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HUGUENOT COAL PROJECT TECHNICAL REPORT

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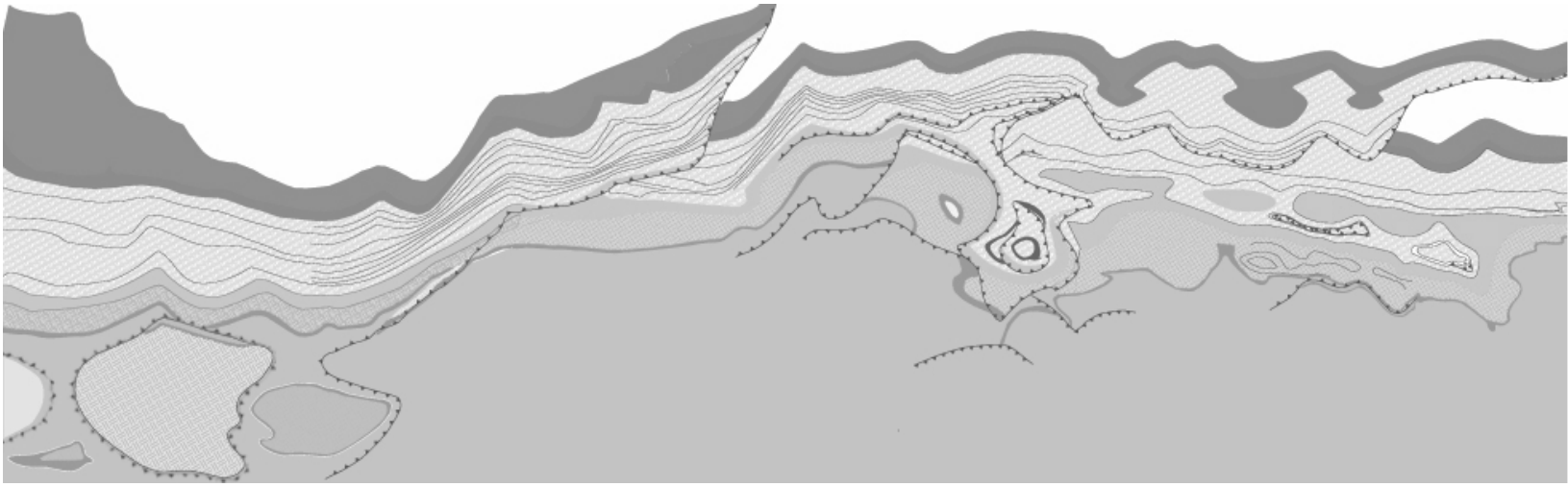

TECHNICAL REPORT

HUGUENOT COAL PROJECT

LIARD MINING DIVISION
BRITISH COLUMBIA

Submitted to:

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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 3 • SUMMARY

This report was originally prepared for Colonial Coal Corporation (Colonial) on May 19, 2010, but is now being prepared for Ananda Capital Corp. (Ananda) as Colonial is completing a reverse takeover of Ananda, as a qualifying transaction for Ananda, pursuant to the policies of the TSX Venture Exchange. As a consequence of the proposed qualifying transaction, the business and assets of Colonial, including the Huguenot Coal Project, will become the business and assets of Ananda. The purpose of this report is to support an application by Ananda to the TSX Venture Exchange for approval of its qualifying transaction.

The Huguenot Coal Project is located in northeastern British Columbia, approximately 690 km north-northeast of Vancouver, close to the provincial boundary with Alberta. It is situated approximately 85 km south-southeast of the town of Tumbler Ridge and 115 km southwest of the city of Grande Prairie (Alberta).

The property covers a total area of 7,592 ha and consists of one contiguous block of 13 coal licenses and 2 coal licenses applications that encompass previously explored coal deposits. These licenses are held beneficially for Colonial by a British Columbia company, 0735513 B.C. Ltd., which is a wholly-owned subsidiary of Colonial. A royalty of 1.5% is payable on all coal production from the property.

Access into the project area is provided 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 roads link with a number of logging roads and trails constructed for previous coal exploration. The property is located approximately 75 km southeast of a rail line which terminates at the Quintette wash plant and coal load-out facility (approximately 17 km south of Tumbler Ridge). The currently operating Trend South and Perry Creek open pit coal mines are located approximately 25 km south and 15 km southwest of Tumbler Ridge, respectively. The rail load-out facility for the Trend South mine is located 4 km north 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.

The Huguenot property covers part of the old Belcourt property previously owned by Denison Mines Limited (later, joint ventured with Gulf Canada Resources Inc). Exploration of the property began in 1970 but the main programs were carried out between 1976 and 1980. This work defined three major targets for open pit mine development; two (Red Deer and Holtslander) are located north of Huguenot property and one (Omega) lies to the south. Recent exploration on these three areas was carried out in 2005 and a feasibility-level study supporting high tonnage, low to moderate strip ratio, surface mines on the Belcourt North (Red Deer) and Belcourt South (Holtslander) projects was completed in January 2009. The southern end of the Belcourt South pit lies just north of the Huguenot property boundary.

Within the area now covered by the Huguenot property, a total of 2,452 metres of drilling (from 8 diamond drillholes) and approximately 138 hand trenches were completed as part of several helicopter-

supported exploration programs conducted between 1976 and 1979. Drilling and sampling was conducted in a manner similar to current exploration practices. Most of the data generated from these programs are available as are the reports generated from these programs. Exploration conducted by Colonial in 2008 consisted of 17 air rotary holes (1623 m) and ten 6-inch holes (88 m core and 334 m of percussion drilling), 19 mechanical trenches, and 36 hand trenches. Work focused on the northern part of the property (called the North Block) which lies immediately south of the Belcourt South pit area, a potential large open-pit mineable coal deposit.

The Huguenot Coal Project lies within a belt of Mesozoic strata that form part of the Rocky Mountain Foothills of northeastern British Columbia. The stratigraphic succession broadly represents an alternating sequence of marine shales and marine and non-marine clastic lithologies deposited from a series of transgressive and regressive cycles. These strata were uplifted during the Laramide Orogeny, resulting in the development of thrust faults and intense folding. The main structural feature in the region is the broad, northwest-plunging Belcourt Anticlinorium. Lower Cretaceous coal measures are located along the western and eastern margins of this structure, with the Huguenot property located along its northeastern limb.

The coal seams of greatest potential are found within Lower Cretaceous strata of the Gates Formation. At Huguenot, the Gates Formation contains nine coal seams and coal zones numbered, in ascending order, from 1 to 9 (the term “coal zone” is applied to multiple, sometimes discontinuous, coal splits with intervening rock bands that form a distinct traceable horizon). The main coal seams are consistently developed and even the thinner seams can be traced over large distances. The thickest is Seam 5, which ranges between 3.3 and 9.1 m (but is typically between 5 and 6 m thick). The seams correlate northwest and southeast with those being evaluated by Belcourt Saxon Coal Limited.

The property consists of mostly easterly dipping strata that lie within three main structural blocks; each block being separated from the other by thrust faults. The upper structural block is underlain by the Holtslander North Thrust; it is located in the north of the property and is referred to as the North Block. It contains near-homoclinal, moderate, northeasterly- to easterly-dipping, coal measures. The Middle Block is carried on the Holtslander South Thrust. Strata dip northeasterly throughout most of this thrust sheet but, in the south, an open, upright, pair of minor folds are present along the eastern portion of the block. In the north and south of the Middle Block, strata have moderate dips but they are quite steep in the center of the area. The lowest structural unit is the South Block. Here, the strata are steep, easterly-dipping to slightly overturned and form the eastern limb of an asymmetric anticline, the fold axis of which essentially defines the western limit of the coal measures.

Coal resource estimations for the North Block of the Huguenot property were carried out by Moose Mountain Technical Services (MMTS). MMTS conducted data validation, and reviewed the geological interpretation, formatting and treatment of data to support model development; MMTS also completed the resource classification work.

The total in-situ coal resource estimates inside a 20:1 incremental strip ratio pit for the North Block are:

- using a 0.6 m minimum thickness:- 45.2 million tonnes (Mt) of Measured and Indicated (Measured = 31.3 Mt; Indicated = 13.9 Mt), plus 10.3 Mt of Inferred
- using a 1.0 m minimum thickness: - 36.7 Mt of Measured and Indicated (Measured = 26.4 Mt; Indicated = 10.3 Mt), plus 9.2 Mt of Inferred.

The overall strip ratio is 12.0:1 (BCM waste: tonnes coal) for the 0.6 m minimum thickness model, and 12.86:1 (BCM waste: tonnes coal) for the 1.0 m minimum thickness model. Metallurgical coal makes up approximately 99% of the stated resources. The resource estimates were completed in accordance with the procedures and criteria of GSC Paper 88-21 as required by NI 43-101.

Based upon a review of historical data and associated resource estimates, the overall coal resource potential of the Gates Formation for the combined Middle and South Blocks is estimated to range from approximately 84 to 113 Mt. This range uses tonnage estimates based upon 0.6 and 2.0 m seam thickness minimums.

Analytical results indicate that the Gates coal seams are metallurgical coals that would yield a coking coal product after beneficiation in a wash plant. While Dry Mineral Matter Free volatile contents suggest the seams are of medium volatile bituminous rank, maximum reflectance values from the 2008 samples show that, on the North Block at least, the upper seams (Seams 6BCD and 8A) are of high volatile bituminous rank. North Block seam ash values range from approximately 8% to 26.4%, although most are between 10.5% and 21%. Clean coal FSI levels are good (at 6.5), sulphur contents are low to very low and concentration of sulphur from un-washed raw coal into washed clean coal is not evident; phosphorus contents are consistently low. Yields obtained from cleaning to approximately 8% ash, are good to excellent. Mineral compositions of ash, yield base: acid ratios ranging from 0.054 to 0.139. Raw and clean coal quality data from the North Block are generally comparable to equivalent data from the Middle and South Blocks.

Thermal rheology data from the simulated product indicate that this sample had low fluidity with a narrow melting range and no dilatation. However, it is likely that these data were significantly affected by the age of the sample by the time the tests were carried out, as fluidity and dilatation are very sensitive to early stages of oxidation at low temperatures. Historical data from Huguenot and the adjoining Belcourt South property show significant ranges in fluidity and maximum dilatation values, while melting ranges and maximum contraction values are more constrained. Adit samples from Belcourt South, taken in 1980 from Seams 5 and 1 (Upper), returned maximum fluidities of 291 and 215 ddpm, respectively. Melting ranges varied from 65° (Seam 5) to 72° (Seam 1).

A North Block simulated product was submitted for carbonization tests. This “product” was formed from the combination of four main seams (Seams 1, 5, 6BCD, and 8A) that represent at least 78% of the estimated North Block resources (depending on minimum mining section thickness used). The results indicated that, while this coal sample would not be suitable for a stand-alone product for iron-making blast furnace operations, it would be acceptable as a bridging component of a blend.

Based upon the washability and coal quality data, process simulation was carried out by Norwest Corporation (Norwest) using Limn process simulation software. Norwest concluded that the coal seams are naturally low ash coals with a virtual absence of middlings material and that the coal seams are physically compatible for washing together with no strict pre-blending requirement prior to washing. They further concluded that a product ash in the range 7.5% to 8.0% (ad) is probably optimal and that a product in the range of 7.5% ash (ad) should be readily achievable.

It is concluded that further work on the property is justified. A phased work program is recommended.

Phase I would focus on completing the geological definition of the North Block and bringing all resources classed as Surface Deposit Type to at least the Indicated category. Additional large diameter coring for bulk samples both north and south of Holtslander Creek should be carried out in order to further characterize the coal throughout the North Block and obtain fresh samples for rheological and carbonization tests. A scoping study to examine the potential for establishing an open pit mine on the North Block would be undertaken once all the other aspects of this phase of work were completed. This would be followed by Phase II which would incorporate drilling across the Middle Block with extension into the South Block, to provide definition of resources and coal quality in these areas of the property. The costs of Phase I is estimated at $2.2 M, with Phase II estimated at $3.96 M, for a total of $6.16 M. The decision to proceed with Phase II will be contingent upon the results obtained from Phase I.

SECTION 4 • INTRODUCTION & TERMS OF REFERENCE

This report was originally prepared for Colonial Coal Corporation (Colonial) on May 19, 2010, but is now being prepared for Ananda Capital Corp. (Ananda) as Colonial is completing a reverse takeover of Ananda, as a qualifying transaction for Ananda, pursuant to the policies of the TSX Venture Exchange. As a consequence of the proposed qualifying transaction, the business and assets of Colonial, including the Huguenot Coal Project, will become the business and assets of Ananda.

Colonial controls a block of coal licences plus coal licence applications in northeastern British Columbia, collectively referred to as the Huguenot Coal Project. The company retained Mr. Robert Morris, P.Geo of Moose Mountain Technical Services (MMTS) to act as an Independent Qualified Person for the preparation of a Technical Report, in accordance with NI 43-101, Form 43-101F1. In order to complete the assignment, Mr. Morris has undertaken a review of work carried out within the project area, including data obtained and interpretations generated by current and previous tenure holders and has reviewed, and takes responsibility for those portions of this report that have been prepared by Colonial's internal QP (Mr. J. Perry. P.Geo). Verification of the geology and coal development was completed through a site visit and data review. In addition, MMTS constructed the 3D resource model for the North Block, and carried out resource estimation and resource classification for this block.

The purpose of this report is to support an application by Ananda to the TSX Venture Exchange for approval of its qualifying transaction. It is prepared in a manner consistent with Canadian Securities Commission requirements as laid out in National Instrument 43-101, by personnel who have substantial experience with the coal deposits of western Canada, and northeast British Columbia in particular.

The report provides estimation and classification of coal resources for the North Block of the Huguenot property and discusses the coal resource potential of the two remaining blocks, the Middle and South Blocks. Resource estimations for the North Block are based on Colonial's geologic database for the property which has been generated from their 2008 drilling program plus past work carried out by previous operators. Information from Colonial indicates that expenditures in excess of $1.5 million were incurred for their 2008 field program and subsequent data handling.

In order to prepare this report, the authors have relied on data collected and reports generated by others. A full set of references is presented in Section 23. However, of these, the following have been relied upon to provide most of the historical material reviewed for this study:

Belcourt Project, Geological Report; Denison Mines Limited, March 1979. Coal Assessment Report 463.

Belcourt Project, Geological Report; Denison Mines Limited, December 1979. Coal Assessment Report 465.

A site visit for the purposes of this study was undertaken by the authors on 24 October 2008. The site visit consisted of a helicopter flight over the entire property, on-the-ground observation of the operating, large diameter core rig used for bulk sampling and location checks on two nearby drillholes, fly-over of

the locations of the other 2008 drillholes, observation of core logging procedures, and reviews of core sampling, geophysical log seam picking, and data collection procedures.

Colonial retained Norwest Corporation's coal processing group (Norwest) to assist with the development of a coal processing and product strategy based on coal attrition and washability results (in conjunction with reviews of selected coal quality and coal petrography data). Coal petrography analyses were compiled by Pearson & Associates, Ltd (Pearson). A report on the results of carbonization and coke tests was prepared by CanmetENERGY Technology Centre (Canmet).

A report entitled "Summary Report on the Huguenot Coal Project" dated 10 June 2006 was prepared by D. R. Lucas, P.Geo. Although prepared as a Technical Report for N.I. 43-101 purposes it was never submitted for regulatory review. This report was updated in February 28, 2008, primarily to account for additional coal licenses granted by the Government and other coal license applications filed by Colonial.

SECTION 5 • RELIANCE ON OTHER EXPERTS

No experts other than those listed in Section 4 were relied upon in the preparation of this report.

SECTION 6 • PROPERTY DESCRIPTION & LOCATION

6.1 LOCATION

The Huguenot Coal Project is located in northeastern British Columbia, within the Peace River Regional District, approximately 690 km north-northeast of Vancouver. It is situated near 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 6-1. 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 6-2.

6.2 COAL LICENSES

The Huguenot Coal Project consists of one contiguous block of 13 coal licenses covering 6,467 ha plus two coal license applications over approximately 1,125 ha, for a total area of some 7,592 ha. The recorded owner of both the issued tenures and the applied for ground is a British Columbia numbered company, 0735513 B.C. Ltd. Additional ownership details are provided in Section 6.3.

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 6-1 and the locations of the licenses and areas under application are shown in Figure 6-3. Information pertaining to coal license tenure is posted on the British Columbia Ministry of Energy and Mines web site (current for July 21, 2010). 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. The following summary of rights relating to coal licences was taken, with minor modification, from Western Coal Corporation (2010).

