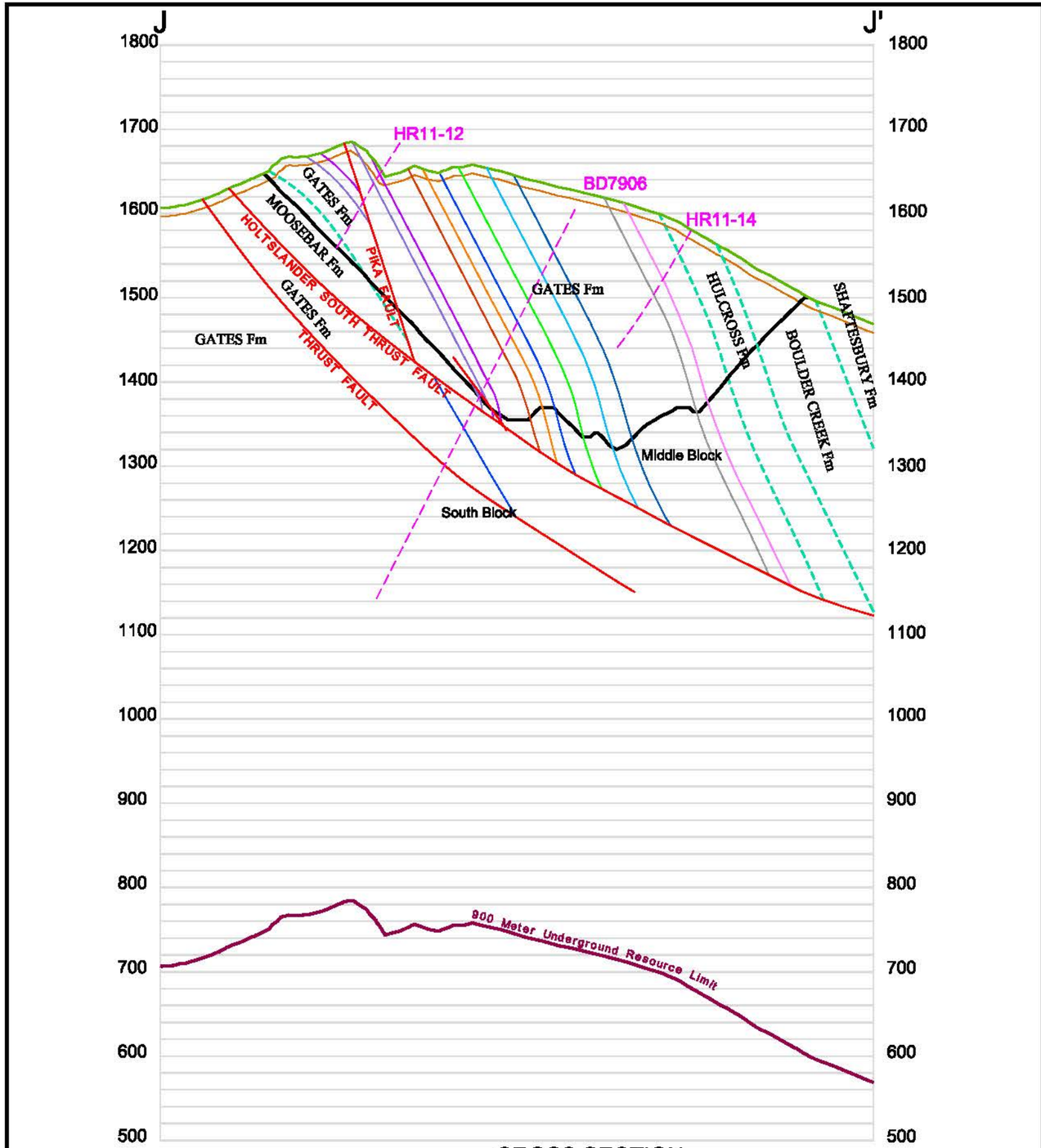
- Cross Section Line
- Fault
- Lease Boundary
- Topography
- Pit Bottom

Figure 5-17

COLONIAL COAL CORP.

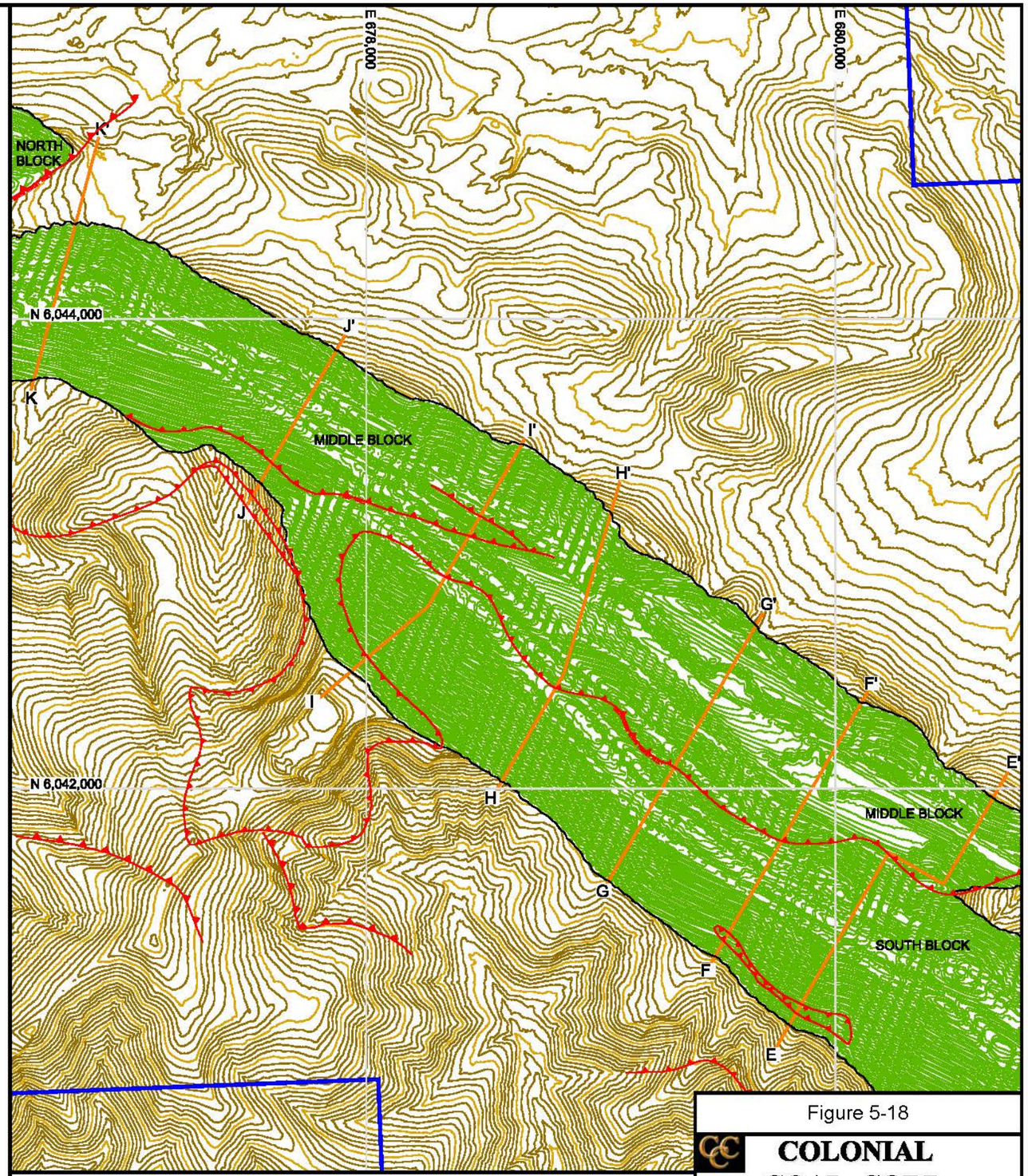
CROSS SECTION I - I'

DATE: 08/20/2012	SCALE: N.T.S.	NORWEST CORPORATION
PROJECT: 497-1		



CROSS SECTION

- Drillholes
- Topography
- Pit Bottom
- Weathered Base
- Formation Boundaries
- Seam 1
- Seam 2A
- Seam 3B
- Seam 3D
- Seam 4u
- Seam 5
- Seam 6B
- Seam 6L
- Seam 8
- Seam 9
- Topo Minus 900m