Table 6-1: 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	93I-09B/C	2011,06,22
416920	0735513 B.C. Ltd.	1,203	93I-08J	2011,06,22
417014	0735513 B.C. Ltd.	1,352	93I-09C	2011,07,21
417156	0735513 B.C. Ltd.	901	93I-09C	2010,12,21
417614	0735513 B.C. Ltd.	151	93I-08J	2010,08,17
417615	0735513 B.C. Ltd.	301	93I-08J	2010,08,17
417616	0735513 B.C. Ltd.	76	93I-08K	2010,08,17
417617	0735513 B.C. Ltd.	151	93I-09B	2010,08,17
417618	0735513 B.C. Ltd.	301	93I-09B	2010,08,17
417619	0735513 B.C. Ltd.	76	93I-09B	2010,08,17
417620	0735513 B.C. Ltd.	301	93I-09B	2010,08,17
417621	0735513 B.C. Ltd.	301	93I-09C	2010,08,17
417622	0735513 B.C. Ltd.	151	93I-09C	2010,08,17
Total Licensed Area		**6,467**		
Application 417674				
Qtr Units: 71-76, 83-87, 94, 97	0735513 B.C. Ltd.	975	093I-08K	n.a.
Application 417678				
Qtr Units: 95, 96	0735513 B.C. Ltd.	150	093I-08K	n.a.
Total Applied For Area		**1,125**		

Coal licenses issued under the *Coal Act* of British Columbia, carry the following rights:

a) A licensee has the exclusive rights: (i) to explore for and develop coal on the location of the license; and (ii) with the approval of the chief inspector appointed under the *Mines Act*, to mine and remove those quantities of coal the licensee may reasonably require for testing to a maximum of 100,000 tonnes.

b) A licensee is entitled to explore for and develop only that coal that is inside the boundaries, continued vertically downward, of the license location.

c) The holder of a licence is entitled: (i) to enter, occupy and use the surface of the location for the purpose of exploring for and developing coal on the location; (ii) subject to entering into an agreement in the form of a free use permit or a license to cut under the *Forest Act*, to use and remove timber that, at the time the holder of the license enters into the agreement, is on the location; and (iii) to the non-exclusive right to use sand, gravel and rock from the location for use on the location for a construction purpose approved under the *Mines Act*, without the necessity of obtaining under the *Land Act* a licence, lease, permit or other authorization.

A coal license is valid for a term of one year from the date of its issue. If a licensee complies during the term of the license with the provisions of the *Coal Act* and the license, then the coal license will be extended for further one year terms on application by the licensee. Such application must be made before the license expires and must be accompanied by a rental fee and certain information of data respecting the exploration, development and production of coal. In the event a licensee has not applied

to extend the term of the licence, a licensee may, not more than 30 days after the date the license expires, apply to extend the license upon payment of a late application fee.

Coal licenses will expire if renewal applications are not made in accordance with the provisions set out above. In addition, the government may suspend operations, refuse to renew a coal licence, or terminate a coal licence for failure to comply with the *Coal Act,* the licence, the *Mines Act* or a permit under it.

A restriction on the use of surface rights may be imposed by the British Columbia government if the surface area is so situated that it should be used for purposes other than mining. Under the *Coal Act*, other restrictions on the right of entry or surface use may be applicable in some instances. As well, notice requirements for surface use may be required in particular circumstances. Lands may also be expropriated under the *Park Act* (British Columbia). In addition, and area of coal land may, by government regulation, be designated as coal land reserve in which case, unless the regulation provides otherwise, exploration, development or the production of coal must not be carried out on a reserve and a licnese or lease must not be issued for a reserve.

The only financial obligation required on the part of the licensee to keep the coal licenses in good standing are the yearly renewal fees. For the first 5 years these are set at $7/ha. This increases to $10/ha for the second 5-year term and by an additional $5/ha at the end of each 5 year period beginning with the 11th year. There is no financial or other obligation required from either Colonial or Ananda in order to retain the property. For 2010, Colonial's coal licence renewal fees will total $59,243.

As far as can be reasonably ascertained, the property appears to be free of any environmental liabilities associated with previous exploration activities. The last operator (a senior company) undertook appropriate reclamation which met the standards of the day. It was observed during a 2005 helicopter reconnaissance (undertaken, by D. Lucas P.Geo, for the purposes of the 2006 Technical Report) that old drill sites were well reclaimed and, consequently, not easily identified.

No mining has been undertaken within any of the licence blocks, consequently there are no tailings ponds or waste dumps. Areas disturbed by historical exploration campaigns were reclaimed at the conclusion of each program. It is unlikely that any of these past exploration activities have generated, or have the potential to generate, any environmental liabilities. Reclamation was carried out on selected drill trails and on drill pads during the 2008 exploration. Certain portions of drill trail were not reclaimed due to future work requirements; Colonial intends to reclaim these trails after the next phase of fieldwork.

If a mine were to be developed, there would be adequate room for the mine surface and, possibly, waste dump and settling pond imprints within the current licences. However, the selection of sites for waste dumps, coal processing and load-out facilities, tailings ponds and settling ponds would be subject to appropriate engineering and environmental studies and it is possible that some sites would be located outside the current property boundaries. It is worth noting that the northern boundary of the property is located 400 m south of the proposed Belcourt South open pit development and within 15 km of the proposed Belcourt processing plant.

The surface expressions of the coal seams and locations of drillholes, trenches and previous access trails are shown on maps and diagrams included in various sections of the report as presented below, together with appropriate description and discussion. Resource estimates determined by the previous operator are presented in Section 8 and estimates determined from the recent drilling are presented in Section 19.

Parts of the property and its immediate surrounds are covered by a variety of tenures. The types and number of tenures and the areas they may cover are not known, as no title search has been undertaken. However, they can be expected to include petroleum and natural gas (including coal bed methane) tenures plus tenure applications, forestry, wind farm, guide outfitting, and trapping. Significant levels of natural gas exploration and development currently exist in the project area. Most of these activities have occurred north of the property although some drilling has also taken place to the south and east, plus the one oil/gas well to the west. One well is situated within coal licence 417156 while another is present along the western boundary of this coal license. The status of any individual well has not been determined; some are producing gas but these are located some distance from the main coal target areas.

Occasional areas of merchantable timber are present at lower elevations and a number of logged areas are present both on, and in the general vicinity of, the property. Apart from those areas that have been the focus of oil/gas and forestry activities, current land use appears limited to hunting, trapping, and recreational activities such as snowmobiling and driving ATVs. The property lies within an active guide-outfitter area.

Permits necessary for any exploration activities recommended in this report have yet to be acquired.

6.3 OWNERSHIP

The outline of property ownership, provided below, is derived from information obtained from Colonial.

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

LEGEND

- Roads
- Railways
- Provincial Boundary
- Coastline
- City, Town

100 km 0 100 200 300 400 km

SCALE

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS
Checked by:	JP
Approved by:	JP
Revision No.	C
Dwg No.	005A_LOG001_C

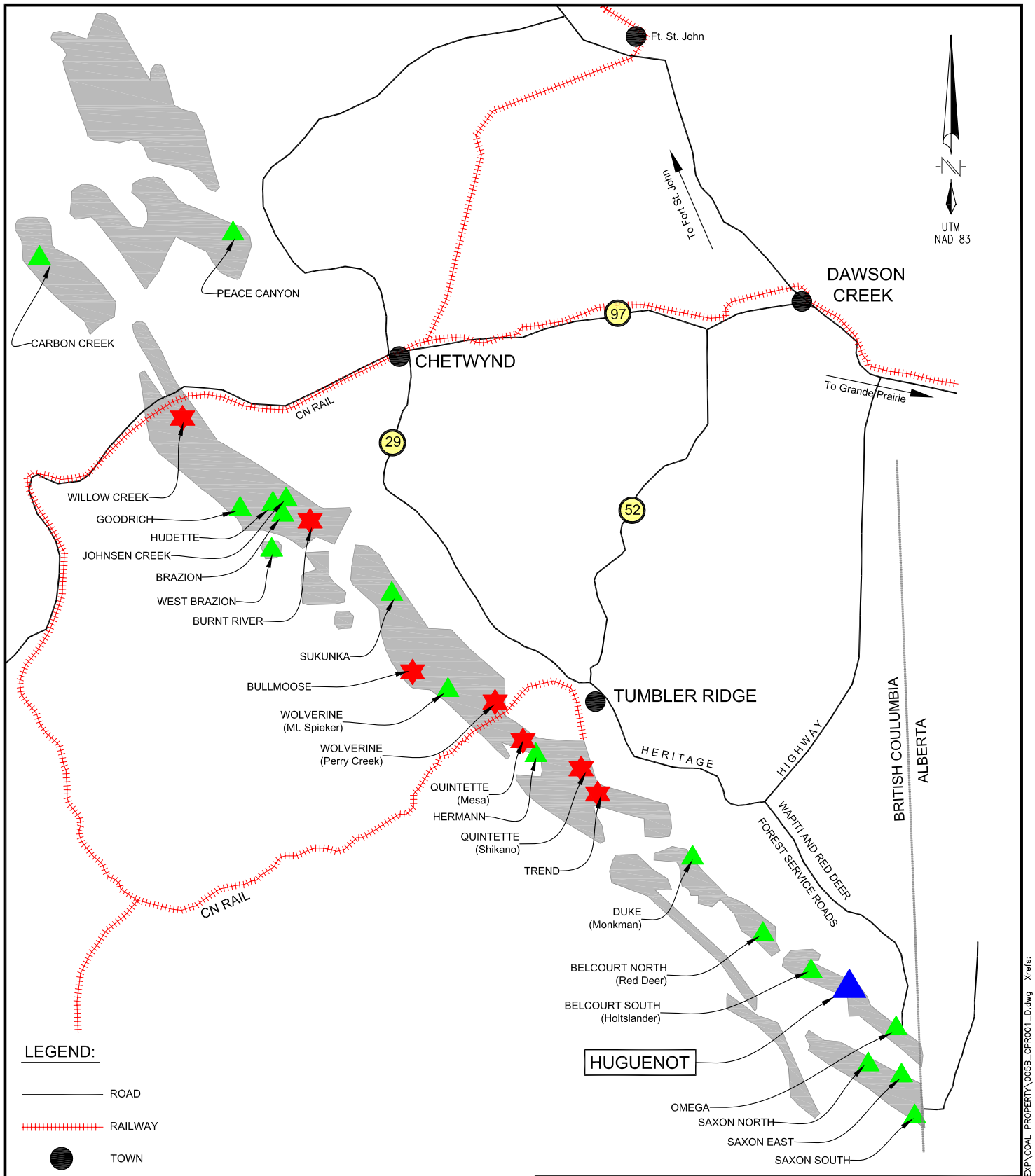
GENERAL LOCATION MAP

Date: 2010/FEB/03

Document:

Figure No. 6.1

02/14/10 – 11:14:18am L:\005_Huguenot_EXP\LOCATION\005A_LOG001_C.dwg Xrefs:



COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS
Checked by:	JP
Approved by:	JP
Revision No.	C
Dwg No.	005B_CPR001_D

COAL PROPERTY MAP

Date: 2010/FEB/03

Document:

Figure No. 6.2

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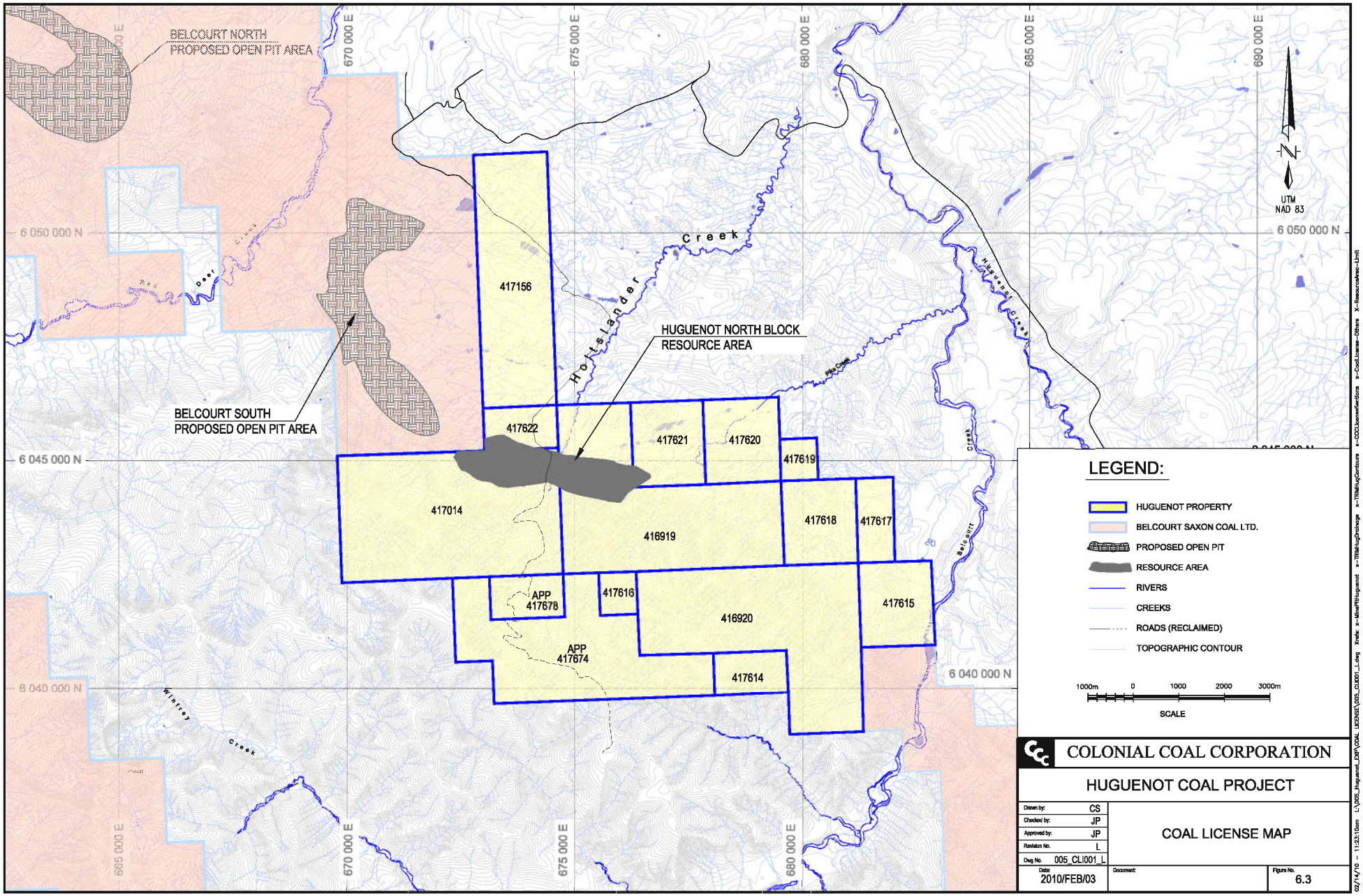

BELCOURT NORTH
PROPOSED OPEN PIT AREA
BELCOURT SOUTH
PROPOSED OPEN PIT AREA
HUGUENOT NORTH BLOCK
RESOURCE AREA
Hollslander Creek
Deer Creek
Wintrey Creek
Hugenot Creek
Belcourt Creek
Pine Creek
670 000 E
675 000 E
680 000 E
685 000 E
690 000 E
6 050 000 N
6 045 000 N
6 040 000 N
417156
417622
417621
417620
417619
417014
416919
417618
417617
APP
417678
417616
416920
417615
APP
417674
417614
UTM
NAD 83
LEGEND:
HUGUENOT PROPERTY
BELCOURT SAXON COAL LTD.
PROPOSED OPEN PIT
RESOURCE AREA
RIVERS
CREEKS
ROADS (RECLAIMED)
TOPOGRAPHIC CONTOUR
1000m 0 1000 2000 3000m
SCALE
COLONIAL COAL CORPORATION
HUGUENOT COAL PROJECT
COAL LICENSE MAP
Drawn by: CS
Checked by: JP
Approved by: JP
Revision No. L
Dwg No. 005_CLI001_L
Date: 2010/FEB/03
Document:
Figure No. 6.3

SECTION 7 • ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE & PHYSIOGRAPHY

7.1 ACCESSIBILITY

The Huguenot property is remote relative to population centres, but is reasonably easy to access. Road 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. This road eventually connects to a westerly-trending gravel road that extends through 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. No drill trails were ever constructed within this licence block during previous coal exploration phases as all exploration activities were helicopter supported.

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.

7.2 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 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.

7.3 LOCAL RESOURCES & 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 6-1.

The town of Tumbler Ridge is situated approximately 85 km north of the property. The town and most of the existing industrial infrastructure was built to support the Quintette and Bullmoose Coal Mines, which are situated 18 km south to southwest, and 30 km west of the town, respectively. The Quintette Coal Mine operated from December 1983 to August 2000 and the Bullmoose Coal Mine operated from 1984 to 2003. Production capacity at Quintette was rated at approximately 6 million tonnes per year (Mt/a), while that of Bullmoose was 2.3 Mt/a.

The Trend South Coal Mine, owned by Peace River Coal (PRC), is located approximately 25 km south of town. This open pit operation began limited production at the end of 2005. Total coal production in 2008 was 772,000 tonnes of which 632,000 tonnes were metallurgical coal and 140,000 tonnes were thermal coal (Hillsborough, 2009) Western Coal Corp is producing coal at their Perry Creek open pit mine approximately 15 km southwest of Tumbler Ridge. For the year ending March 31, 2009 production was 1,295,000 tonnes of clean coal (Western, 2009).