PLAN VIEW

- Cross Section Line
- Fault
- Lease Boundary
- Topography
- Pit Bottom

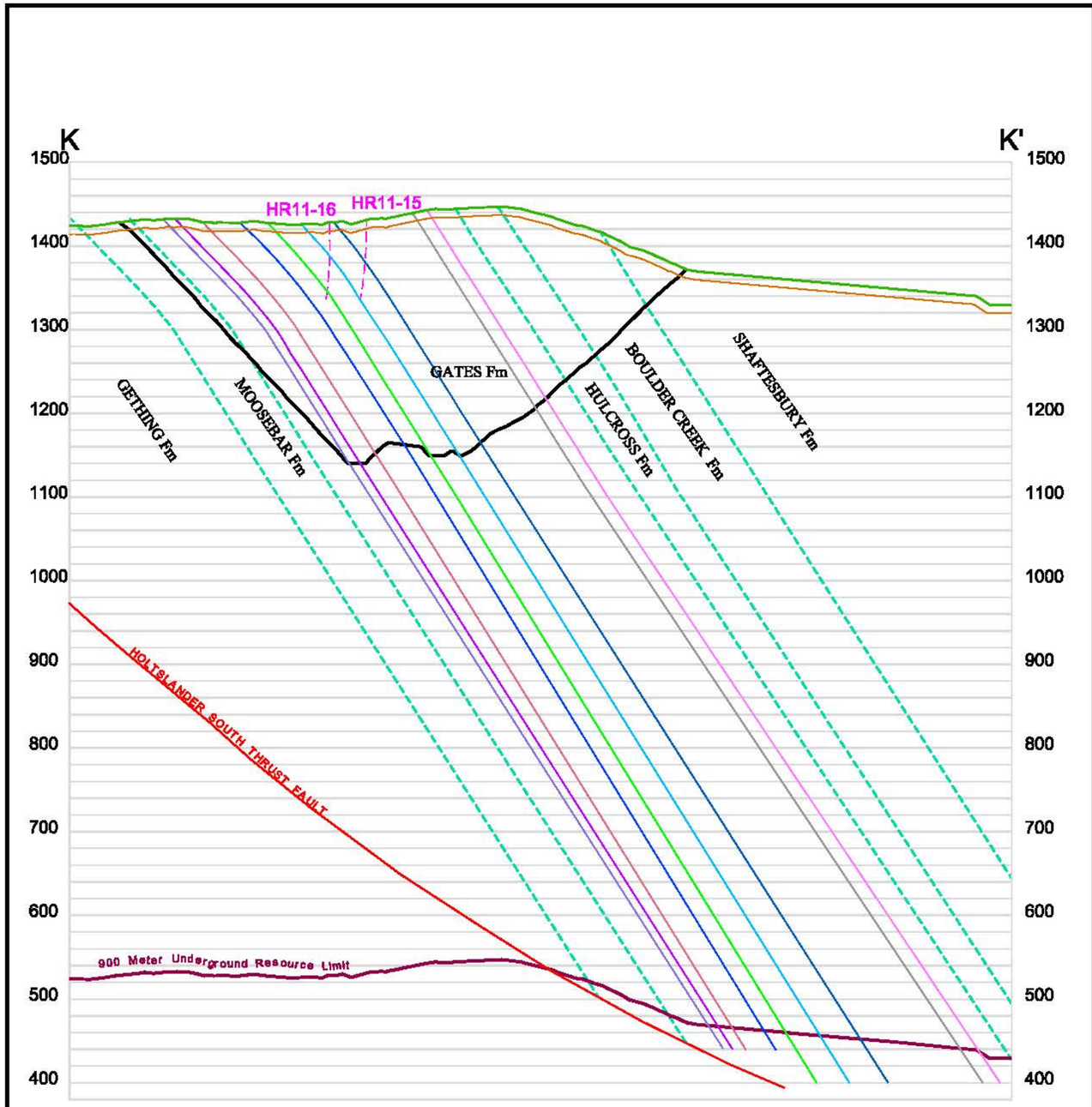
Figure 5-18

COLONIAL COAL CORP.

CROSS SECTION

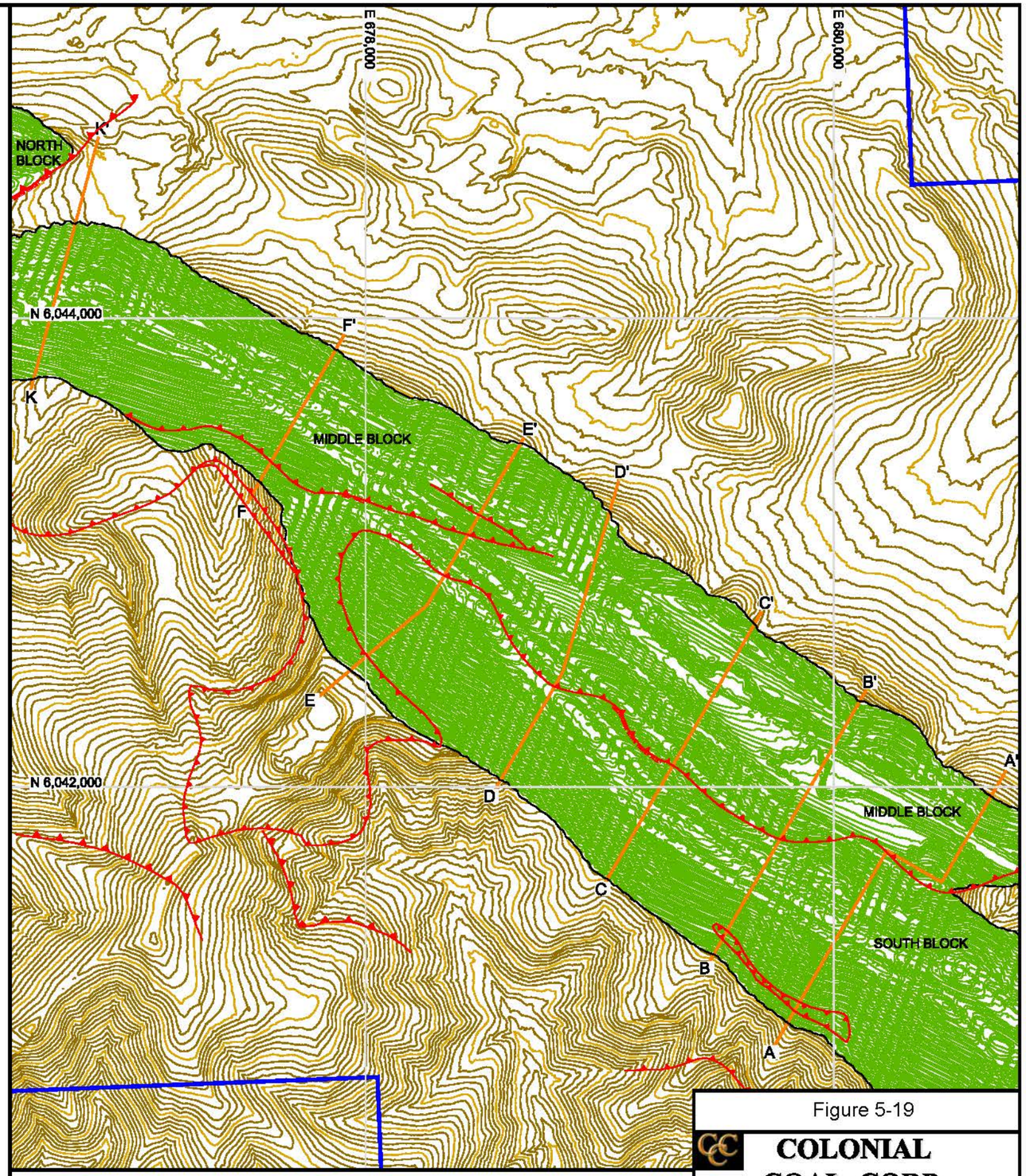
J - J'

DATE: 08/20/2012	SCALE: N.T.S.	NORWEST CORPORATION
PROJECT: 497-1		



CROSS SECTION

- Drillholes
- Topography
- Pit Bottom
- Weathered Base
- Formation Boundaries
- Seam 1
- Seam 2A
- Seam 3B
- Seam 4u
- Seam 5
- Seam 6L
- Seam 6B
- Seam 8
- Seam 9
- Topo Minus 900m