A rail line (operated by CN Rail) terminates at the Quintette wash plant and coal load-out facility located approximately 17 km south of Tumbler Ridge and about 65 km northwest of the property. The plant and load-out are still in place and a high-voltage power sub-station is also located in this area. Using the current road network, the distance between the property and the Quintette rail load-out is approximately 140 km. PRC's rail load-out facility is located 4 km north 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 6-1).

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.

7.4 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 6-3). 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; east of the property, the creek turns towards the north, and joins 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 to 2,000 m while the lowest elevations range between 1,200 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 N-S-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 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.

SECTION 8 • HISTORY

8.1 INTRODUCTION

The Peace River Coalfield extends for 400 kilometres within the northeast part of the province. Coal was first discovered in the area in 1793. Due to lack of infrastructure, mining was restricted to small operations serving local needs. Prior to 1980, less than 100,000 tonnes were mined (Ryan, 2002). The expansion of steel production in the mid-1960s, led by the Japanese steel mills, stimulated worldwide exploration for metallurgical (or coking) coal. In western Canada, exploration focused largely on coal deposits located within the Rocky Mountain Foothills of British Columbia and Alberta. By the mid-1970s, most of the land within the Peace River Coalfield that contained surface and underground mineable coal potential, had been acquired by various mining and oil companies. Coal licences stretched almost unbroken for a distance of over 300 km, from the Alberta border in the southeast (the original Saxon property) to north of the town of Hudson's Hope. A similar situation exists today.

In February 1981, representatives of the Japanese Steel Industry, the Governments of Canada and British Columbia, Denison Mines Limited, and Teck Corporation signed an agreement to develop North East Coal. The Japanese Steel Industry agreed to buy 115 Mt of metallurgical and thermal coal from the Quintette Mine (Denison/Quintette Coal Limited) and Bullmoose Mine (Teck joint venture), over a period of 15 years with an option for a further 5 years. The governments of Canada and British Columbia assumed responsibility for establishing the infrastructure necessary to facilitate mine development and shipment of product. This included building the town of Tumbler Ridge, 129 km of rail line, 95 km of highway, 127 km of high voltage transmission line, a new port at Ridley Island and upgrading the 752 km of existing rail line from Prince George to the port at Prince Rupert. In December 1983, the first coal train left the Quintette Mine for the port at Ridley Island.

Quintette Coal Mine made its first coal shipment in December 1983 and operated until August 2000. The mine had a raw coal production capacity in excess of 6 Mt/a, making it one of Canada's largest mines. Production came from four open pits named, in order of importance, Mesa, Wolverine, Shikano and Babcock (Windy). In the years prior to closure, clean coal production was in the range of 3 to 4 Mt/a.

Bullmoose Coal Mine began production in 1984 with Teck as operator. The mine produced coal from the South Fork deposit, located 40 km west of Tumbler Ridge. Coal production capacity was 2.3 Mt/a, although shipments in recent years ranged from 1.5 to 1.9 Mt/a. Coal production in 2000 was 1.4 Mt of clean coal. The Bullmoose Mine has now closed; the last shipment was reported to have left the coal load-out facility on April 14, 2003.

Bullmoose has exhausted coal reserves at South Fork, but potentially mineable resources remain in the West Fork deposit area. A number of mineable and potentially mineable deposits remain from the old Quintette property. Principle among these are the old: Quintette Trend and Roman Mountain (NEMI - Trend property); Wolverine (WCC); Babcock (including Window – Teck Coal Ltd); Grizzly/Transfer (split

between Teck and WCC); and, Hermann (WCC) areas. The EB pit area, once operated by Ranger Oil and now owned by WCC, forms part of the current Wolverine project.

Two mines are currently operating in the Quintette region: these are the Perry Creek mine (owned by WCC) and the Trend South mine (initially owned by NEMI but now owned and operated by PRC); both are open pit mines. The Perry Creek mine started production in 2006; it has a capacity of 3 Mt/a but is currently producing in the range of 1.4 Mt/a. Trend South commenced mining under a limited production permit (up to 0.25 Mt/a) in late 2005. In November 2006, NEMI joined with Anglo Coal Canada Inc. and Hillsborough Resources Limited to form PRC in order to jointly develop their northeastern coal assets, including the Trend South mine. PRC received a full mine permit in January 2007 that allows production of up to 2 Mt/a. In 2008 production at Trend South was approximately 0.8 Mt.

In addition to the Trend and Quintette properties, two other coal properties are located between the Huguenot Coal Project and the current rail terminus; these are, Belcourt (owned by Belcourt Saxon Coal Limited (BSCL)) and Duke Mountain (formerly Monkman, owned by Teck Coal Ltd). Other coal projects such as Omega and Saxon are located southeast of the Huguenot property, while the Belcourt West property lies to the west. These three properties are also owned by BSCL, which is a private (50: 50) joint venture between WCC and PRC.

8.2 PRIOR OWNERSHIP

The original Belcourt coal property was acquired by Denison in 1970, based upon published regional geology. The property was made up of 55 contiguous coal licences that totalled 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. Shortly thereafter, the property was expanded to 144 coal licences that covered an area of 36,442 ha. The area now covered by the current Huguenot property was part of the original Belcourt project. At that time most of the current property was referred to as Holtslander South; Denison's old Huguenot Block referred to an area immediately south of Belcourt Creek.

While large tonnages of high quality coking coal were defined in several deposit areas on the old Belcourt and Saxon properties, these projects were never placed into production. The main reasons for this were related to the extensive financial commitment undertaken by Denison and the Federal and Provincial Governments with respect to development of the Quintette Coal Mine and supporting infrastructure and the collapse in coking coal prices over the following decade. The drop in coal prices also affected the development of other projects in the region, such as Duke Mountain. Denison subsequently fell into financial difficulties and the Belcourt coal licences (amongst others) were forfeited to the crown in the early 1990s due to high carrying costs. In total, including marketing and feasibility studies, it is believed that approximately $11 M was spent on the old Belcourt property; a considerable portion of which was expended on the area now covered by the Huguenot coal licenses.

Between June 1995 and June 1997, two private British Columbia companies (Ensync Resource Management and 528951 B.C. Ltd) acquired coal licenses that covered selected portions of the old Belcourt property. These coal licenses were subsequently transferred to WCC (then called Western

Canadian Coal Corp.) and formed the project upon which WCC completed its initial public offering to become a publicly traded junior mining company. Except for one small area in the north, the licenses held by these companies did not extend into ground now covered by the current Huguenot property.

8.3 SUMMARY OF PREVIOUS EXPLORATION

Initial exploration by Denison was carried out in 1971; the program consisted of a limited geological reconnaissance to confirm the presence of coal seams within the Lower Cretaceous Gates and Gething Formations (see Section 9). No further work was carried out by Denison on any part of their property until 1975, when detailed mapping was performed. This was followed, in 1976, by the drilling of two core holes to ascertain seam thickness and coal quality data; one of these holes (BD7601) is located within the current Huguenot licenses. Denison conducted a trenching program in 1977 which, again, focused upon the current Huguenot property.

Much larger exploration programs were undertaken during the ensuing three years across the expanded Belcourt property, to gather information on geological structure, coal resources and coal quality in order to identify potential mining areas. Between 30% and 40% of the work performed in 1978 was carried out on the current Huguenot property which, at that time, was one of the main resource target areas of the old Belcourt property. Much of the later work focussed on potentially surface mineable deposits discovered in the old Red Deer (Belcourt North) and Holtslander North (Belcourt South) deposit areas. No further field work was conducted on the old Belcourt property after 1980 until a small rotary drilling program was conducted by WCC during the winter of 1998, on the northern part of the Belcourt South pit area. In 2005, BSCL undertook major drilling programs on the Belcourt North and Belcourt South coal deposits and at Saxon East, Saxon South and Omega.

Exploration programs conducted across the property consisted of detailed geological mapping, hand trenching, diamond drilling, geophysical logging, coal core sampling and sample testing. Aerial photography was carried out and topographic maps were prepared at various scales for general and detailed coverage. Ground control survey stations were established throughout the area and all drillholes were surveyed and topographic maps updated to incorporate these data. Reclamation was carried out on areas of surface disturbance. Several adits were constructed for bulk sampling purposes on adjoining ground, but none were driven on the current property.

The exploration activities conducted by Denison/BCJV upon what is now the Huguenot property are summarized in Table 8-1. This table does not include additional data points that lie adjacent to the property that are of importance in defining the geology. The locations of drillholes and trenches that lie both within, and in the immediate vicinity of, the current Huguenot property are shown in Figure 8-1. 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.

A total of 2,452 m of core were obtained from 8 diamond drillholes, and 138 hand trenches excavated, on ground now covered by the Huguenot property. Additional information regarding this drilling is provided in Section 13. Detailed geological mapping was carried out as part of each exploration

campaign, from 1975 onwards; data points were located using modified plane table, chain and compass traverses.

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 BD-7601 and BD-7803 and BD-7804 (the latter two did not reach the targeted coal measures).

Table 8-1: Summary of Exploration Activities – Huguenot Property, 1971 to 1979

Year	Drill Holes	Depth (m)	Geophysical Logs	Hand Trenches	Geological Mapping	Other	Assess Report
1971	-	-	-		Recon.	AP/Topo	457
1975	-	-	-		1: 2500	AP/Topo	458
1976	1(D/HQ)	59	-		-	Topo	460
1977	-	-	-	25	-	mss	461
1978	5(D/HQ)	1,389	d,g,n,c,fr,dev	84	1: 2500	Topo	462/463
1979	2(D/HQ)	1,004	d,g,n,c,fr,dev	29	1: 2500		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.

Various reports detailing exploration activities, geological interpretations, reserve estimations and coal quality parameters were generated, together with mine engineering studies for large-scale open pit mining and evaluations of coal preparation requirements and coal product expectations. Wright Engineers Ltd completed a pre-feasibility study in 1980 followed by a detailed feasibility study 1982. This latter study called for annual production of 4 M clean coal tonnes from an open pit developed on the Belcourt North (Red Deer) deposit. The exploration conducted by BSCL in 2005 culminated in a feasibility study (completed in January 2008) for the Belcourt North and Belcourt South open pit areas, at a combined clean coal production rate of approximately 4 Mt/a.

None of the past work has been conducted by the issuer or by a contractor acting on behalf of the issuer or its agents.

8.4 HISTORICAL RESOURCES

Various tonnage estimates were conducted by Denison/BCJV between 1975 and 1979. While their reports refer to these estimates as “reserves,” they are not reserves as defined under N.I. 43-101. In the discussion below, they are called resources.

The most recent resource estimates reported for the area now called the Huguenot property were carried out in 1979 (Denison, 1979b). In-situ resources are reported for various thickness cut-offs, taken to a nominal depth of 500 m below surface. All resources were estimated using the cross-section method as outlined below:

- Cross-sections perpendicular to structural trend were constructed at 200 to 1,200 m intervals, depending upon the frequency of coal seam data. Most cross-section widths were in the 400 to 800 m range.
- Mining sections had to meet a minimum true thickness of 0.5 m and had to contain a minimum estimate of 65% coal by weight (this exceeds GSC 88-21 coal: rock ratio guidelines of 2:1).
- The coal seams were assigned a mining section thickness taken from the nearest drillhole; trench data were not used.
- No estimates of oxidized coal were reported.
- The specific gravities (S.G.'s) determined for the mining section(s) from each coal seam were applied to the measured seam lengths. Specific gravities for lost core were estimated from a formula used to establish the relationship between ash and specific gravity represented by the equation:

$$\text{specific gravity} = 1.1685e^{0.0083 \times \text{ash}} \text{ ; where the correlation coefficient} = 0.9821$$

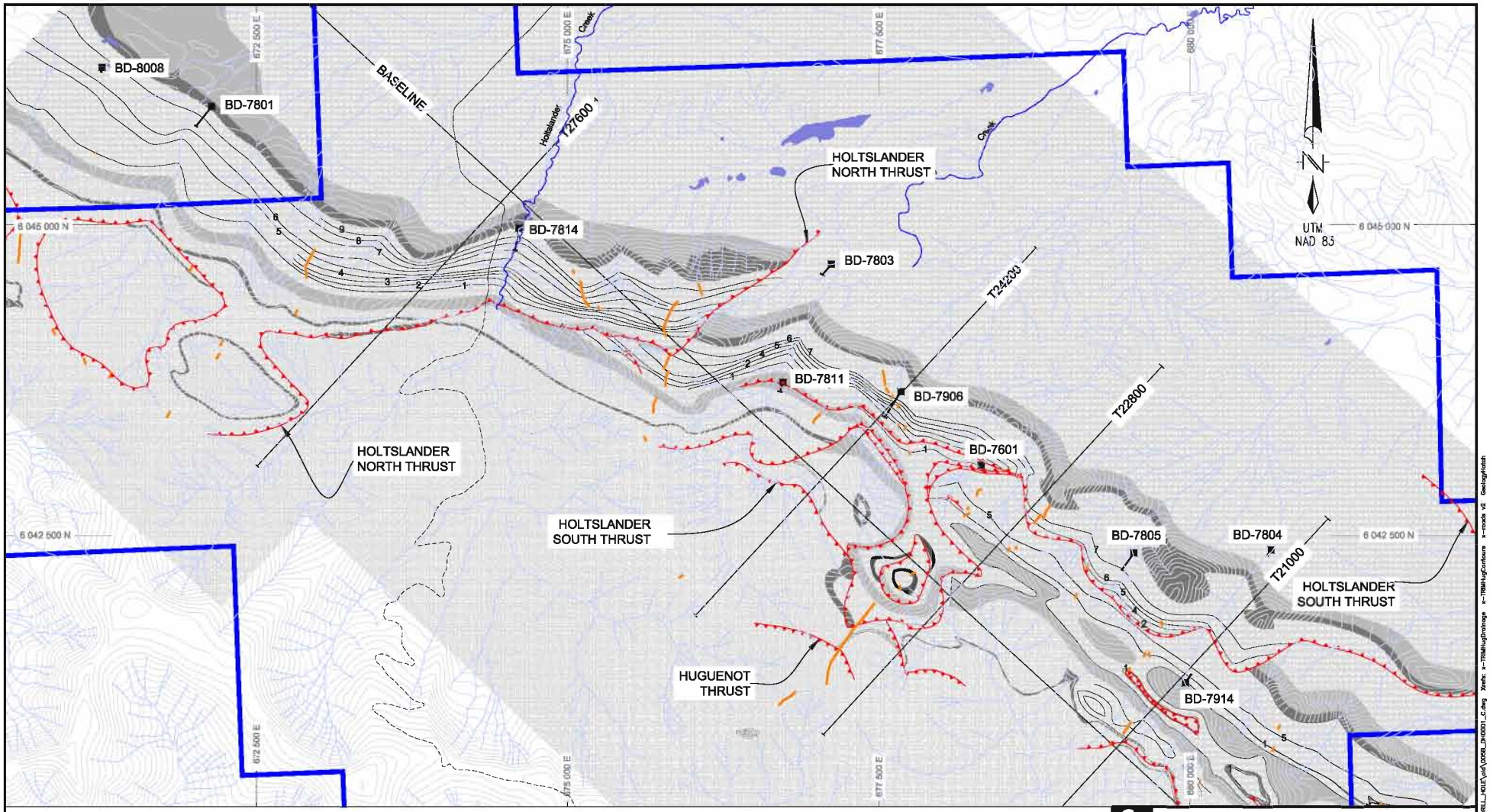
Dry, in-place coal resources were reported for each geographical "block" that made up the old Belcourt property. Resources for the area covered by the current Huguenot property have been re-constituted from Denison's data and are presented in Table 8-2. In-place resource estimates were summarized by thickness cut-offs ranging from 0.50 to 3.0 m. Resource estimates for these minimum mining thickness cut-offs were: 0.5 m = 181 Mt; 1.0 m = 159 Mt; 2.0 m = 134 Mt; and, 3.0 m = 111 Mt.

Table 8-2: Summary of Historical Resources Huguenot Property (Denison, 1979b)

Seam	>0.5 m (Mt)	>1.0 m (Mt)	>2.0 m (Mt)	>3.0 m (Mt)
9	1.8	-	-	-
8	10.3	8.7	8.7	8.7
7	6.8	-	-	-
6	13.8	12.5	5.1	-
5	76.5	76.5	68.5	60.2
4	5.4	3.5	-	-
3	1.9	-	-	-
2	9.8	6.5	-	-
1	54.2	51.5	51.5	41.8
Total	**180.5**	**159.2**	**133.8**	**110.7**

Coal seam criteria and estimation procedures conform to a reasonable standard and were selected and conducted by geologists well versed in the requirements of coal projects located in the foothills of northeastern British Columbia. Most of the approaches towards data reduction and resource estimation employed in the 1970s are the same as those used today, differing mostly by the advent of digital geophysical logging and computerized data analysis and handling. From the review of reports and checks on drill data carried out for this study, it is apparent that the nature and distribution of the data broadly conforms to the guideline criteria laid out in GSC Paper 88-21 (Hughes, et al, 1989).

No attempt is made in this report to classify any of the resources presented in Table 8-2 into N.I. 43-101 compliant resources. However, examination of the data and their distribution suggests that significant portions of the resources within what are now referred to as the North and Middle Blocks would likely meet Inferred category criteria. This is supported by the closeness of total tonnage reported by Denison for the North Block compared to current resource estimates presented in Section 19.1. Further discussion of the resource potential of the remainder of the property is presented in Section 19.2.



LEGEND :

- 5 — COAL SEAM
- THRUST FAULT
- DRILL HOLE
- CONTOUR

HAND TRENCHES;

- MULTIPLE
- SINGLE

- PROPERTY BOUNDARY
- T21000 CROSS SECTIONS (SEE FIG. 9.6 A TO B)

* FOR GEOLOGY LEGEND SEE FIG. 9.5

400m 0 400 800 1200 1600 2000m

SCALE

NOTE:

MODIFIED FROM DENISON (1979b)

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

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Checked by:	JP
Approved by:	JP
Revision No.	C
Dwg No.	0058_DHO001_C.dwg
Date:	2010/FEB/09

OLD DRILL HOLE AND TRENCH LOCATIONS

Document:

Figure No. 8.1

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SECTION 9 • 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 9-1 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 9-2. A regional geology map, that illustrates the relationships between the various formations that occur within and adjacent to the Huguenot property and shows the main structural geological features, is presented as Figure 9-3.

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 inter-bedded 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.

9.1 STRATIGRAPHY

9.1.1 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 discomformable, although there is a marked angular discordance regionally.

9.1.2 Cadomin Formation (Bullhead Group)

The Cadomin Formation is the basal unit of the Lower Cretaceous Bullhead Group. It mostly 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 (in places) 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 rusty 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 but appears to be in the order of 10 m thick on the property.

9.1.3 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 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 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 describe three coal zones named, in ascending stratigraphic order, Zones A, B, and C, 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 (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 mined 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.

9.1.4 Moosebar Formation (Fort St John Group)

The Moosebar Formation is the lowermost formation of the Fort St. John Group. It rests abruptly on the Gething Formation with the contact taken 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). 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.

9.1.5 Gates Formation (Fort St John Group)

The Gates Formation conformably overlies the Moosebar Formation. The Gates 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, the Gates Formation averages approximately 310 m in thickness. A generalized stratigraphic section through the Gates Formation is illustrated in Figure 9-4.

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 to 45 m thick.

It 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 11). 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. The lateral equivalent of this unit at Huguenot may be represented by a thick, sandstone-dominated sequence with occasional conglomeratic lenses, located above Seam 5.

This sandstone unit is overlain by predominantly finer grained lithologies consisting mostly of intercalating 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.

9.1.6 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. Although 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 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.

9.1.7 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 and 90 m in thickness.

9.1.8 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 assessment reports 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 conglomerate. The unit is almost homogenous and bedding is discernible only through occasional appearance of resistant thin beds of 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 beds.

9.2 COAL SEAM DEVELOPMENT

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 to 2.5 m thick. The potential for coal seams in other formations appears very limited. The work conducted in 2008 also focussed on Gates Formation coal seams, although one drillhole to test Gething coal seams was also completed.

9.2.1 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 intersection is likely the result of fault thickening.

Thick sandstone separates Zones A and B; this latter 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 South Mine.

Within the North Block, the Gething seams are designated, in ascending order, GT1, GT2, and GT3. Seam GT1 ranges from 1.75 m (BD 7811) to 2.17 m (HR08-05), Seam GT2 varies from 0.32 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.

9.2.2 Gates

The Gates Formation is well established as being the most prolific coal-bearing formation in northeastern British Columbia. From north-west 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 9 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 Huguenot property, although correlations have not been definitively demonstrated for some of the minor seams, particularly in the south half of the property. Seam correlations are well established in the North Block and with the adjoining Belcourt South deposit, situated immediately to the north. The Torrens sandstone provides a marker horizon for the base of the Gates' coal measures. The more important characteristics of the seams that reach minimum mining section thickness criteria (i.e., 0.60 m) are summarized in Section 11.

9.3 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 in lithologies and distance from the Front Ranges of the Rocky Mountains.

Folding within stratigraphic units dominated by finer-grained lithologies can be extremely complex, 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 band 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 9-5; cross-sections illustrating the main structural elements are presented in Figure 9-6 and 9-7. For descriptive purposes, the three structural slices are referred to as the North, Middle, and South Blocks.

The North Block sits structurally above the Holtslander North Thrust, and is interpreted to be the oldest of thrust on the property; it sits structurally above the other two. The coal measures occupy the western limb of a broad synclinal structure called the Holtslander Synclinorium. In the North Block area, 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 Thrusts, exhibits steep, northeast-dipping, near-homoclinal strata in the northern half of the block, although dips moderate towards the south. A N-S-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.

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 overturned, steep, westerly-dipping beds occur within the eastern limb of this anticline and in the footwall of the thrust.

SERIES	GROUP	FORMATION		LITHOLOGY	UNIT THICKNESS (METERS)
LOWER CRETACEOUS	FORT ST JOHN	SHAFTESBURY		Dark gery 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 fossiliferous shaly 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 GROUP	NIKANASSIN		Thin-bedded grey and brown shales and brown sandstones, containing numerous thin coal seams.	

NOTE:

MODIFIED FROM DENISON MINES LIMITED (1979b)

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

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TABLE OF FORMATIONS

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Figure No. 9.1

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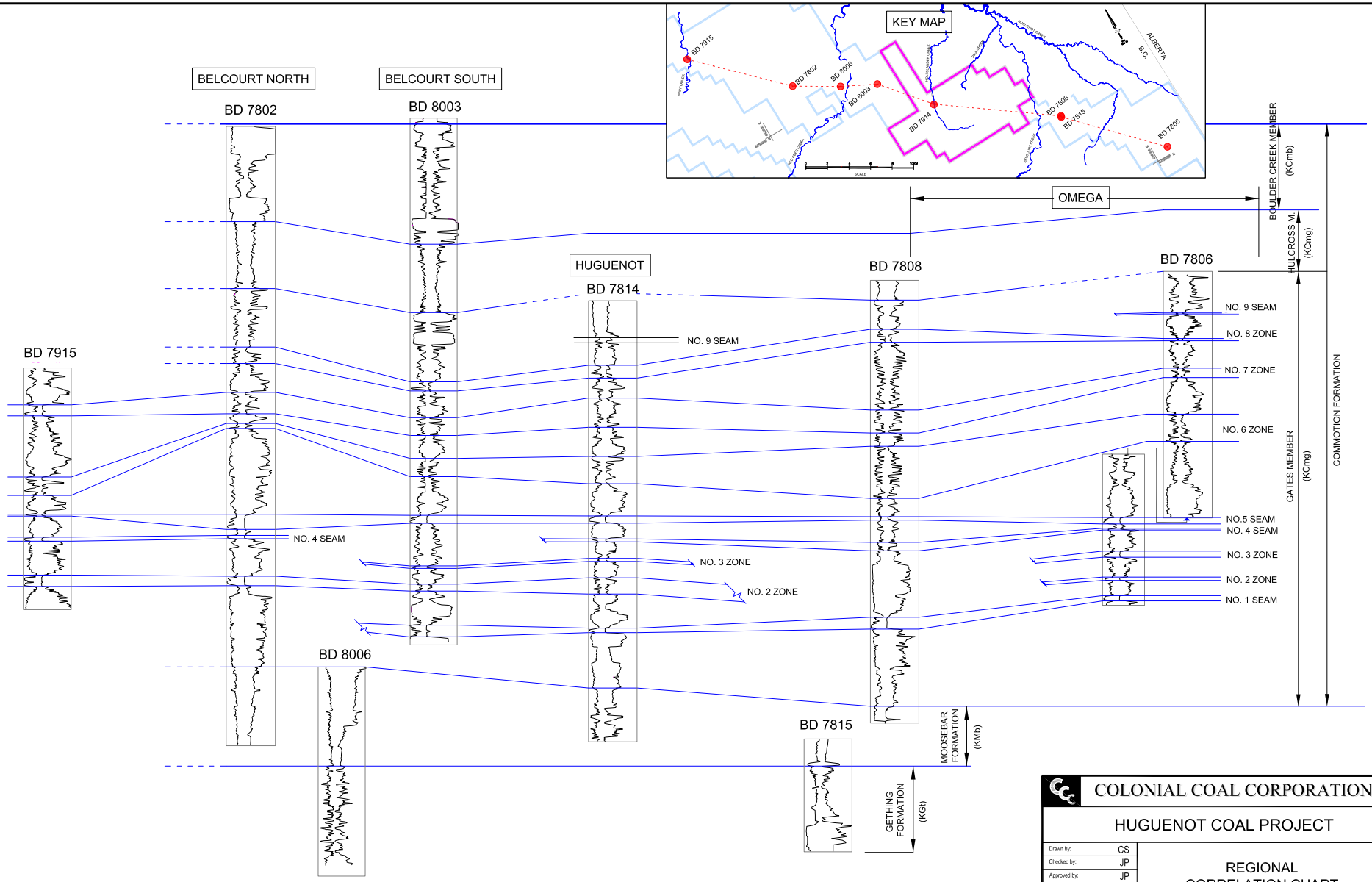

Note: coal zone/coal seam correlations are taken from Denison (1981)

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

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Revision No.	I
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REGIONAL CORRELATION CHART

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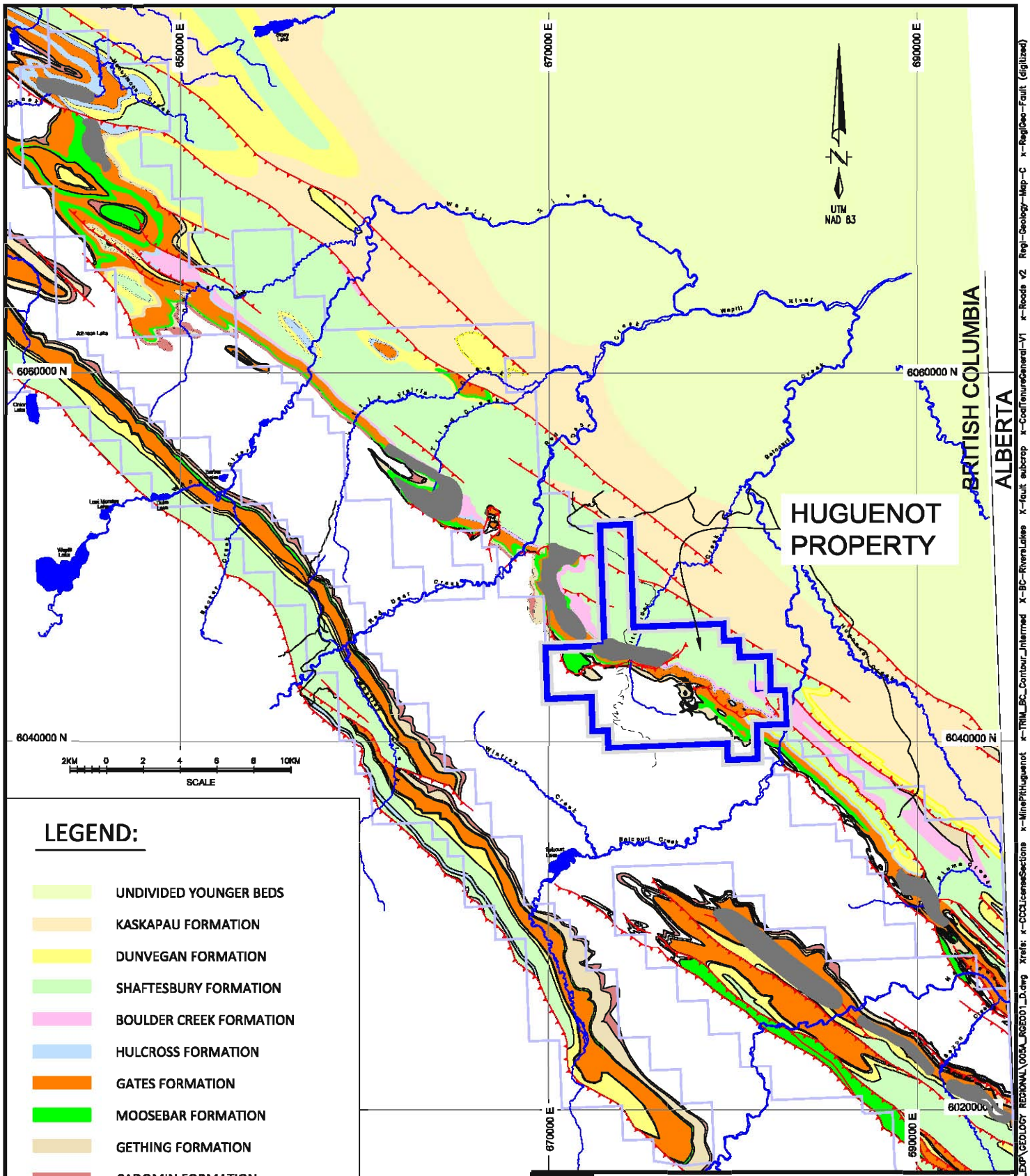

LEGEND:

- UNDIVIDED YOUNGER BEDS
- KASKAPAU FORMATION
- DUNVEGAN FORMATION
- SHAFTESBURY FORMATION
- BOULDER CREEK FORMATION
- HULCROSS FORMATION
- GATES FORMATION
- MOOSEBAR FORMATION
- GETHING FORMATION
- CADOMIN FORMATION
- PROPERTY BOUNDARY
- THRUST FAULT
- OPEN PIT AREA (PREVIOUS, CURRENT AND PROPOSED)

MAP SOURCE:

BRITISH COLUMBIA GEOLOGICAL SURVEY BRANCH GEOSCIENCE MAP 2003-2 (COMPILED BY: A. LEGUN)

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

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Date:	2010/FEB/15

REGIONAL GEOLOGY

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Figure No. 9.3

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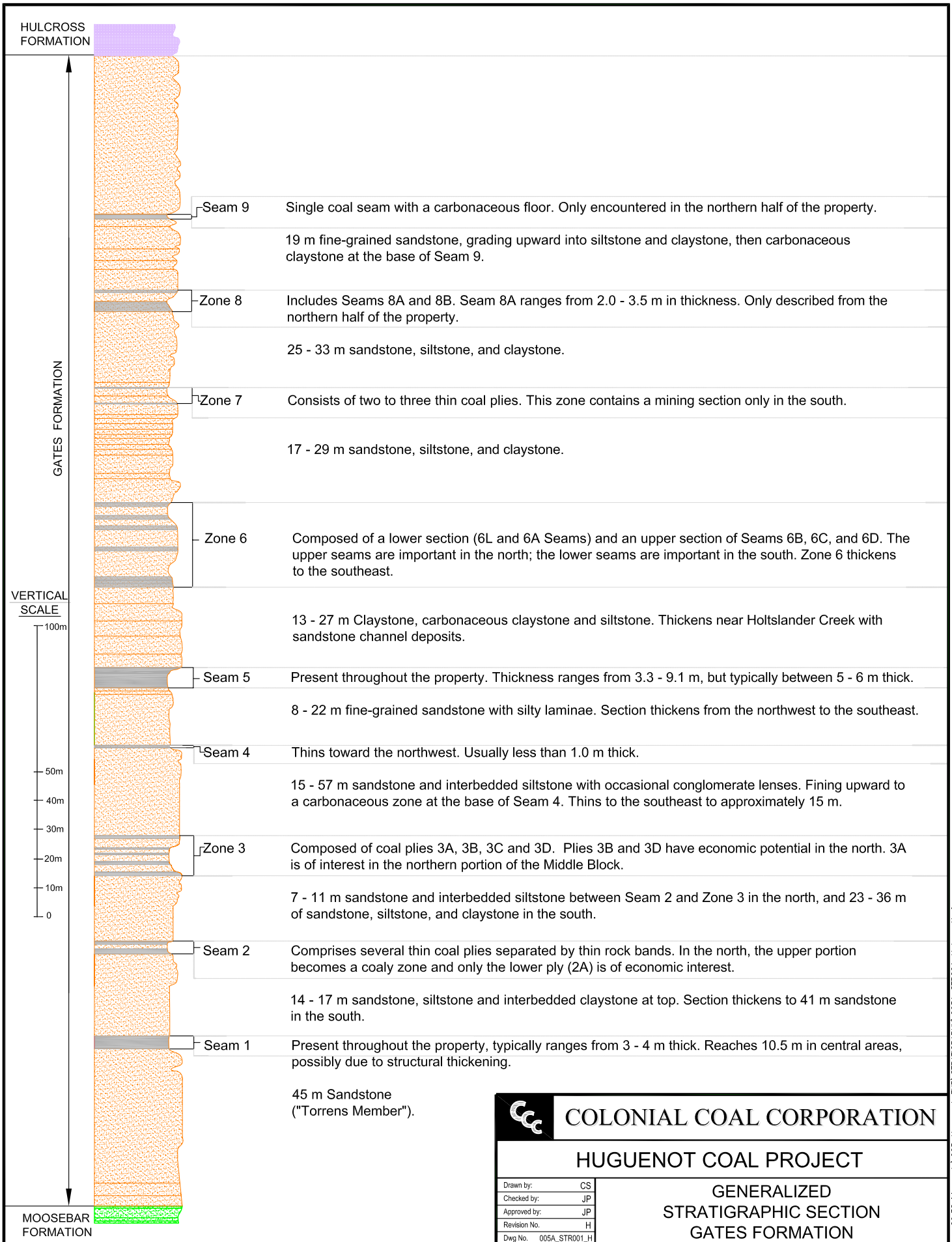