PLAN VIEW

- Cross Section Line
- Fault
- Lease Boundary
- Topography
- Pit Bottom

Figure 5-19

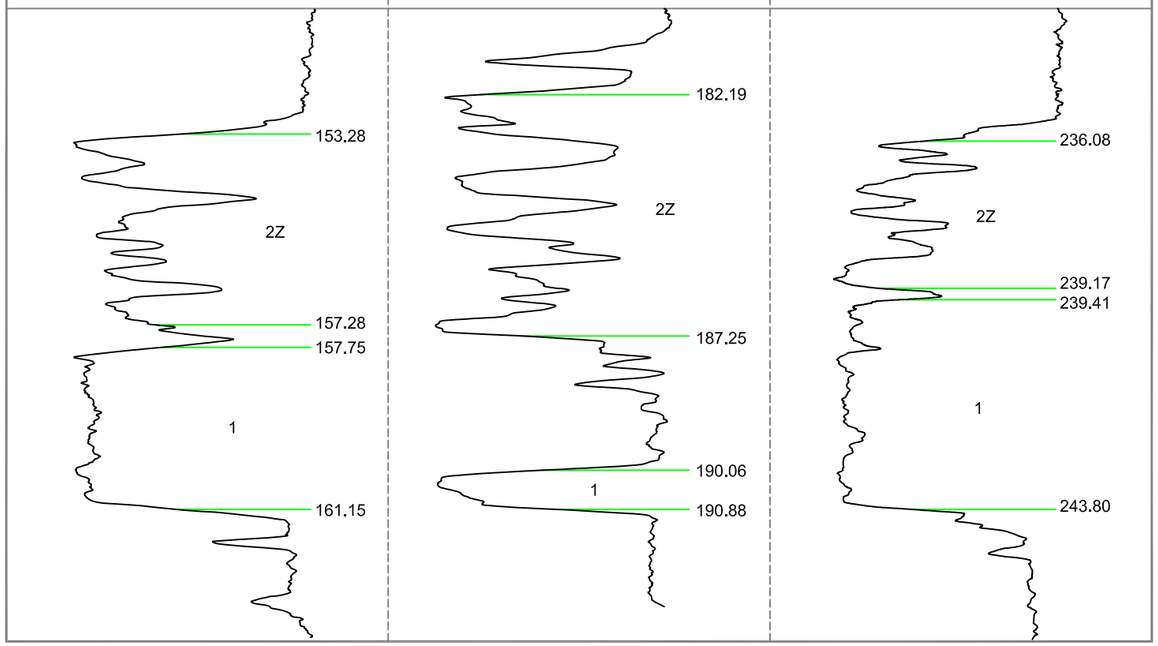
COLONIAL COAL CORP.

CROSS SECTION
K - K'

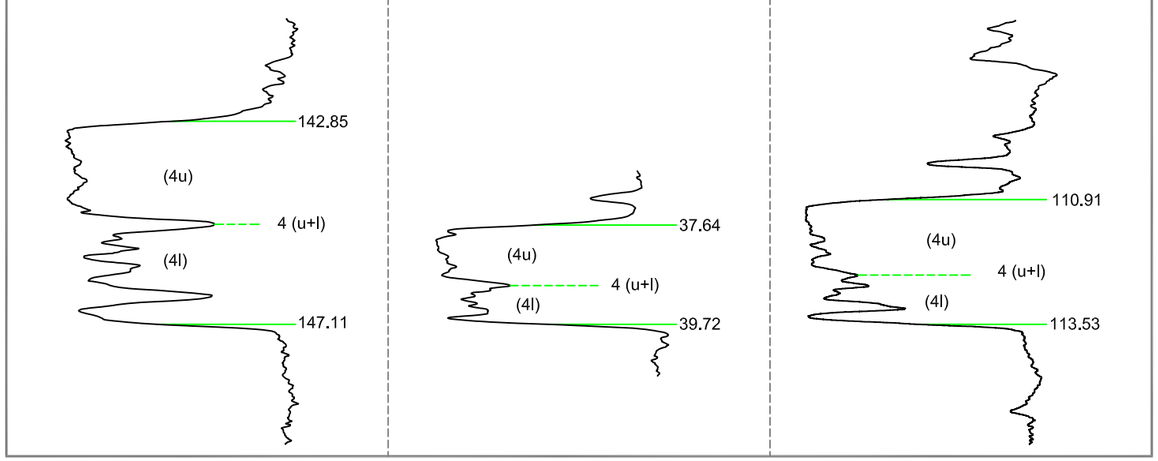
DATE: 08/20/2012	SCALE: N.T.S.
PROJECT: 497-1	NORWEST CORPORATION

SOUTH BLOCK (SEAMS 1, 2Z, & 4u+l)

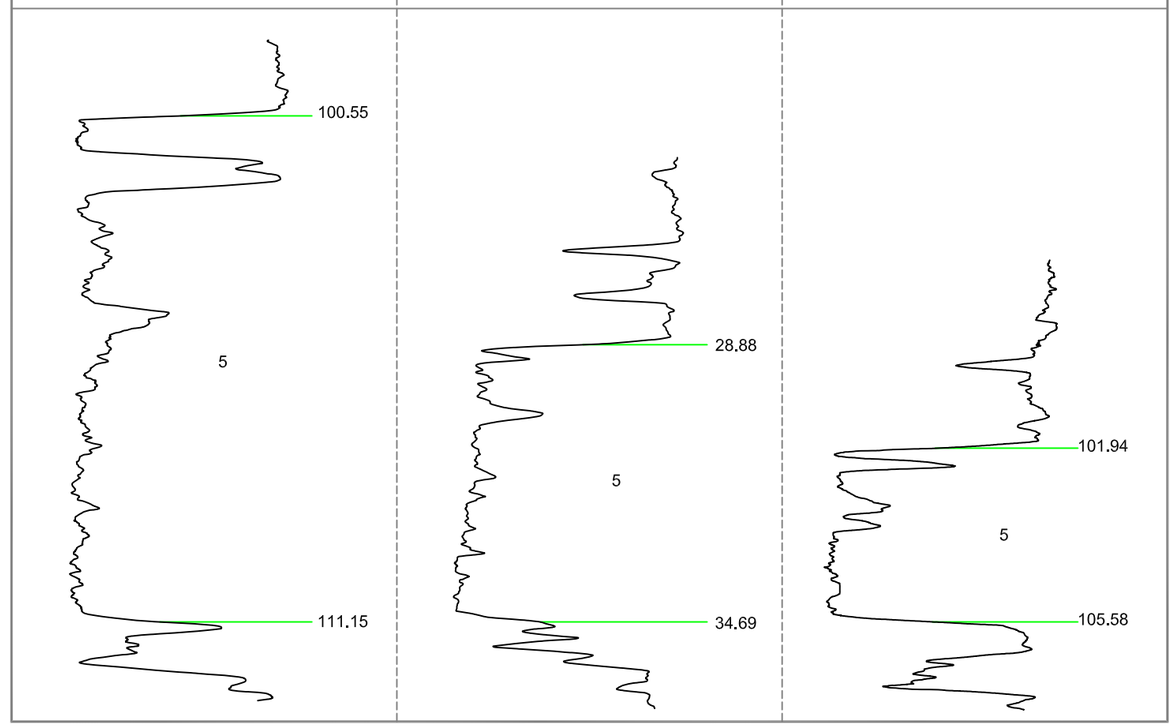
SEAM 1 & 2Z



SEAM 4u+l



SEAM 5



LEGEND:

- MINING SECTION
- UPPER AND LOWER SEPARATION
- NON-MINING SECTION

NOTE:

SEAM TRACES TAKEN FROM
DETAILED DENSITY LOGS

COLONIAL COAL CORP.