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

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GENERALIZED STRATIGRAPHIC SECTION GATES FORMATION

Date: 2010/FEB/12

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Figure No. 9.4

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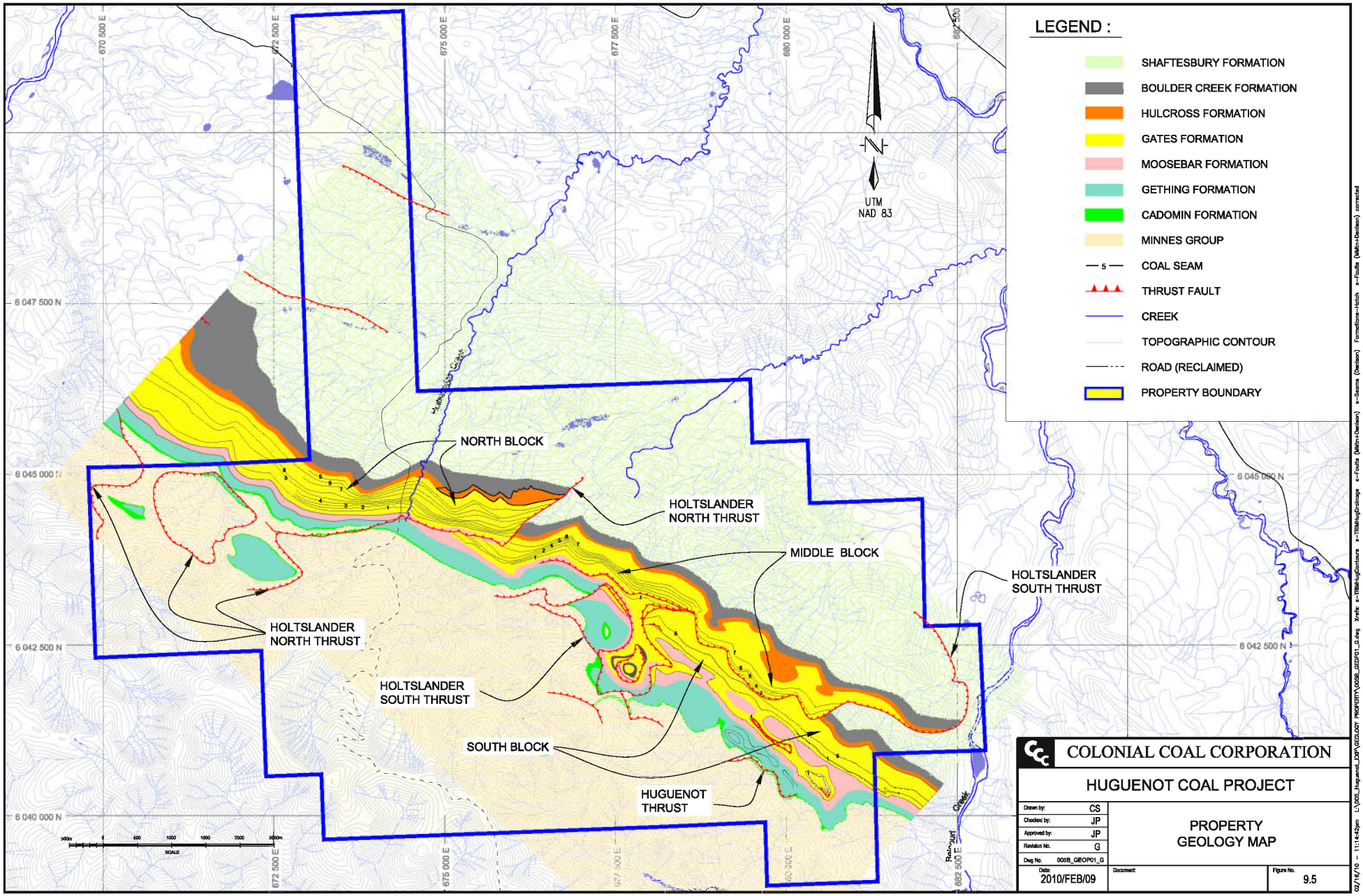
LEGEND :
SHAFTESBURY FORMATION
BOULDER CREEK FORMATION
HULCROSS FORMATION
GATES FORMATION
MOOSEBAR FORMATION
GETHING FORMATION
CADOMIN FORMATION
MINNES GROUP
COAL SEAM
THRUST FAULT
CREEK
TOPOGRAPHIC CONTOUR
ROAD (RECLAIMED)
PROPERTY BOUNDARY
UTM
NAD 83
NORTH BLOCK
HOLTSLANDER NORTH THRUST
MIDDLE BLOCK
HOLTSLANDER SOUTH THRUST
HOLTSLANDER NORTH THRUST
HOLTSLANDER SOUTH THRUST
SOUTH BLOCK
HUGUENOT THRUST
670 500 E
672 500 E
675 000 E
677 500 E
680 000 E
682 500 E
6 047 500 N
6 045 000 N
6 042 500 N
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SCALE
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HUGUENOT COAL PROJECT
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Approved by: JP
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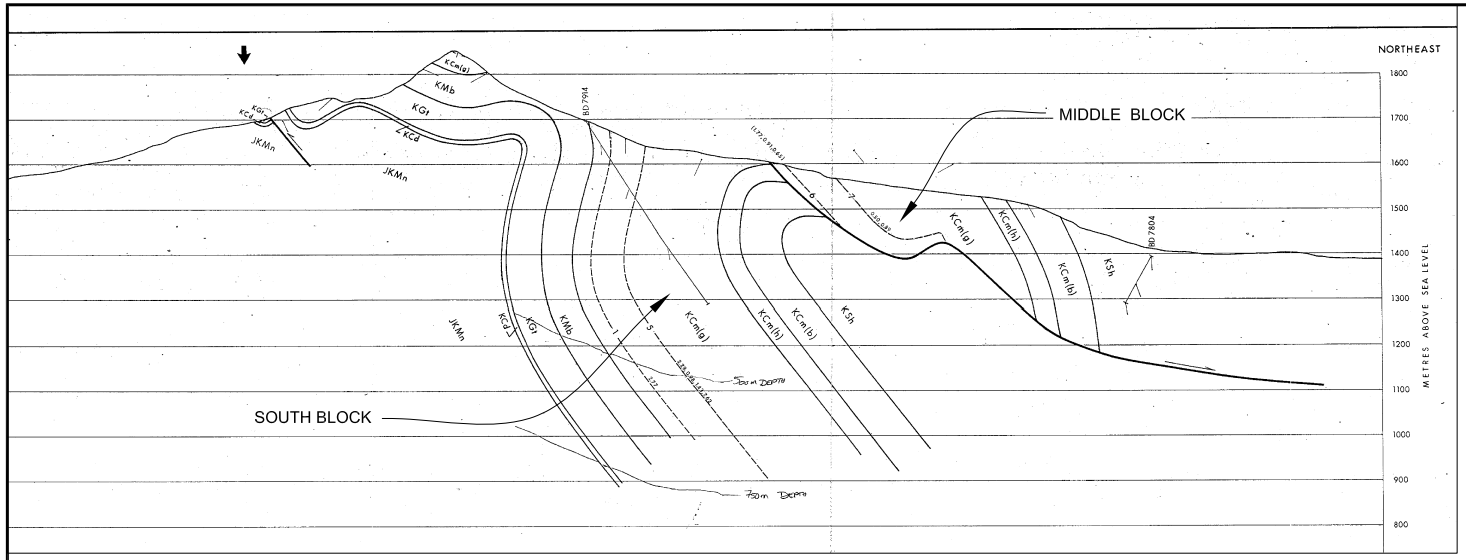
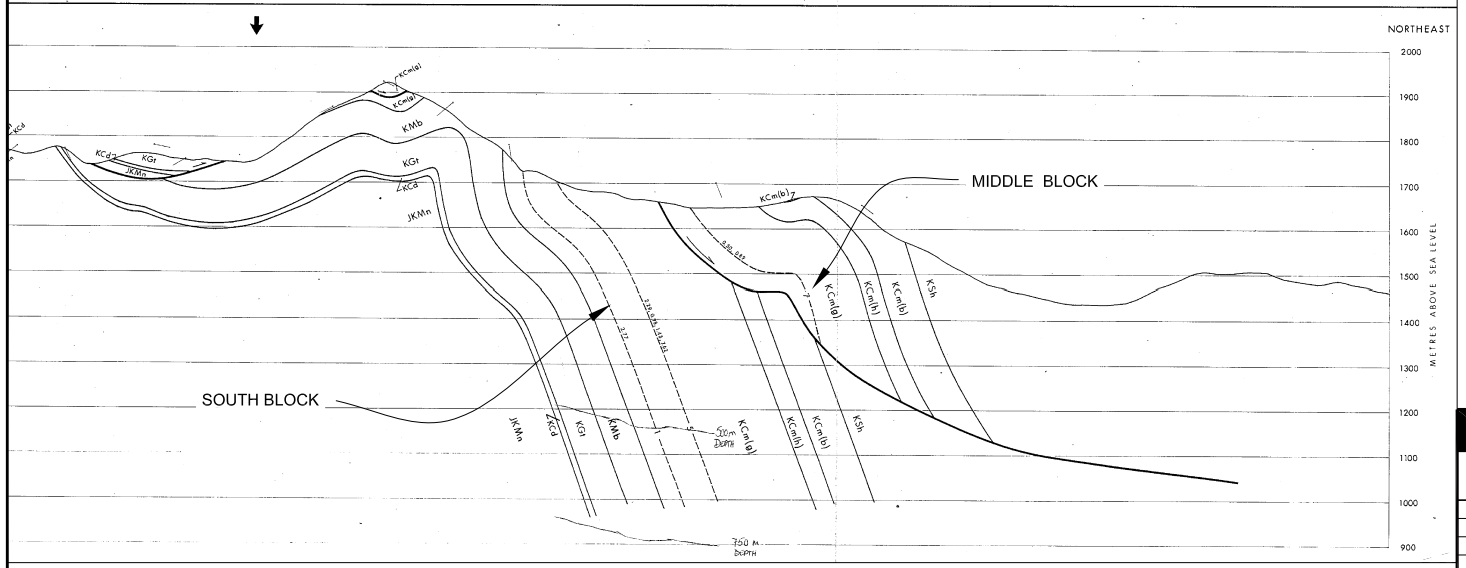
PROPERTY
GEOLOGY MAP
Figure No. 9.5



SECTION T21000



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 CORPORATION

HUGUENOT COAL PROJECT

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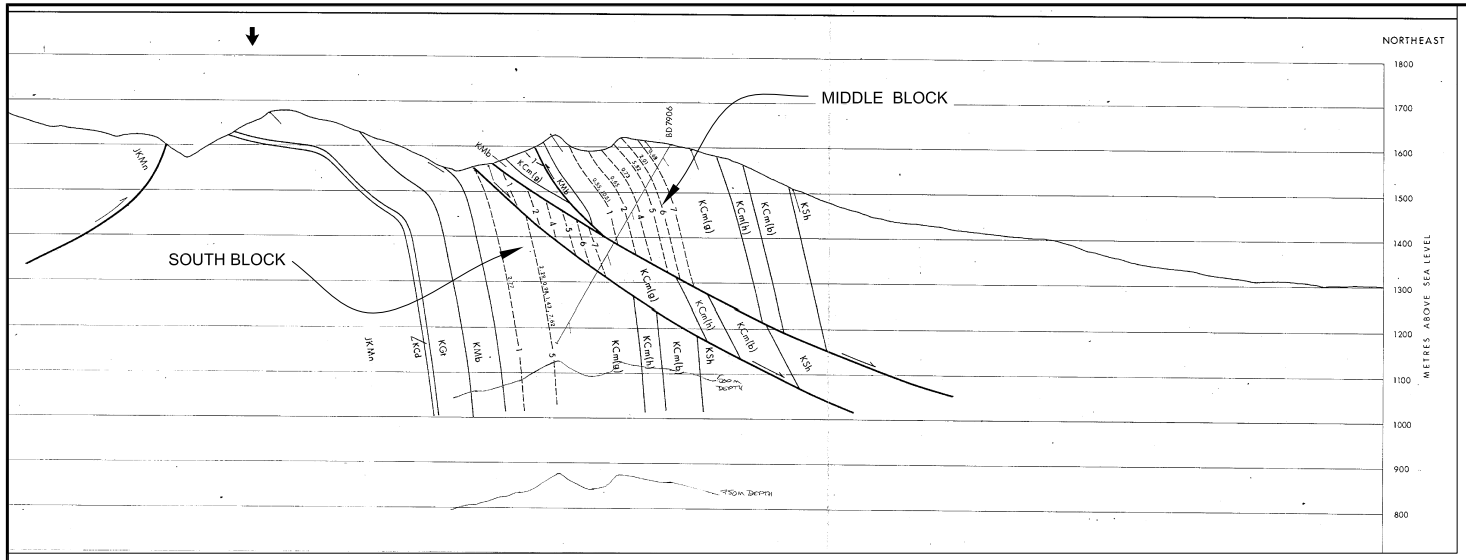
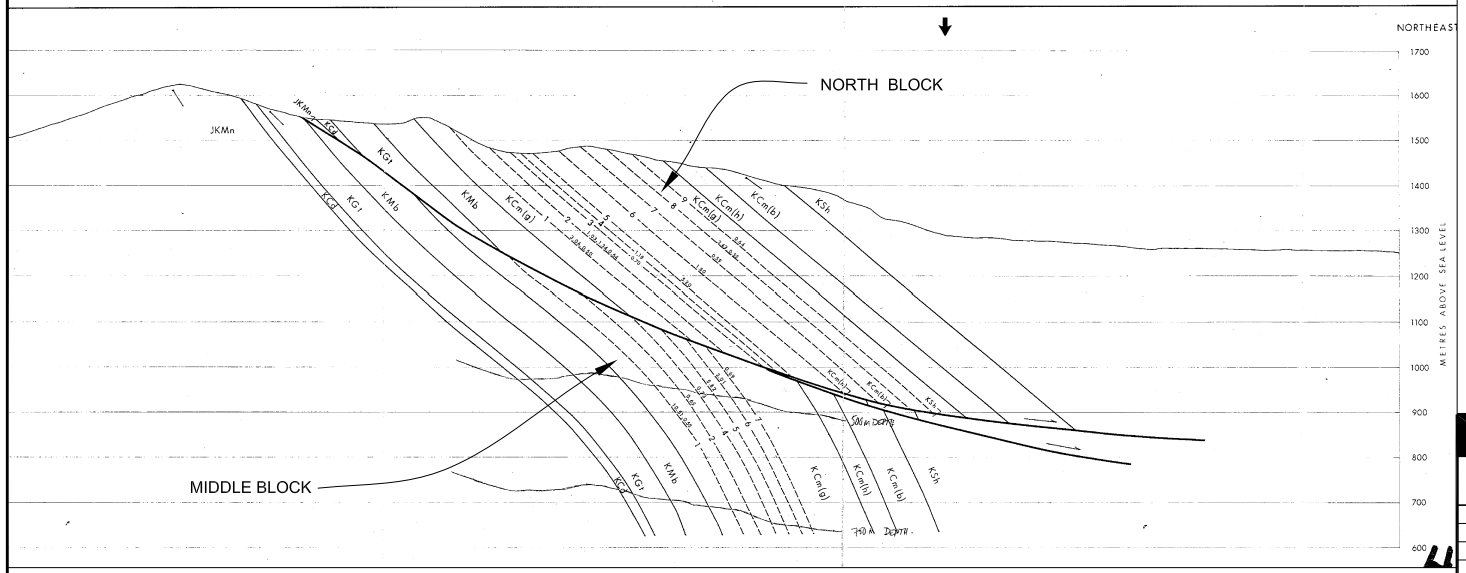


SECTION T24200



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 CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS	STRUCTURAL CROSS-SECTIONS T24200 - T27600
Checked by:	JP	
Approved by:	JP	
Revision No.	C	
Dwg No.	005B_SSEC02_C	
Date: 2010/FEB/09	Document:	Figure No. 9.7

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SECTION 10 • DEPOSIT TYPES

This section discusses the designation of the Huguenot property's North Block coal deposit for which formal resource estimations are presented (see Section 16), in terms of both 'Geology Type' and 'Deposit Type' as defined in Geological Survey of Canada Paper 88-21 ("A Standardized Coal Resource/Reserve Reporting System for Canada").