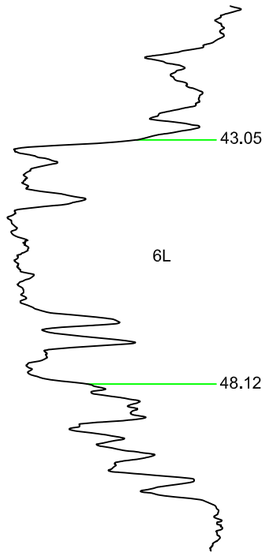
HUGUENOT COAL PROJECT

Drawn by: CVS	SEAM CORRELATION (SOUTH BLOCK) SHEET 1 OF 2
Checked by: JHP	
Approved by: JHP	
Revision No.,	
Dwg No. Hug8 2011AR 2012SmCorr South 1 of 2	
Date: 2012-08-02	Document 43-101 (2011AR)
	Figure No. 5-20

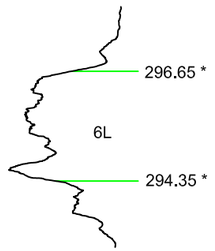
SOUTH BLOCK (SEAMS 6L, 8 & 9)

SEAM 6L

HD11-07

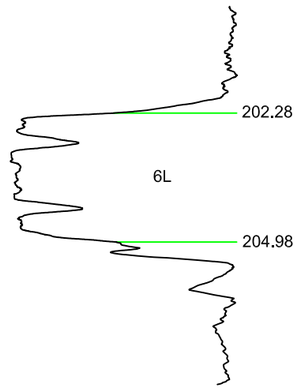


BD7914



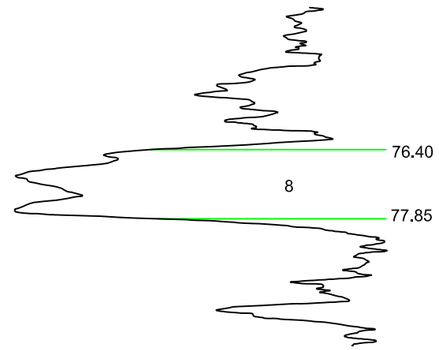
* DEPTH REVERSED AS THIS SEAM WAS DRILLED FROM FLOOR TO ROOF

HD11-01



SEAM 8

HD11-04



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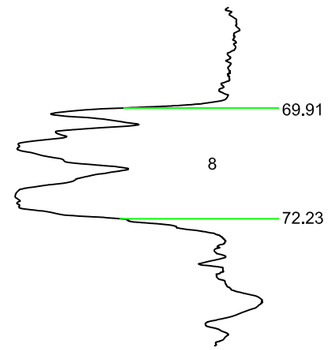
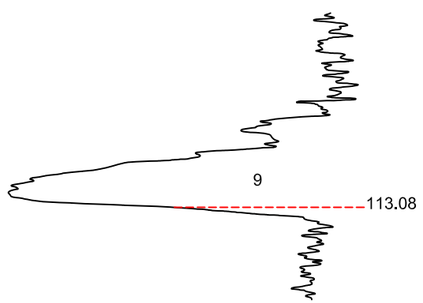


SEAM 9

HD11-04



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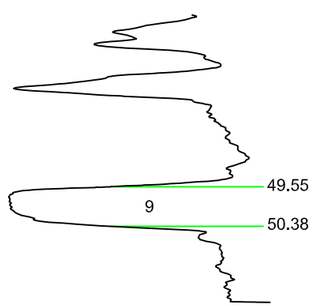

LEGEND:

- MINING SECTION
- UPPER AND LOWER SEPARATION
- NON-MINING SECTION

NOTE:

SEAM TRACES TAKEN FROM DETAILED DENSITY LOGS

COLONIAL COAL CORP.

HUGUENOT COAL PROJECT

Drawn by:	CVS
Checked by:	JHP
Approved by:	JHP
Revision No.	
Dwg No.	Hug8 2011AR 2012SmCorr South 2 of 2
Date:	2012-08-02

SEAM CORRELATION (SOUTH BLOCK) SHEET 2 OF 2

Document: 43-101 (2011AR)

Figure No. 5-21

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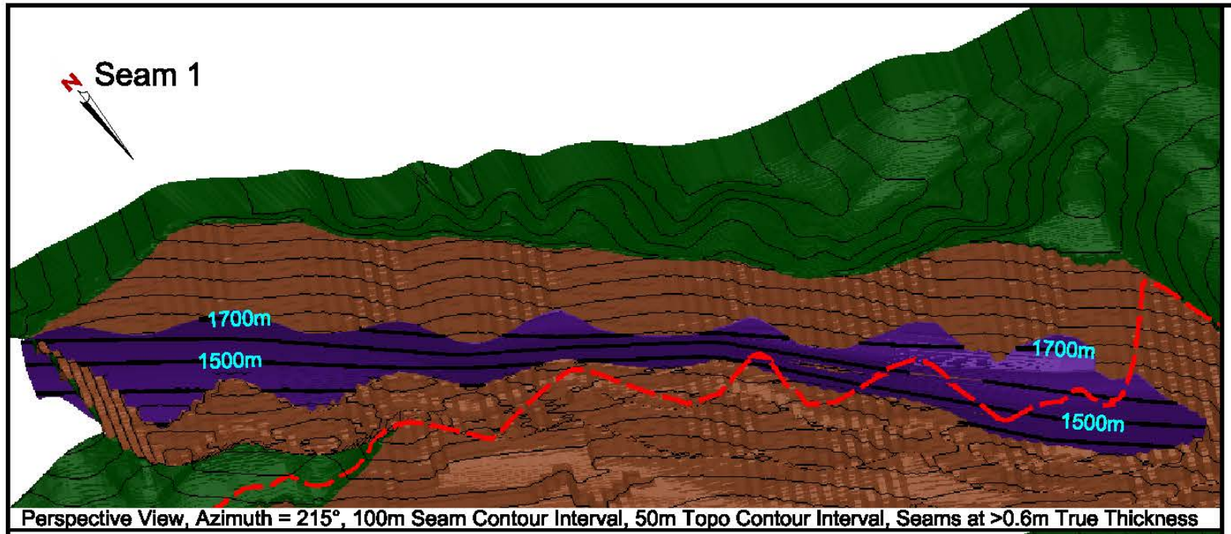
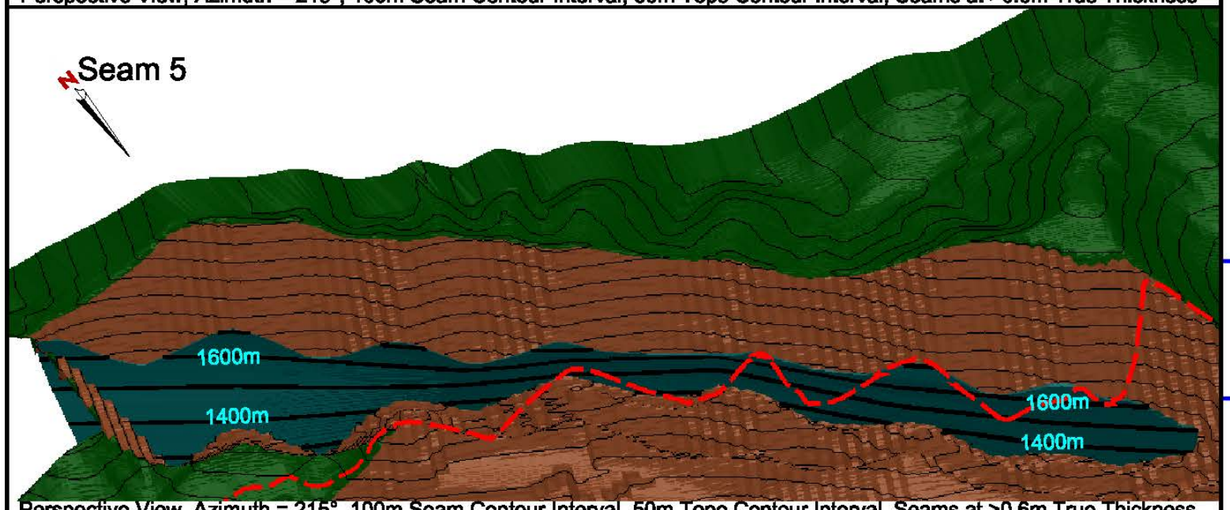
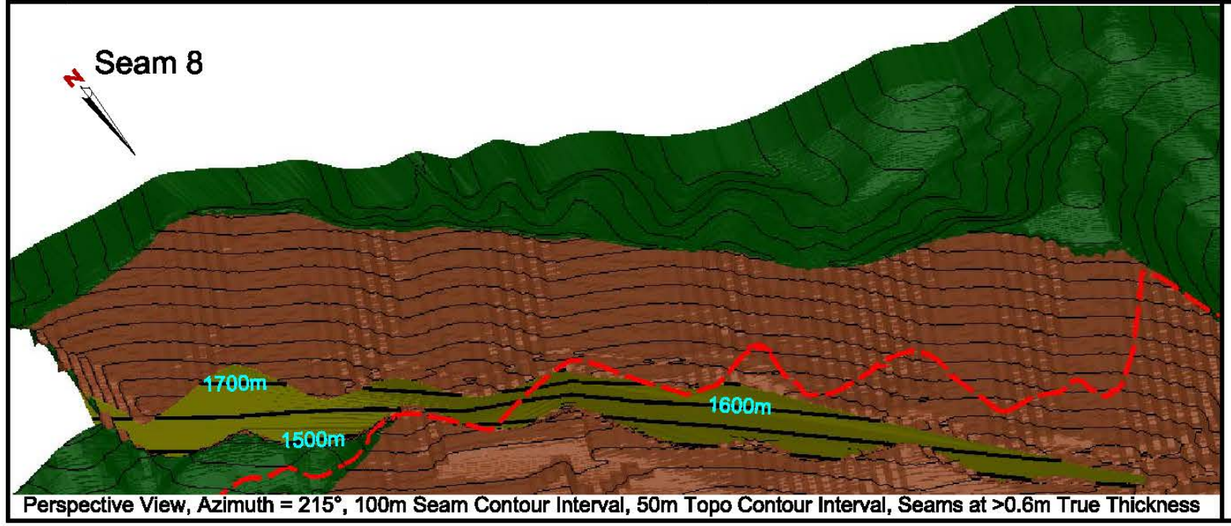