10.1 GEOLOGY TYPE

The following is extracted from GSC Paper 88-21:

"Four categories of geology type are proposed to address differences in the complexity of seam geometry within deposits. These differences may result both from sedimentary processes at the time of coal deposition and from subsequent deformation, which may have folded and faulted the coal measures. Primary categories are termed low, moderate, complex, and severe."

The North and Middle Blocks of the Huguenot are considered to conform to the Moderate Geology Type. The South Block requires further geological definition to confirm its Geology Type which will either be Moderate or Complex. These geology types are defined as:

- Moderate – *"Deposits in this category have been affected to some extent by tectonic deformation. They are characterized by homoclines or broad open folds (wavelengths greater than 1.5 km) with bedding inclinations of generally less than 30°. Faults may be present, but are relatively uncommon and generally have displacements of less than ten metres. Deposits in this category would include many of the outer Foothills coalfields in western Alberta (and) some of the deposits farther to the west in the Front Ranges of the Rocky Mountains."*
- Complex – *"Deposits in this category have been subjected to relatively high levels of tectonic deformation. Tight folds, some with steeply inclined or overturned limbs, may be present, and offsets by faults are common. Individual fault-bounded plates do, however, generally retain normal stratigraphic sequences, and seam thicknesses have only rarely been substantially modified from their pre-deformational thickness. Most of the coal deposits in the inner Foothills and Front Ranges of western Alberta and British Columbia are included in this category."*

The North Block coal deposit is considered to conform to the Moderate geology type.

10.2 DEPOSIT TYPE

The following is extracted from GSC Paper 88-21:

"Deposit type refers to the probable extraction method that would be used to recover coal, as the mining method in many instances dictates the manner of calculating quantification parameters such as seam thickness. Four categories are proposed and are designated surface, underground, non-conventional, and sterilized. Surface mineable deposits are those that would be extracted by removal of overburden from the surface using truck/shovel, dragline or other mining techniques."

The North Block deposit is considered to be potentially Surface Mineable deposit.

SECTION 11 • MINERALIZATION

The following summary of coal seam descriptions and structural geology is divided into two parts. The first part deals with the North Block which was the focus of exploration in 2008 and for which detailed information is available and NI 43-101 compliant resources have been estimated. The second part summarizes the coal geology of the remainder of the property (i.e., the Middle and South Blocks) for which only historical data is available.

In the discussion below, the term 'mining section' refers to that part of a coal seam 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 vertical 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) are omitted, even though, in practice, some would almost certainly be mined with coal in medium- to large-scale production scenarios. In the discussions presented below, the mining sections are taken to a minimum true thickness of 0.60 m.

11.1 NORTH BLOCK

A total of ten 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 9. 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) and its lowermost potentially mineable coal split is called Seam 6La.

All seams/coal zones except Seam 7 provide potentially mineable coal intervals. The main coal seams are Seams 1, 5, 6B, and 8A; 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 North Block. Where not considered to be potentially mineable, they 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 11-1 while correlations of each of these coal seams are shown in Figures 11-2 to 11-4. Thickness ranges for the coal seams, together with mining section thicknesses extracted from those seams, are presented in Table 11-1. Taking into account the distribution of the coal seams, cumulative thickness for all mining sections (based upon a 0.6 m cut-off) ranges from approximately 17.7 to 21 m. Using a 1.0 m thickness cut-off, the range is from 15.2 to 19.4 m. There is no evidence of thickening or thinning of coal seams due to structural deformation.

Table 11-1: North Block Coal Seam & Mining Section Thickness Ranges

	Seam Thickness (m)		Mining Section (m)		Mining Section Average Thickness	
Seam	Overall Minimum	Overall Maximum	Min.** (>0.60 m)	Max	>0.6 m	> 1.0 m
9	0.20	1.20*	0.66	1.20*	1.0	1.0
8A	2.90	3.37	2.45	2.93	3.0	2.5
6D	0.37*	0.77	0.61	0.77	0.7	-
6BC	2.41	3.36	2.41	3.36	2.9	2.9
6B	1.67	2.64	1.67	2.64	2.0	2.0
6A	0.25	1.11	0.99	1.11	1.1	1.1
6La	0.32	2.10	1.03	1.78	1.4	1.5
5	3.29	6.77	3.29	6.77	5.4	5.4
4	0.45	0.73	0.62	0.73	0.7	-
3D	0.32	0.68*	0.64	0.68*	0.7	-
3B	0.47	1.50*	0.68	1.50*	1.1	1.1
2A	0.50	0.76	0.61	0.76	0.7	-
2	3.55*	3.55*	2.91*	2.91*	2.9	2.9
1	3.00*	4.43	3.00*	4.43	3.7	3.7

Note: * from trench data; ** using the 0.6 m thickness minimum model.

11.1.1 Seam 1

This is the basal seam within the Gates Formation and occurs approximately 40 to 46 m above the Moosebar Formation contact and is persistent throughout the property. Seam 1 is consistent throughout the North Block. The seam widths are the same as those used for the mining sections and range from 3.00 m (HS-78-24) to 4.43 m (HR08-14) and average 3.7 m.

Seam 1 is characterized by a thick, comparatively clean lower section and a thinner (0.50 to 1.50 m) upper section that contains one to two thin, carbonaceous claystone bands (Figure 11-2). The top 0.30 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 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.

Inter-seam separation between Seams 1 and 2 are represented by approximately 14 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 inter-bedded siltstone and claystone at the top.

11.1.2 Seam 2

Seam 2 forms a 3.55 m (HS-78-25) seam in the southeast corner of the North Block. It consists of two main, relatively clean, coal plies each approximately 0.75 to 0.80 m thick, separated by about 1 m of inter-banded coal and rock; several inter-banded coal plies and rock bands are also present near the top of the seam. For resource estimation purposes, 0.64 m of the middle coal-rock interval were removed from the mining section, to yield a mining section of 2.91 m. The upper parts of this seam become a coaly-carbonaceous zone towards the northwest, and only the lower coal split is continuous throughout most of the block; this split is referred to as Seam 2A (Figure 11-2). In the northwest, 2A mining sections range in thickness from 0.61 m (HR-08-01) to 0.76 m (HR08-07), averaging 0.7 m. The split thins in the centre of the block to 0.50 m (HR08-14).

Seam 2 and Zone 3 are separated by between approximately 6 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.

11.1.3 Zone 3

This coal zone is composed of four coal splits separated by rock bands of variable thickness; the overall thickness of the zone varies from 7.50 m (HR08-07) to 11.44 m (BD 7814). In ascending order, the coal splits are named 3A to 3D (Figure 11-2). The more prominent of these are 3B and 3D; splits 3A and 3C are less well developed.

Seam 3A contains two coaly-carbonaceous plies separated by rock band. In the northern part of the Middle Block, immediately below the Holtslander North Thrust, Seam 3A has a thickness of 1.25 m in trench HS-78-18. The 3A split was not trenched in the southeast part of the North Block, and may present a similar thickness as reported from HS-78-18. For the rest of the block, the geophysical logs indicate that 3A is either a coaly zone or contains too little coal to be of economic importance.

Seam 3B lies approximately 1.5 to 2 m above 3A. A 0.15 to 0.39 m thick rock band is often present in the middle of the seam. Except for the northwest corner, where it is only 0.47 m thick (HR08-07), Seam 3B forms a mining section throughout the block. It increases in thickness towards the southeast, ranging from 0.68 m (HR08-01) to 1.50 m (HS-78-26). Average thickness is 1.1 m. This seam is correlated with Seam 3 at Belcourt South.

Seam 3C is typically composed of three coaly plies separated by carbonaceous claystone; it never forms a mining section.

From drill data, Seam 3D is located between 4 and 7 m above 3B. It forms a clean seam which ranges from 0.32 m (HR08-01) to 0.68 m (HS-78-27) in thickness. It forms a mining section across the southern two-thirds of the block, ranging from 0.64 to 0.68 m thick. Seam 3D averages 0.7 m.

The inter-seam separation between Zone 3 and Seam 4 ranges from 57 m in the northwest to 30 m around Holtslander creek, to approximately 42 m in the southeast. The lower half of the sequence is

predominantly 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 to 10 m of claystone with several thin coal plies. This, in turn is followed by fine-grained, bioturbated, calcareous sandstone which is in contact with a carbonaceous zone below Seam 4.

11.1.4 Seam 4

Seam 4 ranges in thickness from 0.45 m (HR08-07) to 0.73 m (HR08-14). Mineable thicknesses are not reached at the northwest end of the block (Figure 11-3). Mining sections vary between 0.62 m (BD 7814) to 0.73 m (HR08-14). The average mining section thickness is 0.7 m.

Seam 4 is separated from Seam 5 by 8.5 to 14.0 m of clean, fine- grained, calcareous sandstones with occasional silty laminae. This sequence thickens from northwest to southeast.

11.1.5 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 Upper Block, seam and mining section intervals are coincident. They vary from 3.29 m (HR08-07) to 6.77 m (HR08-03) although most intersections are between 5 and 6 m thick. The average thickness of Seam 5 is 5.4 m.

Seam 5 is characterized by a relatively clean lower section (typically, 3.0 to 3.5 m) and an upper section which contains one to three carbonaceous rock or poor coal bands (Figure 11-3). The most distinctive of these is situated immediately above the lower section and ranges in thickness between 0.15 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. Around Holtslander Creek, where the sequence is thickest, a medium- to coarse-grained, sandstone with a 1.5 m conglomeratic lens is present.

11.1.6 Zone 6

Coal Zone 6 contains five main coal splits separated by rock bands (+/- thin coal plies) of variable thickness. In most of the drillholes, this zone is approximately 20 m in thickness, although it thickens to about 27 m in HR08-01, due to the presence of thick sandstone between the 6A and 6B coal splits.

In ascending order, the coal splits of interest are named 6La, 6A, 6B, 6C, and 6D. The vertical separation between these splits varies across the block. In the north, Seams 6La 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) separation. This large separation between the upper and lower coal intervals diminishes 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 2 and 5 m.

While discussed individually below, for resource estimation purposes the 6B-6D coal interval forms two mining sections. In the northwest of the block, the lower coal ply of Seam 6C is added to Seam 6B to form the composite mining section 6BC. In the central and southern areas, the interval between 6B and 6C thickens such that each coal split is evaluated separately; Seam 6D is always reported 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, this interval ranges between 3.84 m (HB08-6C-A) and 5.72 m (HR08-01) in thickness. As this is where the bulk sample was taken, the 6BCD interval was bulk sampled and tested as one continuous mining section (see Section 18). The 6BCD interval correlates with 6 Upper at Belcourt South.

Within this coal zone, Seam 6La is the lowest seam of potential economic importance. It is part of a thicker series of coal and highly carbonaceous to coaly splits that, together, are referred to as 6L (this interval was cored in HB08-6 in order to confirm its potential for providing a mining section). For most of the block, mining section 6La is situated in the lower half of 6L and is usually composed of two coal plies separated by a thin (0.15 to 0.30 m) rock band (Figure 11-3). This rock band is not present in the southeast part of the block (trench HS-78-37). Seam 6La ranges up to 2.10 m (HT08-6A-2) in thickness; the mining sections vary in thickness from 1.03 m (BD 7814) to 1.78 m (HT08-6A-2) and averages 1.4 m. The lower ply of 6La degrades toward the northwest and the mining section shifts to incorporate a higher coal ply. The mining section eventually falls below thickness cut-off (HR08-06) and, together with 6L as a whole, continues to degrade northwesterly to become a carbonaceous-coaly zone on the Belcourt South property (BD 7801).

Seam 6A in the northern part of the block is essentially part of 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 3 to 5 m (Figure 11-3). Seam 6A is characterized by a central coal ply with either thin rock bands separating it from thinner coal plies in both the floor and roof, or with a dirty roof and floor. It only forms mining sections in the northwest of the block (0.99 m in HR08-06 and 1.11 m in HT08-6A-2). In the north, Seam 6A is separated from 6B by 8.8 m (HR09-06); to the south, it thickens to 15.6 m in HR08-01 but thins to 2.4 m in BD 7814. At Belcourt South, this seam is called 6 Lower.

Seam 6B consistently forms, or is otherwise part of, 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 11-4); the thicknesses of 6B ranges from 1.67 m (HR08-02) to 2.64 m (HS-78-39). The average thickness is 2.0 m. Around Holtslander Creek, 6B is sufficiently separated from 6C (1.75 to 2.74 m) that it forms an independent mining section; this separation continues to the southeast. To the northwest, the 6B-6C parting decreases to between 0.23 to 0.30 m such that the lower ply of 6C can be added to 6B, resulting in the composite mining section, 6BC. Seam 6BC ranges in thickness from 2.41 m (HB08-6C-B) to 3.36 m (HR08-01), with an average thickness of 2.9 m.

Seam 6C is usually composed of two coal plies 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 ply represents good coal and, as discussed above is included in the 6BC mining section. The upper ply is high in ash and this, together with the intervening rock band, precludes Seam 6C from being an independent mining section (Figure 11-4). Where incorporated into the composite mining section 6BC, the lower split varies between 0.23 m and 0.58 m in thickness.

Seam 6D is the uppermost seam in Zone 6, is characterized by a single, comparatively clean seam which occasionally has a thin band of high-ash coal or coaly rock near its centre (Figure 11-4). It is consistently developed throughout the North Block but falls below mining section thickness in HR08-03 and in the southeast part of the block. Mining section thickness varies between 0.61 m (HR08-07) and 0.77 m (HR08-01) with an average of 0.7 m.

The inter-seam separation between Zone 6 and Zone 8 typically ranges between approximately 66 and 79 m, although this interval may thicken to as much as 90 m at the southeast end of the North Block. 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, one to two uneconomic coal plies and a series of small carbonaceous bands are present; these form part of Zone 7. The strata of above Zone 7 contain occasional sandstone and siltstone interbedded lenses.

11.1.7 Zone 8

This coal zone is composed of two component seams called 8A and 8B. Overall, this zone ranges in thickness from approximately 5 m (HR08-06) to 7 m (HR08-02).

Seam 8A ranges from approximately 2.90 m (HR08-04) to 3.37 m (HB08-8-A and -B) and is characterized by a relatively thick lower and upper coal plies, separated by a rock band (Figure 11-4). The rock band is sufficiently thick to require its omission from resource estimations. Consequently, Seam 8A mining sections are taken as the sum of the upper and lower coal plies; they range in thickness from 2.45 (HR08-04) and 2.93 m (HB08-8-A). The lower coal ply varies in thickness from 1.41 to 2.10 m, contains a 0.15 to 0.25 m rock band near its top and has a thick, relatively clean, bottom section. The main rock band varies between 0.33 and 0.73 m and sometimes contains a thin coal ply. The upper ply ranges in thickness from 1.28 to 0.80 m, has a clean top half and a high-ash bottom section due to one to two thin rock bands. For the 0.6 m thickness minimum, the mining sections average 3.0 m; the average drops to 2.5 m for the 1.0 m minimum. A thin rider is situated between 0.21 and 0.44 m above the main seam. It has been omitted from all 8A mining sections.

As indicated above, the internal rock band was removed from the mining sections for resource estimation purposes. However, as with 6B, 6C, and 6D, in most practical mining scenarios the entire 8A interval would most likely be mined in its entirety. The bulk sample has been dealt with accordingly (see Section 18). Seam 8A correlates with Seam 8 at Belcourt South.

Seam 8B is situated approximately 1.5 to 4 m above 8A (Figure 11-4). In the drillholes it is represented thin, relatively clean, coal split, although 1.19 m was intersected in trench HS-78-47 southeast of Holtslander Creek.

The separation between Zone 8 and Seam 9 ranges between approximately 12.5 to 19 m, although for most of the block it is at the higher end of the 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.

11.1.8 Seam 9

Seam 9 is a thin coal seam that tops a coaly to carbonaceous interval. Seam thickness ranges from 0.20 m (HR08-06) to 1.20 m (HS-78-34). It is thinnest in the northeastern half of the block where it also contains a thin rock band; here it does not meet mining section minimums (Figure 11-4). It is of potential interest in the southeastern half of the block, where it is present as a single, clean coal split in BD 7814 (0.66 m) and HS-78-34 (1.20 m). The average thickness is 1.0 m.

11.1.9 Structure

The structural geology of the North Block is illustrated on the structure contour maps for Seams 1, 5, 6B/BC, and 8A (Figure 11-5 to 11-8) and is shown on the cross-sections (Figures 11-9 to 11-13). The North Block sits structurally above the Holtslander North Thrust and is interpreted to be the oldest of the thrusts that cut through the property. The 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.

11.2 MIDDLE & SOUTH BLOCKS

11.2.1 Coal Seams

A total of four coal seams and four coal zones have been identified over the central and southern portions of the Huguenot property. Coal seams and coal zones greater than 0.5 m in thickness are identified in ascending order as Nos. 1 through 9; of these, the main coal seams/zones (>1 m true thickness) are 1, 2, 4, 5, 6, and 8.

Summarized descriptions of the coal seams and zones contained within the Middle and South Blocks are provided below; a generalized stratigraphic column through the Gates Formation is shown in Figure 9-1.

Seam 1: varies in thickness across the Middle Block, from 3.0 m (HS-78-16) in the north to 10.5 m in the south (BD 7906); it is 2.8 m (BD 7914) thick in the South Block. A 10.51 m intersection in BD 7906 is likely fault-thickened.

Seam 2: ranges in thickness from 1.39 m (BD 7914) in the South Block to 4.08 m (HS-78-17) at the northern end of the Middle Block.

Zone 3: is of interest only in the northern parts of the Middle Block, where Seams 3A and Seam 3B are 1.25 m (HS-78-18) and 1.50 m (HS-78-19) thick, respectively. Zone 3 is poorly developed throughout the rest of the Middle and South Blocks.

Seam 4: consists of a single coal split that ranges in thickness from 0.73 m (BD 7906 - Middle Block) to 1.16 m (BD 7914 - South Block). Near the southeast boundary of the property, a 2.11 m coal seam reported from trench HS-78-109 is now believed to correlate with Seam 4.

Seam 5: overlies Seam 4 by approximately 22 m. The thickness of Seam 5 throughout the Middle and South Blocks is considered to range between 5.43 m (HS-78-110) and 5.82 m (BD 7806). The Seam 5 intersection in drillhole BD 7805 is very close to a major fault and its greater thickness (9.09 m) is probably the result of structural thickening. The 18.87 m coal zone reported as Seam 5 by Denison from drillhole BD 7914 is likely a fault-thickened repeat of Seam 1, in which case Seam 5 was not reached in this drillhole.

Zone 6: lies approximately 13 to 23 m above Seam 5. In the northern half of the Middle Block, three main coal splits (BD 7805) are developed, the most prominent of which is the 1.77 m, lower split; this seam is correlated with Zone 6L/Seam 6La of the North Block. The upper two splits are correlated with Seams 6C and 6D; they have thicknesses of 0.94 and 0.70 m, respectively. In the southern half of this Block, the main, lower, split is 2.01 m (BD 7906). Denison does not describe these seams as being present in the South Block although 2.25 m of coal, which likely correlates with the lower split, was intersected in trench HS-78-111.

Zone 7: This zone is situated approximately 17 to 29 m above Zone 6. It usually contains several thin, uneconomic seams. The most developed of these ranges from 0.6 to 0.9 m in thickness (BD 7805). It is not shown by Denison to be present in the South Block.

Seam 8A: is situated approximately 25 to 33 m above Zone 7. No thicknesses for Seam 8A were reported by Denison from either the Middle or South Blocks. However, in the Middle Block, coal seams in trenches HS-78-103 and HS-77-18 are now considered to correlate with Seam 8A; these trenches intersected 1.94 m and 2.02 m of coal, respectively.

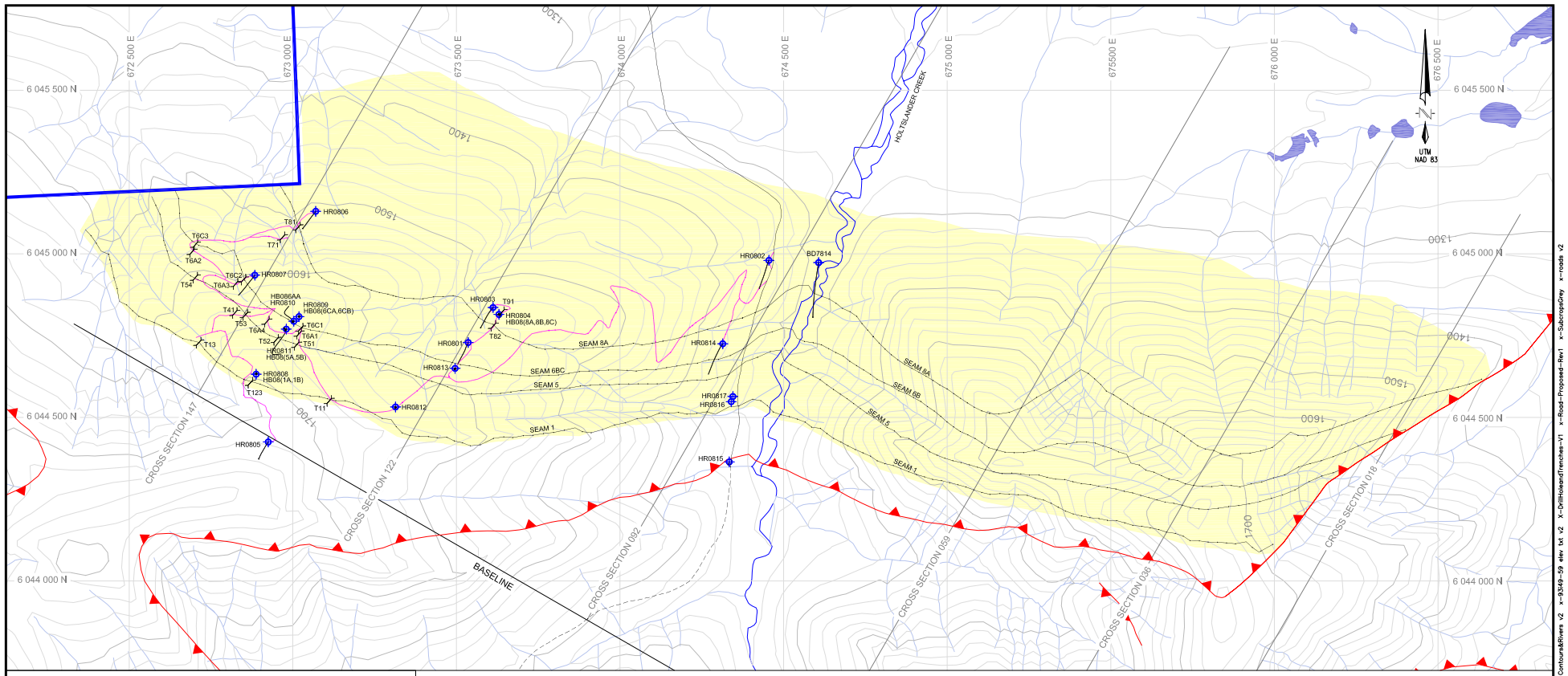
Seam 9: attains mining section thickness in the northern part of the Middle Block where trench HS-77-19 intersected a 1.10 m coal seam. Seam 9 was not described by Denison from the southern half of the Middle Block or from the South Block.

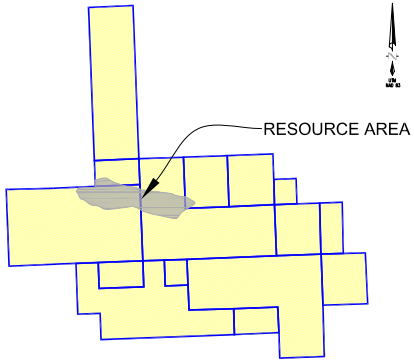
Drill data south of Belcourt Creek, from Denison's old Huguenot, Ptarmigan, and Omega Blocks, indicate that there are multiple coal seams, similar in number to those present in the North Block. The more limited coal seams described by Denison from the southern half of the current Huguenot property, is considered to reflect the level of exploration that has been conducted to data.

11.2.2 Structure

The structural geology of the Middle and South Blocks is illustrated on the geology map (Figure 9-5) and on the cross-sections (Figures 9-6 and 9-7). The Middle Block sits structurally above the Holtslander South Thrust and below the Holtslander North Thrust. 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 centre 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.

The South Block forms the lowest structural unit. Most of the coal seams are contained within steep, easterly-dipping beds (60° and 75°) which get steeper 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.





LEGEND:

- DRILL HOLE COLLAR AND TRACE
- T81 TRENCH (HT08-8-1)
- SEAM SUBCROP TRACES
- LICENSE BOUNDARY
- RIVER
- CREEK
- TOPOGRAPHIC CONTOUR (20m)
- ROAD (RECLAIMED)
- DRILL TRAIL
- FAULT THRUST
- RESOURCE AREA

100m 0 100 200 300 400 500m
SCALE

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS
Checked by:	JP
Approved by:	JP
Revision No.	E
Dwg No.	005B_DHN001_E
Date:	2010/FEB/03
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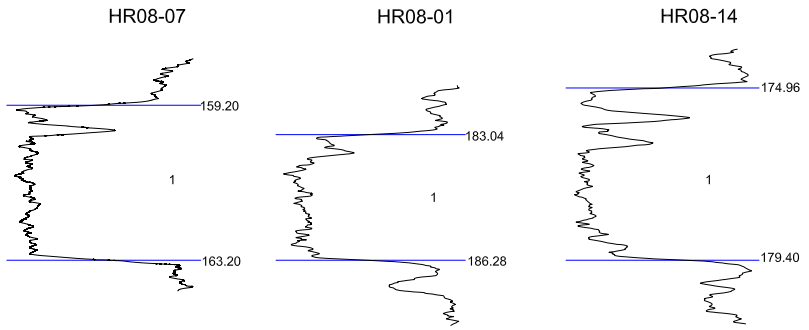
Figure No.	11.1

SEAM TRACES AND 2008 DRILL HOLE AND TRENCH LOCATIONS

02/10/10 – 03:46:27pm L:\005_Huguenot_EXP\DRILL_HOLE\005B_DHN001_E.dwg Xrefs: X-9349-59 Contours&Rivers v2 x-9349-59 elev txt v2 X-DrillholeandTrenches-V1 x-Road-Proposed-Rev1 x-SubcropGrey x-roads v2

SEAM 1



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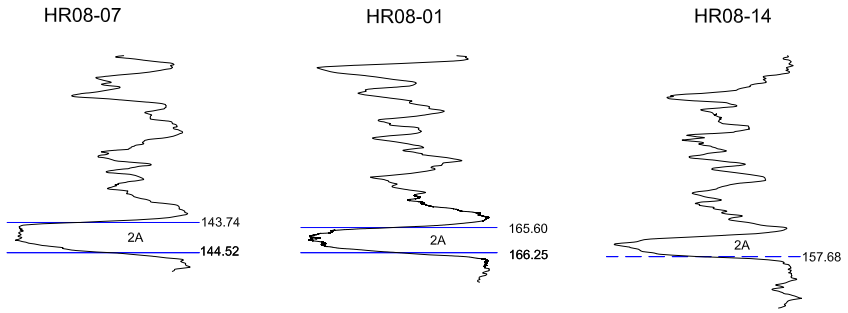
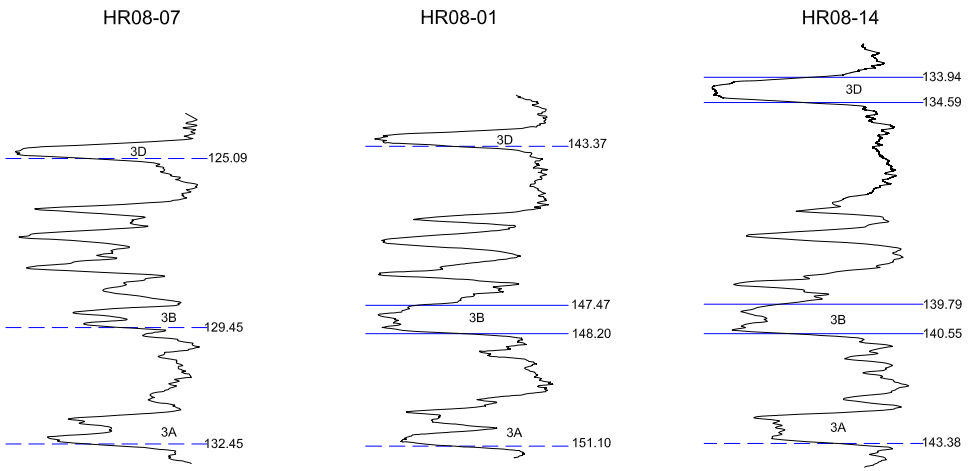


SEAMS 3B and 3D



LEGEND:

MINING SECTION

NON MINING SECTION

NOTE:

SEAM TRACES TAKEN FROM DETAILED DENSITY LOGS

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by: CS	SEAM CORRELATION SEAMS 1, 2A, 3B and 3D	
Checked by: JP		
Approved by: JP		
Revision No. G		
Dwg No. 005B_SMC001_G		
Date: 2010/FEB/02	Document:	Figure No. 11.2

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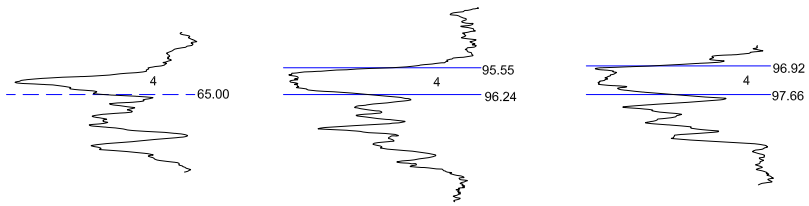
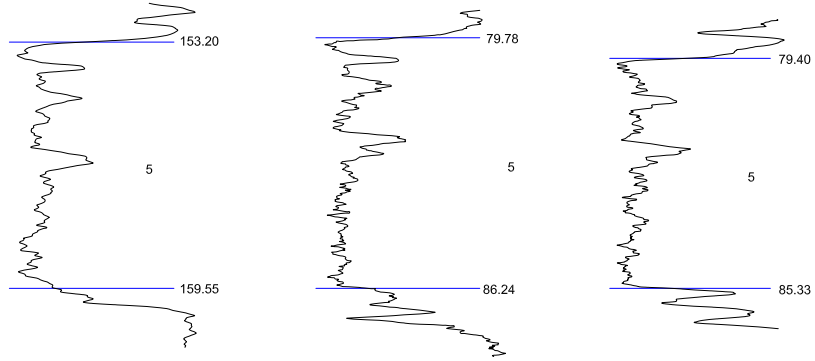
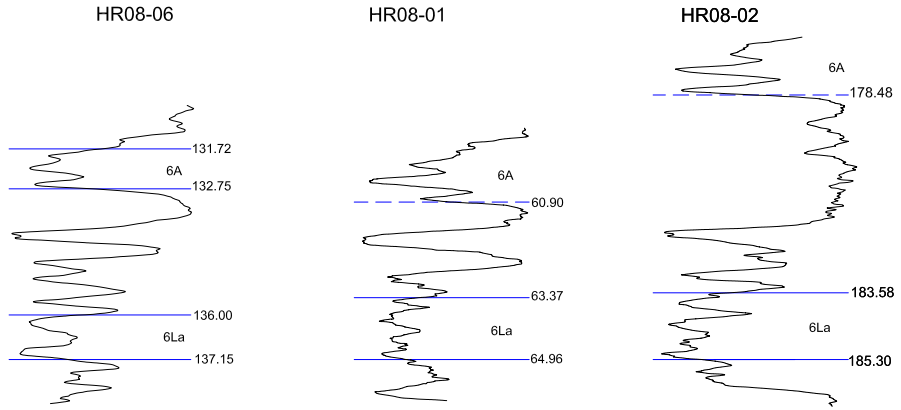


SEAM 5



SEAMS 6A and 6La



LEGEND:

MINING SECTION

NON MINING SECTION

NOTE:

SEAM TRACES TAKEN FROM DETAILED DENSITY LOGS

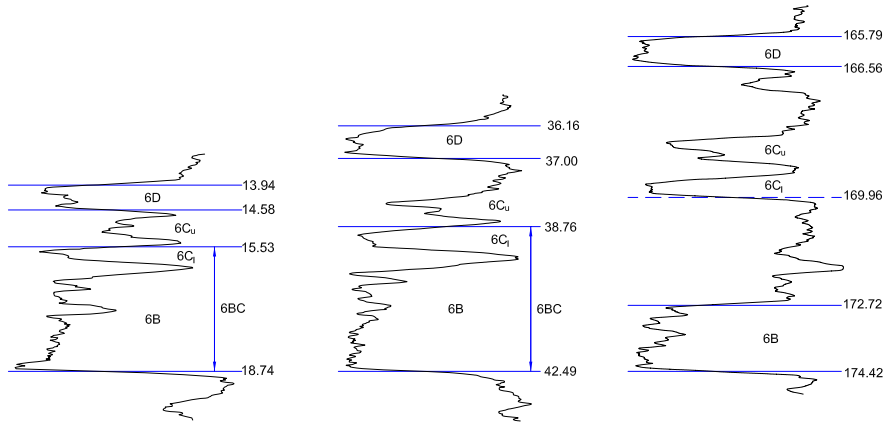
COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by: CS	SEAM CORRELATION SEAMS 4, 5, 6A and 6La	
Checked by: JP		
Approved by: JP		
Revision No. G		
Dwg No. 005B_SMC002_G		
Date: 2010/FEB/02	Document:	Figure No. 11.3