Perspective View, Azimuth = 215°, 100m Seam Contour Interval, 50m Topo Contour Interval, Seams at >0.6m True Thickness

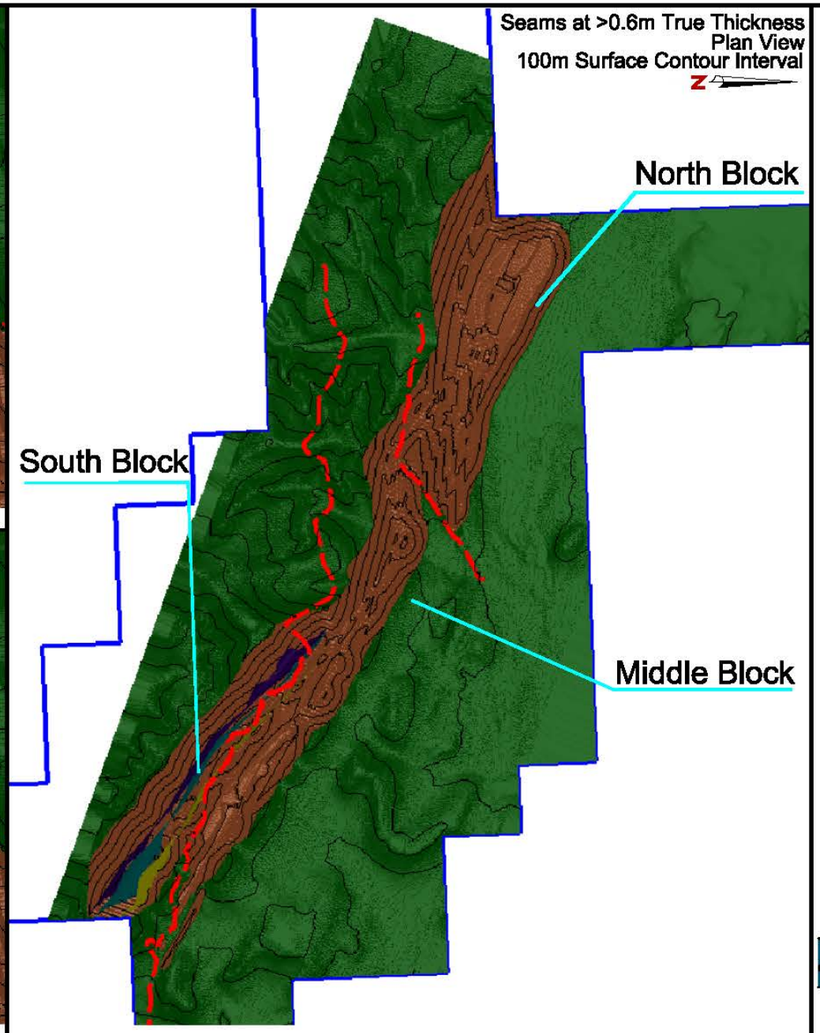


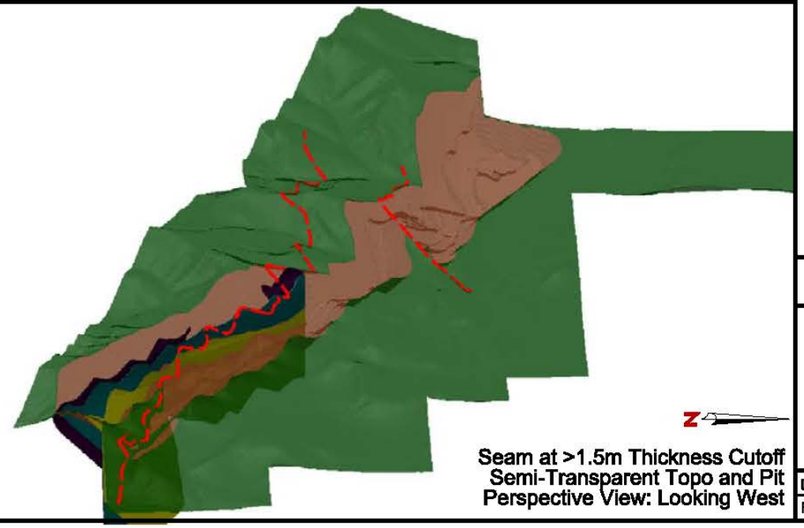
Perspective View, Azimuth = 215°, 100m Seam Contour Interval, 50m Topo Contour Interval, Seams at >0.6m True Thickness



Perspective View, Azimuth = 215°, 100m Seam Contour Interval, 50m Topo Contour Interval, Seams at >0.6m True Thickness

Seams at >0.6m True Thickness
Plan View
100m Surface Contour Interval





Seam at >1.5m Thickness Cutoff
Semi-Transparent Topo and Pit
Perspective View: Looking West

LEGEND

- Seam 1
- Seam 5
- Seam 8
- Topography
- Surface Pit
- Surface Projection of Major Faults Separating Fault Blocks
- Lease Boundary
- Topo/Pit Contours
- Seam Contour
- 1400m Contour Elevation

Figure 5-22

COLONIAL COAL
SOUTH BLOCK
SEAM STRUCTURE

DATE: 08/08/2012
FILE: 497-1 FIGbo

NORWEST CORPORATION

SECTION 6 COAL QUALITY

Data and interpretations presented in this section incorporate historical coal quality taken from Denison (1979a, 1979b, and 1981), plus the results obtained from Colonial's 2008 and 2011 coal sampling and testing programs. All 2011 coal quality data including analytical, attrition-sizing, washability, petrography and carbonization results, plus detailed sample logs are presented in Appendix IV.

6.1 RAW COAL QUALITY

The overall, in-situ coal quality data for mining sections within each of the North, Middle, and South Blocks are presented in Tables 6-1, 6-2, and 6-3, respectively. These coal quality data were derived from widely-spaced drillholes for which reliable data are available (essentially determined by core recovery), generated from recent exploration conducted by Colonial and from historical data reported by previous operators.

Residual moisture values are typical of un-oxidized coals found within the Gates Formation of the North-East Coal Block; that is, usually less than 1%. Volatile matter on a Dry-Mineral Matter-Free (dmmf) basis ranges from 22.27% to 30.95%. This indicates that all of the coal seams fall within the medium volatile bituminous classification (using ASTM rank classification criteria). There is a tendency for slightly lower volatile contents towards the southeast; this is particularly evident when comparing South Block values to those from the Middle and North Blocks. This trend was first noted by Denison (1979b) as a result of exploration across their old Belcourt property. Recent work by Colonial suggests that it is due to the intersection of progressively lower structural slices (of the fold and thrust belt) towards the southeast.

Table 6-1: North Block In-Situ Coal Quality Summary (air dried basis)

Seam	RM %	Ash %	VM %	FC %	S %	Dmmf VM %
9	0.66	16.34	26.83	56.18	1.04	30.95
8	0.77	28.28	20.94	50.00	0.36	27.07
6BCD	0.71	33.91	18.79	46.58	0.49	25.46
6D	0.60	7.87	23.87	67.65	0.71	25.37
$6BC_L$	0.62	19.09	22.11	58.18	0.45	25.98
$6C_L$	1.76	23.76	20.74	53.74	0.81	25.67
6B	0.48	16.77	22.57	60.17	0.40	25.96
6L	0.67	26.83	19.76	52.74	0.35	24.90
5	0.49	16.39	22.98	60.14	0.32	26.39
4u	0.50	12.94	22.53	64.03	0.87	24.87
3D	0.57	10.67	25.42	63.34	0.69	27.75
$3B_L$	0.40	13.31	22.55	63.74	0.50	25.05
3B	0.58	28.10	20.34	50.98	0.43	26.03
2A	0.50	26.67	21.21	51.62	0.71	26.73
1	0.60	16.21	22.15	61.04	0.39	25.34

Table 6-2: Middle Block In-Situ Coal Quality Summary (air dried basis)

Seam	RM %	Ash %	VM %	FC %	S %	Dmmf VM %
10	0.83	17.02	24.07	58.08	0.80	27.86
9	0.57	14.78	24.06	60.59	0.82	27.16
8	0.51	24.12	22.33	53.04	0.39	27.64
6D	0.55	30.91	20.29	48.24	0.67	26.72
6B	0.68	17.11	22.55	59.66	0.54	26.03
6L	0.48	25.54	20.27	53.71	0.42	25.18
5	0.49	14.04	22.43	63.04	0.29	25.17
4u	0.59	6.94	22.38	70.09	0.53	23.59
2A	0.58	25.59	22.22	51.61	0.51	27.93
1	0.46	10.45	23.29	65.80	0.31	25.35

Table 6-3: South Block In-Situ Coal Quality Summary (air dried basis)

Seam	RM %	Ash %	VM %	FC %	S %	Dmmf VM %
9	0.77	7.33	24.56	67.34	0.64	26.07
8	0.71	26.95	20.44	51.89	0.50	25.87
6L	0.75	25.71	18.57	54.96	0.42	22.95
5	0.68	17.22	20.82	61.28	0.30	23.98
4u	0.69	23.47	21.43	54.41	0.48	26.27
2A	0.65	53.50	14.71	31.14	0.52	24.75
1	0.59	8.38	20.89	70.14	0.35	22.27

Apart from Zone 2 in the South Block, which consists of multiple, interlayered coal splits and rock bands, all the mining sections contain low to moderate raw ash values. The variability exhibited in raw ash contents primarily reflects the thickness and continuity of in-seam rock partings. Although inherent ash (such as mineral matter) produces some variability, its effect is usually minor in comparison to the in-seam partings. Huguenot coals are low to very low in sulphur; average in situ sulphur values range between 0.29% and 1.04%, although most are less than 0.6%.

[redacted]

[redacted]

SECTION 7 RESOURCE ESTIMATES

7.1 INTRODUCTION

Coal resource estimations for the North, Middle and South Blocks of the Huguenot property were carried out by Norwest. Within each of these structurally defined blocks, coal resources were categorized as mineable using either surface or underground mining methods.

Norwest provided a senior coal geologist (Mr. W. A. Evenson, CPG) to undertake a site visit in July 2012. Under Mr. Evenson's direct supervision, Norwest completed data validation, a review of Colonial's geological interpretation, plus formatting of data to support model development. This was followed by Norwest personnel completing a 3D resource model, resource estimation and resource classification. The 3D resource model comprises a 3D-block model compiled using MineSight™ software. Mr. Evenson acted as the Independent Qualified Person for Colonial in the preparation of a N.I. 43-101 compliant report (Norwest Corporation, 2012) upon which, this assessment report is based.

The North, Middle and South Block resource estimates were completed in accordance with the procedures and guidelines of GSC Paper 88-21 (Hughes, et al, 1989) as required by N.I. 43-101. Total in-situ surface mineable resource estimates using a 0.60 m thickness cut-off are: 92.2 million tonnes (Mt) of Measured and Indicated (Measured = 80.2 Mt; Indicated = 12.0 Mt), plus 38.2 Mt of Inferred. Total underground resource has also been estimated using a 1.5 m minimum thickness: 97.2 Mt of in-situ Measured and Indicated (Measured = 36.7 Mt; Indicated = 60.4 Mt), plus 156.5 Mt of in-situ Inferred resources.

The accuracy of resource and reserve estimates is, in part, a function of the quality and quantity of available data and of engineering and geological interpretation and judgment. Given the data available at the time this report was prepared, the estimates presented herein are considered reasonable. However, they should be accepted with the understanding that additional data and analysis available subsequent to the date of the estimates may necessitate revision. These revisions may be material. There is no guarantee that all or any part of the estimated resources or reserves will be recoverable.

7.2 G.S.C. PAPER 88-21 RESOURCE

In accordance with N.I. 43-101, Norwest utilized the referenced document, GSC Paper 88-21, "A Standardized Coal Resource/Reserve Reporting System for Canada" (Hughes, et al, 1989) to identify, classify and report coal resources for the Huguenot Coal Property. Table 7-1 shows the framework for the resource/reserve criteria.

Table 7-1: Coal Resource/Reserve Criteria

Class Feasibility	Resource		Reserve	
	Immediate Interest	Future Interest	Active Mines	Not in Active Mines
Assurance	Measured Indicated	Inferred Speculative	Measured and Indicated	
Technology	In Place Only		In Place Recoverable Saleable	

7.3 METHODOLOGY AND GENERAL CRITERIA

Factors affecting estimation of resources within each of the blocks are summarized below.

7.3.1 Model Extent & Geometry

Two 3D block models were compiled with each outlining either surface mineable coal resources or underground mineable coal resources. All block models were oriented along strike of the northeasterly dipping Gates Formation at an azimuth of 290°. Table 7-2 outlines the model extent and block dimensions for each of the two model types.

Table 7-2: Geologic Model Dimensions

Dimensions (m)	Surface Model	Underground Model
Along Strike length	12,910	14,300
Dip direction length	8,368	10,398
Maximum elevation	2,000	2,000
Minimum elevation	800	200
Block size along strike	25.0	25.0
Block size dip direction	5.0	5.0
Block size vertical	2.5	5.0

7.3.2 Topography & Overburden (Till) Surface

Digital LIDAR topography was provided by Colonial. This topography was used to generate a digital elevation model (DEM). The drillhole data were 'draped' to the digital data and the drillhole collar elevations were adjusted to fit the topography.

The base of the unconsolidated overburden surface defines the extent of glacial-fluvial cover over bedrock. The thickness of this layer was created by triangulating overburden thicknesses reported from drillhole data. No coal seams are modeled above the base of the unconsolidated overburden surface.

7.3.3 Oxide Horizon

The base of oxidation surface represents an estimate of the horizon where in-situ coal has been sufficiently exposed to oxidizing elements to alter its metallurgical characteristics. Oxidized coal is defined as coal within 5 m of the base of the overburden surface. This estimate was made from experience with other mining projects in the region.

7.3.4 Geological Data & Geological Interpretation

The geological dataset used to develop the geological model consists of historical data from exploration programs conducted by Denison between 1971 and 1979 as well as new exploration. Within the property, the work conducted by Denison that targeted, and provided data on, Gates Formation coal seams included 5 diamond drillholes totalling 1,862 m, plus significant surface mapping and trenching. Exploration carried out by Colonial during 2008 and 2011 on Gates Formation coal seams included 54 drillholes totalling 8,454 m (including pilot holes for large diameter drill cores), trenching and mapping. The foregoing numbers of drillholes and metres

drilled exclude a number of holes drilled by both Denison and Colonial either to test Gething Formation coal measures, provide ARD samples for selected stratigraphic units, or that may have terminated before reaching Gates Formation targets. Further details of the types and amounts of exploration conducted are presented in Section 3 of this report.

All of the drillhole, surface mapping and trench data available for this property were used to develop the geological models. Additionally, data from one, off-property, drillhole was used for control purposes (Belcourt South, BD7801). Coal seam correlation was determined by Colonial using down-hole geophysical logs and surface mapping. The geologic structural interpretation was developed by Colonial by integrating the seam correlations with bedding-to-core axis angles logged in drill core as well as bedding dips observed at surface.

To complete the geologic model Colonial provided Norwest the following basic data: LIDAR surface data, drillhole and trench database, and surface mapping. For the North Block, area structure contour maps for Seams 1, 5, 6B, 8, plus the (underlying) block-bounding North Holtslander Thrust Fault were provided. For the Middle and South Blocks, cross-sections were provided for structural control. These data were sufficient to correlate coal seams, fault strike and displacement between cross sections and drillhole intercepts. Seam roof and floor surfaces were digitized and used to create solid objects. These seams solids were then used to code a 3D block model with percentage coal on a per seam basis.

Coal seam thicknesses from exploration drillholes were acquired by measuring along the length of the hole. Because the angle of intersection between the hole and the seam is often less than perpendicular, these intersections represent ‘apparent’ rather than ‘true’ thickness. Adjustments from apparent to true seam thickness were made in the modelling of in-situ coal resources. The resource model is based on true seam thickness, as defined mathematically through the relationship between drillhole geometry and interpreted bedding geometry.

While the resource estimates are based primarily on drillhole data supported by selected trench data, the assignment of resource categories takes all of the geological data into account.

7.3.5 Mineable Thickness

On the basis of the current interpretation, the North and Middle Blocks of the Huguenot deposit are classified as a moderate, potentially surface and underground mineable deposit. The South Block is considered a complex, potentially surface and underground mineable deposit. Resource assumptions for mineable thicknesses conform to GSC Paper 88-21 guidelines at 0.6 m for surface deposits and 1.5 m for underground deposits. Rock partings greater than 0.3 m true thickness were omitted from in-situ resource estimations.

It should be noted that the mineability of a given seam is not simply tied to its individual seam thickness, but also to its quality, and the number and thickness of seams and partings immediately adjacent to it. Furthermore, mineability is greatly determined by mining methodology and equipment selection. The larger the equipment, the more difficult it becomes to mine selectively. This understanding is facilitated in current 3D modelling environments such as MineSight™, which was utilized for the North, Middle and South Blocks.

7.3.6 Specific Gravity

In view of the limited S.G. measurements for the 2008 and 2011 coal cores Norwest applied a fixed S.G. of 1.48g/cm3 for all of the coal seams. This S.G. was taken from GSC Paper 88-21 (Table 1 In-situ bulk density (g/cm3) for volume-weight conversion by coal rank and ash content) which recommends a S.G. of 1.48g/cm3 for coal with average ash content of 20% (dry basis) and low to medium volatile rank. The average raw ash content for medium volatile rank coal for the Huguenot project is 20.8% (dry basis) and the Huguenot coal deposit is considered by Norwest to be a 20% ash coal deposit overall. On the basis of this information applying a fixed density 1.48g/cm3 using GSC Paper 88-21 Table 1 density guidelines was considered to be fair and reasonable.

7.3.7 Modelling Method

Seam roof and floor surfaces were digitized from control points that included: drillhole intercepts, surface trenches, surface mapping and across-strike cross sections interpreted by Colonial. The roof and floor surfaces were then used to construct solids for each seam where the true seam thickness is interpreted to be greater than 0.6 m for surface mineable resources and greater than 1.5 m for underground mineable resources. The seam solids did not extend into the zone of oxidation. These seam solids were then used to code a 3D block model with percent coal for each model block to a maximum depth of 900 m below surface.

To define the zone of surface mineable resources, a pit shell was created within coal-bearing zones from below the surface to a depth of 300 m below surface and within the license boundaries. A Lerches-Grossmann algorithm was used determine the shape of the pit shell targeting a maximum incremental stripping ratio of 20:1BCM/tonne for extracting coal seams at greater than 0.6 m true thickness. An overall stripping ratio of 15:1BCM/tonne was calculated for the final pit shell and this stripping ratio was deemed acceptable by Norwest after benchmarking the results with current surface mining costs. The overall pit slope used in the pit shell calculations is 47° based on Norwest experience of pit slope stabilities in neighboring active surface mines.

7.4 COAL RESOURCE ESTIMATION

7.4.1 Surface Minable Resources

Current surface mineable resource estimates for the North, Middle and South Blocks of the Huguenot coal property for the 0.6 m minimum mineable seam thickness model are summarized in Table 7-3. The resources are considered to be of 'immediate interest'. For each model, the coal, as defined, is within a pit with 47° walls and a strip ratio of less than 20:1 BCM/tonne (a pit delineated resource with an incremental strip ratio of 20 bank cubic metres of waste to one tonne of in place coal). The overall strip ratio is 15:1 BCM/tonne and the pit is limited to a maximum vertical depth from surface of 300 m.

Table 7-3: Summary of In-Situ Minable Coal Resources

Resource Category	Total (Mt)
Measured	80.2
Indicated	12.0
Total (Meas. + Ind.)	92.2
Inferred	38.2

Tables 7-4 to 7-6 summarize surface mineable resources by seam/coal zone.

Table 7-4: Summary of Total Measured Surface Minable Resources by Seam/Coal Zone

Seam	Total Coal (Ktonnes)	% Total
10	956	1.19
9	1,676	2.09
8	11,059	13.80
6D	1,896	2.37
$6C_L$	477	0.60
6B	6,494	8.10
6L	11,408	14.23
5	24,600	30.69
4_U	2,319	2.89
3D	822	1.03
3B	1,751	2.18
$3B_L$	492	0.61
2A	2,619	3.27
1	13,581	16.95
Total	**80,150**	**100.00**

Table 7-5: Summary of Total Indicated Surface Minable Resources by Seam/Coal Zone

Seam	Total Coal (Ktonnes)	% Total
10	286	2.38
9	635	5.27
8	2,184	18.14
6D	804	6.68
$6C_L$	458	3.80
6B	1,755	14.58
6L	1,413	11.74
5	2,214	18.39
4_U	201	1.67
3B	110	0.91
2A	133	1.10
1	1,846	15.33
Total	**12,039**	**100.00**

Table 7-6: Summary of Total Inferred Surface Minable Resources by Seam/Coal Zone

Seam	Total Coal (Ktonnes)	% Total
9	950	2.49
8	1,629	4.27
6D	385	1.01
6B	520	1.36
6L	4,036	10.58
5	9,265	24.28
4_U	4,191	10.99
4_L	4,691	12.30
3B	215	0.56
2	6,110	16.01
1	6,160	16.15
Total	**38,152**	**100.00**

7.4.2 Underground Minable Resources

Current underground mineable resource estimates for the North, Middle and South Blocks of the Huguenot coal property, for the 1.5 m minimum mineable seam thickness models are summarized in Table 7-7. The resources are limited to those coal seams below the surface mining pit and are exclusive of the surface mineable coal resources. The underground mineable coal resources are considered to be of 'immediate interest'.

Table 7-7: Summary of In-Situ Underground Minable Coal Resources

Resource Category	Total (Mt)
Measured	36.8
Indicated	60.4
Total (Meas. + Ind.)	97.2
Inferred	156.5

Tables 7-8 to 7-10 summarize underground mineable resources by seam/coal zone.

Table 7-8: Summary of Total Measured Underground Minable Resources by Seam/Coal Zone

Seam	Total Coal (Ktonnes)	% Total
8	2,830	7.69
6B	1,830	4.98
6L	4,650	12.65
5	12,400	33.74
2A	1,400	3.82
1	13,640	37.12
Total	**36,750**	**100.00**

Table 7-9: Summary of Total Indicated Underground Minable Resources by Seam/Coal Zone

Seam	Total Coal (Ktonnes)	% Total
8	9,290	15.37
6B	3,460	5.74
6L	9,110	15.07
5	20,870	34.53
2A	1,140	1.89
1	16,550	27.40
Total	**60,420**	**100.00**

Table 7-10: Summary of Total Inferred Underground Minable Resources by Seam/Coal Zone

Seam	Total Coal (Ktonnes)	% Total
8	23,390	14.95
6B	9,300	5.94
6L	19,210	12.28
5	42,870	27.39
4_U	9,900	6.32
4_L	12,520	8.00
2A	17,240	11.02
1	22,060	14.10
Total	**156,490**	**100.00**

7.5 ASSURANCE OF EXISTING CLASSIFICATION

Model block distances from valid seam intercepts in the drillhole and trench records were used to assign resource classification codes. The Geology Type for the North and Middle Blocks is considered to be Moderate and, as such, valid seam intercepts (data points) within a maximum search radius of 450 m were used to define measured resources, 900 m for indicated resources and 2,400 m for inferred resources as prescribed in GSC Paper 88-21.

Moderate Geology Type is described in GSC Paper 88-21 as:

> *"Moderate geology type refers to deposits characterized by homoclines or broad open folds with bedding inclinations of generally less than 30°. Faults may be present, but are relatively uncommon."*

Although the bedding in the North and Middle Blocks often exceeds 30° the dips are consistent or change gradually along strike, coal seams can be correlated both down dip and along strike with confidence and the encountered faults have minor offsets and are not traceable over distance. Therefore the geology type can be considered moderate.

The Geology Type for the South Block is considered Complex in accordance with GSC Paper 88-21 guidelines. For Complex Geology Type, resources estimations, a minimum of three data points are required within regularly spaced cross-sections defined by fence-line drilling across-strike of the coal

beds. As prescribed in GSC Paper 88-21 the assurance of existence criteria for Complex Geology Type is outlined in Table 7-11.

Table 7-11: Complex Geology Type Classification Criteria

Criteria	Assurance of Existence Category		
	Measured	Indicated	Inferred
Cross section spacing (m)	150	300	600
Minimum number of data points per section	3	3	3
Mean data point spacing along section (m)	100	200	300
Maximum data point spacing along section (m)	200	400	800

Complex Geology Type is described in GSC Paper 88-21 as:

> *"Complex geology type refers to deposits characterized by tight folds, some with steeply inclined or overturned limbs, may be present, and offsets by faults are common."*

The areas covered by the various resource categories for the main coal seams are shown in Figure 7-1.

SECTION 8 INTERPRETATION AND CONCLUSIONS

8.1 INTERPRETATION

The North, Middle and South Blocks of the Huguenot property cover coal measures belonging to the Gething and Gates Formations. The presence of potentially economic coal seams within the Gates Formation is demonstrated by substantial amounts of drilling, trenching, geological mapping, sampling and testing from both historical and recent (2008 and 2011) exploration. Potentially important coal seams within the Gething Formation have also been demonstrated, although these coal seams have seen significantly less work than those belonging to the Gates Formation.

8.2 CONCLUSIONS

The 2011 Colonial exploration program at Huguenot achieved its purpose by demonstrating the geological, coal seam and coal quality continuity within the North, Middle and South Blocks that comprise the main target area.

Based upon the presently available information, it is concluded that:

- The Huguenot property is located within a region where coal mining is being conducted and other coal mines are being developed.
- Delineation of coal reserves for future development is also taking place on adjoining projects.
- The property has seen substantial historical and recent work programs involving the expenditure of significant exploration budgets.
- Exploration carried out within the North Block during 2008 and the Middle and South Blocks during 2011 met expected objectives by sufficiently defining deposit geology to allow quantification of resources and coal quality according to N.I. 43-101 classification standards. Only coal resources contained within the Gates Formation have been evaluated.
- Based upon Geological Survey of Canada criteria, the Geology Type for the North and Middle Blocks are classified as moderate. The Geology Type for the South Block is considered Complex. The data density supports the resource tonnages estimated to date and the coal quality assigned to them. The results of the exploration and their interpretation have been consistent over time, lending confidence to the conclusions that have been reached. The North, Middle and South Block deposits remain open to infill drilling, with the potential for up-grading the level-of-assurance of the coal resources.

The North, Middle and South Block resource estimates are in accordance with the guidelines of GSC Paper 88-21 as required by N.I. 43-101. Overall in-situ resource estimates are:

- Surface mineable, using a 0.60 m thickness cut-off: 92.2 Mt of Measured and Indicated (Measured = 80.2 Mt; Indicated = 12.0 Mt), plus 38.2 Mt of Inferred.
- Underground mineable, using a 1.5 m thickness cut-off: 97.2 Mt of Measured and Indicated (Measured = 36.7 Mt; Indicated = 60.4 Mt), plus 156.5 Mt of Inferred.

- These resources are considered to be of immediate interest.

Drilling, trenching and detailed mapping have outlined areas within the property where coal resources present an opportunity for low to moderate strip ratio surface mining. Underground mining potential exists below and alongside potentially surface mineable resources. There are no major infrastructure elements within or proximate to the project area that can be used in mine development other than some forestry roads and access trails.

Using ASTM criteria and reflectance values, Gates Formation coals on the Huguenot property are classified as medium volatile bituminous overall. The coals are of metallurgical quality and would form a suitable coking coal product after beneficiation in a wash plant.

Based upon washability and coal quality data, process simulation (using Limn process simulation software) indicated that a product ash in the range 7.5% to 8.0% (air dry basis) is probably optimal.

Analysis of a washed, simulated product reported (on a dry basis): ash = 8.10%, volatile content = 23.43%, fixed carbon = 68.47%, FSI = 6.5 and phosphorus = 0.047%. This clean composite has a low base: acid ratio of 0.078, as determined from the mineral composition of ash.

Initial carbonization tests indicate that Huguenot coals can be expected to form a coking coal with favorable coking indices, low to very low sulphur, and low phosphorus contents. It remains for future work to supply fresh samples for carbonization in order assess the coal's maximum coking potential.

Based upon the results of the 2011 exploration program and data available from previous exploration work completed in and around the Huguenot property, it can be concluded that further work on the property is justified. The intention of further exploration would be to:

- Complete the geological, resource and coal quality definition of Gates Formation coal resources in the Middle Block and bring all the coal resources within the block into at least the Indicated category.

- Advance the definition of the geology, resource, and coal quality potential of the South Block. The amount of exploration required to appropriately classify the resources will differ significantly if the Geology Type assigned to this block is confirmed as Complex (as opposed to Moderate).

- Continue to conduct coal quality testing on diamond drill core samples and 6" core (bulk) samples to complete the characterization of the coal quality of seams targeted for future mining, plus washability and carbonization tests. This work should include all seams that could potentially be mined and provide "fresh" coal for the rheological and carbonization tests.

- Continue to evaluate Gething Formation coal seams in those areas considered to present potential mining opportunities.

- Continue with any environmental and geotechnical studies.

SECTION 9 EXPENDITURES

The expenditures for the 2011 Huguenot field program are summarized in the Table 9-1 below. This table does not include any costs associated with geological data compilation and reporting, geological consulting, geological modelling, mine engineering, coal washing studies, environmental and archaeology report preparation, and associated support activities.

Table 9-1: Costs Summary for the 2011 Huguenot Field Program

FIELD		
Trails & Mechanized Trenching	$	700,100
Drilling - Air Rotary	$	322,300
Drilling - L.D. Coring	$	169,550
Drilling - HQ Coring	$	481,550
Camp (Room & Board)	$	444,000
Personnel (Colonial)	$	448,150
First Aid	$	63,200
Geophysical Logging	$	231,650
ARD	$	9,350
Truck Rental	$	44,600
Helicopter Pad Construction	$	155,000
Helicopter	$	713,900
Equipment Rental	$	18,050
Supplies	$	46,700
Surveying & Base Maps	$	15,000
Freight	$	4,350
Travel & Accomodation	$	27,400
Fuel	$	112,300
Communications	$	6,200
Environmental & Wildlife	$	376,900
Permitting	$	1,900
Miscellaneous	$	650
Sub-Total:	**$**	**4,392,800**
LABORATORY		
Coal Quality	$	191,650
Coal Carbonization	$	10,200
Coal Petrography	$	22,150
Water Quality	$	8,700
ARD	$	23,400
Sub-Total:	**$**	**256,100**
OFFICE		
Total:	**$**	**4,648,900**

SECTION 10 REFERENCES

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SECTION 11 STATEMENT OF QUALIFICATION: JOHN H. PERRY, P.GEO.

I, John H. Perry, P.Geo., do hereby certify that:

- I am Chief Operating Officer for Colonial Coal International Corp., with offices at 200-595 Howe Street, Vancouver, B.C., V6C 2T5
- I hold the following academic qualifications:
  - B. Sc. (Hons) Geology, University of Exeter, UK – 1972
  - Post-Graduate studies in Geology, University of Calgary, Alberta – 1972-1976
- I am a registered Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia, (Member #19598) and I am a fellow of the Geological Society, London, UK.
- I have practiced my profession for over 39 years on coal, metallic and industrial mineral and gemstone projects within Canada and internationally. My experience with coal projects is extensive; it ranges from early exploration through resource/reserve delineation and includes multiple feasibility-level studies and work conducted within a producing coal mine. Coal projects have been undertaken throughout western Canada and internationally; this includes many projects located in northeast B.C.
- I have overseen the preparation of this Coal Assessment Report entitled: “Huguenot Coal Project: 2011 Exploration Program (covering the period June 2011 to June 2012)”. Effective Date September, 2010.

Dated: December 4, 2015

(signed) “John H. Perry”

_____

JOHN H. PERRY, P.Geo.