02/10/10 – 02:12:17pm L:\005_Huguenot_EDP\SEAM CORRELATION\005B_SMC002_G.dwg Xrefs:

SEAMS 6B, 6C and 6D



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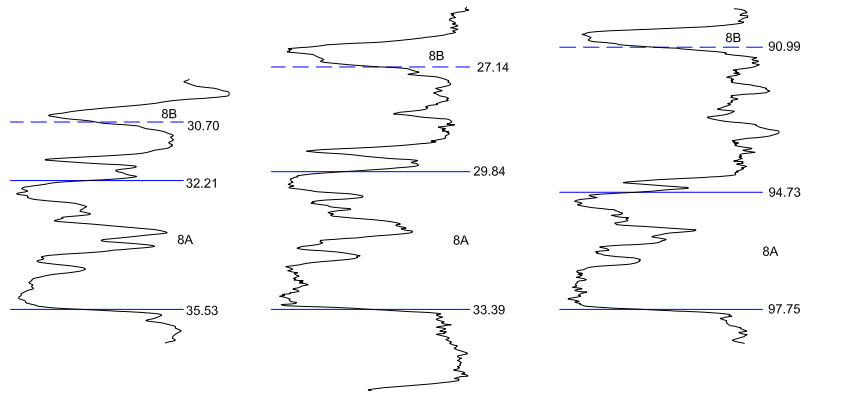

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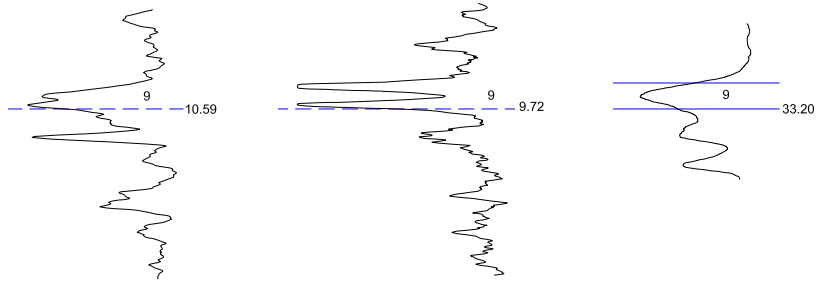

LEGEND:

MINING SECTION

NON MINING SECTION

NOTE:

SEAM TRACES TAKEN FROM DETAILED DENSITY LOGS

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by: CS	SEAM CORRELATION SEAMS 6B-C-D,8A and 9	
Checked by: JP		
Approved by: JP		
Revision No. H		
Dwg No. 005B_SMC003_H		
Date: 2010/FEB/02	Document:	Figure No. 11.4

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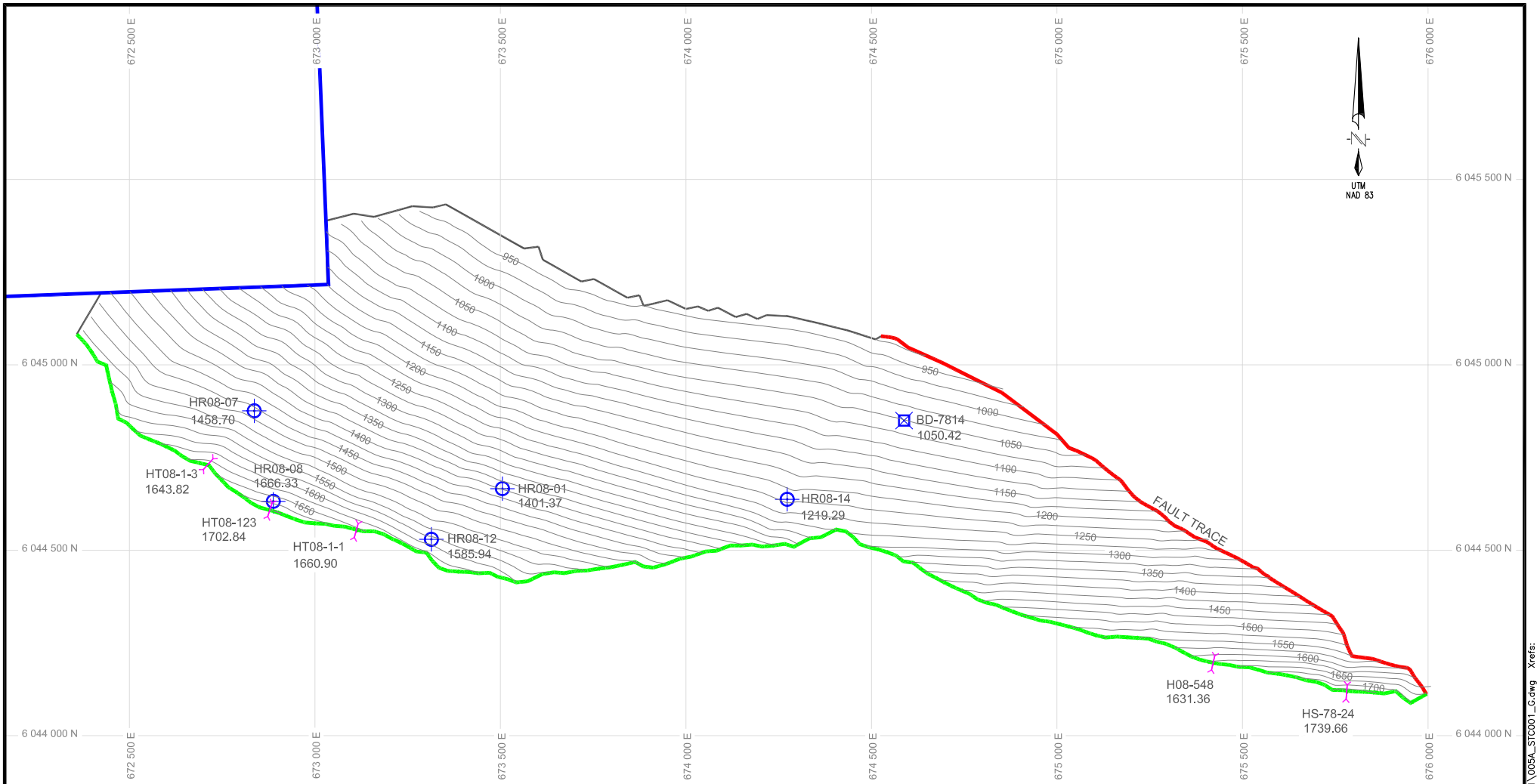


LEGEND:

- BD-7814 - PENETRATION OF SEAM FLOOR 1594.53 WITH ELEVATION (DIAMOND DRILL HOLE
- HR08-03 - PENETRATION OF SEAM FLOOR 1561.87 WITH ELEVATION (ROTARY DRILL HOLE)
- SEAM 1 SUBCROP
- CONTOUR (25 M.)
- FAULT TRACE
- TRENCH
- PROPERTY BOUNDARY

NOTE:

STRUCTURE CONTOURS EXTRACTED FROM GEOLOGICAL MODEL PREPARED BY MOOSE MOUNTAIN TECHNICAL SERVICES.

100m 0 100 200 300 400 500m

SCALE

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS
Checked by:	JP
Approved by:	JP
Revision No.	G
Dwg No.	005A_STC001_G

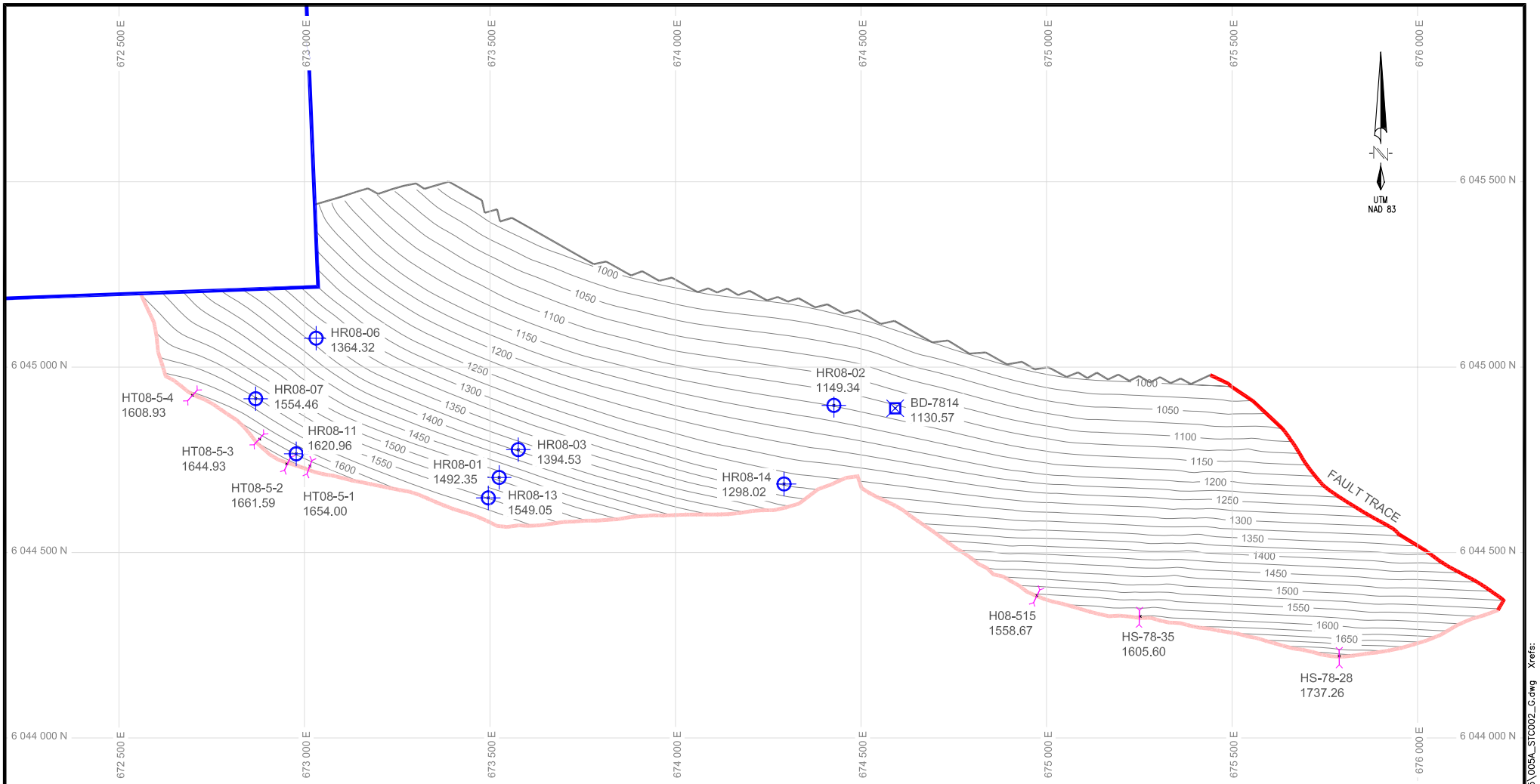
NORTH BLOCK
STRUCTURE CONTOUR
SEAM 1

Date: 2010/FEB/09

Document:

Figure No. 11.5

02/14/10 – 01:13:20pm L:\005_Huguenot_EXP\STRUCT CONTOURS\Seam1\005A_STC001_G.dwg Xrefs:



LEGEND:

- BD-7814 - PENETRATION OF SEAM FLOOR 1594.53 WITH ELEVATION (DIAMOND DRILL HOLE
- HR08-03 - PENETRATION OF SEAM FLOOR 1561.87 WITH ELEVATION (ROTARY DRILL HOLE)
- SEAM 5 SUBCROP
- CONTOUR (25 M.)
- FAULT TRACE
- TRENCH
- PROPERTY BOUNDARY

NOTE:

STRUCTURE CONTOURS EXTRACTED FROM GEOLOGICAL MODEL PREPARED BY MOOSE MOUNTAIN TECHNICAL SERVICES.

100m 0 100 200 300 400 500m

SCALE

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS
Checked by:	JP
Approved by:	JP
Revision No.	G
Dwg No.	005A_STC002_G

NORTH BLOCK
STRUCTURE CONTOUR
SEAM 5

Date: 2010/FEB/09

Document:

Figure No. 11.6

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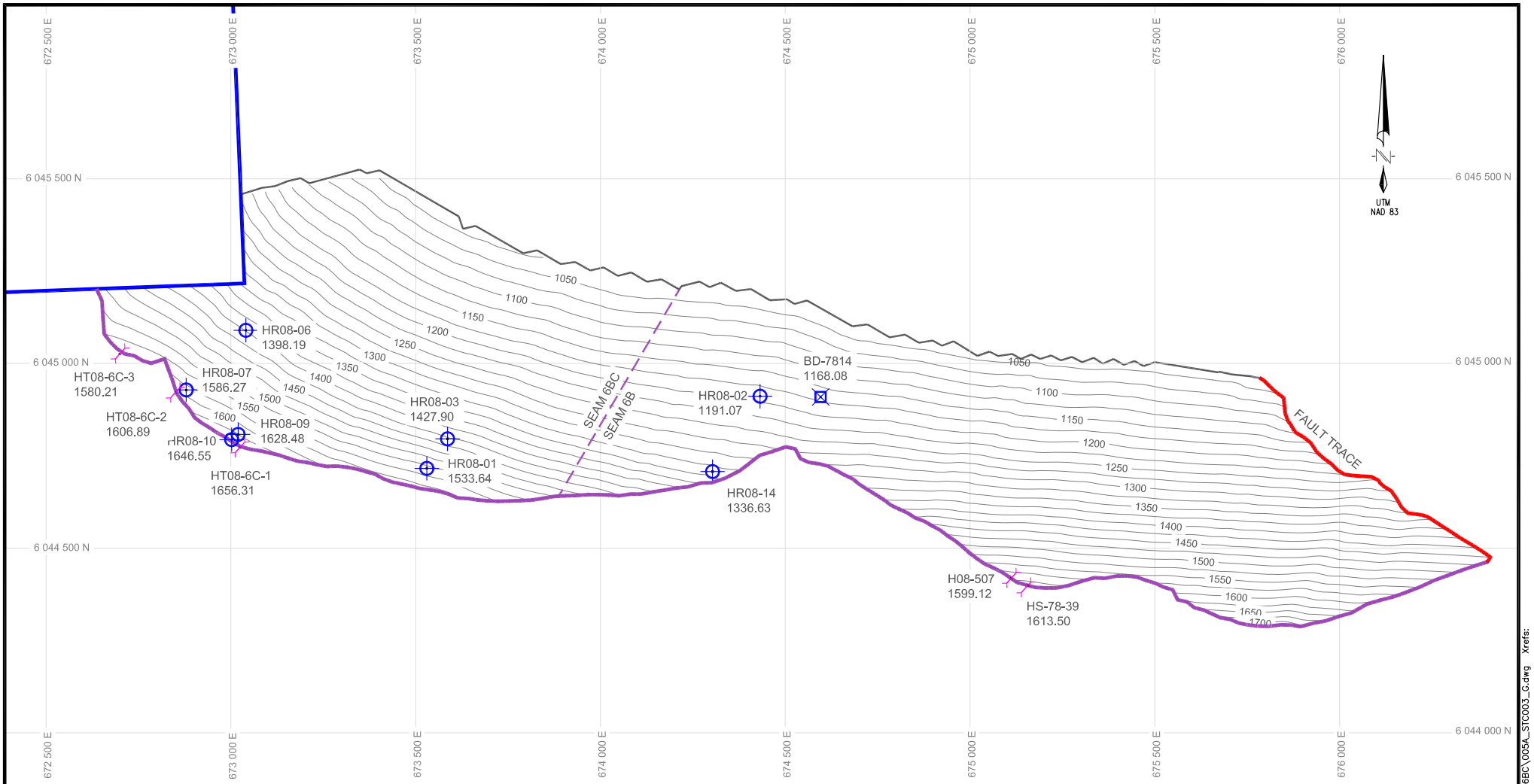

LEGEND:

- BD-7814 - PENETRATION OF SEAM FLOOR 1594.53 WITH ELEVATION (DIAMOND DRILL HOLE
- HR08-03 - PENETRATION OF SEAM FLOOR 1561.87 WITH ELEVATION (ROTARY DRILL HOLE)
- SEAM 6BC/6B SUBCROP
- CONTOUR (25 M.)
- FAULT TRACE
- TRENCH
- PROPERTY BOUNDARY

NOTE:

STRUCTURE CONTOURS EXTRACTED FROM GEOLOGICAL MODEL PREPARED BY MOOSE MOUNTAIN TECHNICAL SERVICES.

100m 0 100 200 300 400 500m

SCALE

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS
Checked by:	JP
Approved by:	JP
Revision No.	G
Dwg No.	005A_STC003_G

NORTH BLOCK
STRUCTURE CONTOUR
SEAM 6BC/6B

Date: 2010/FEB/09

Document:

Figure No. 11.7

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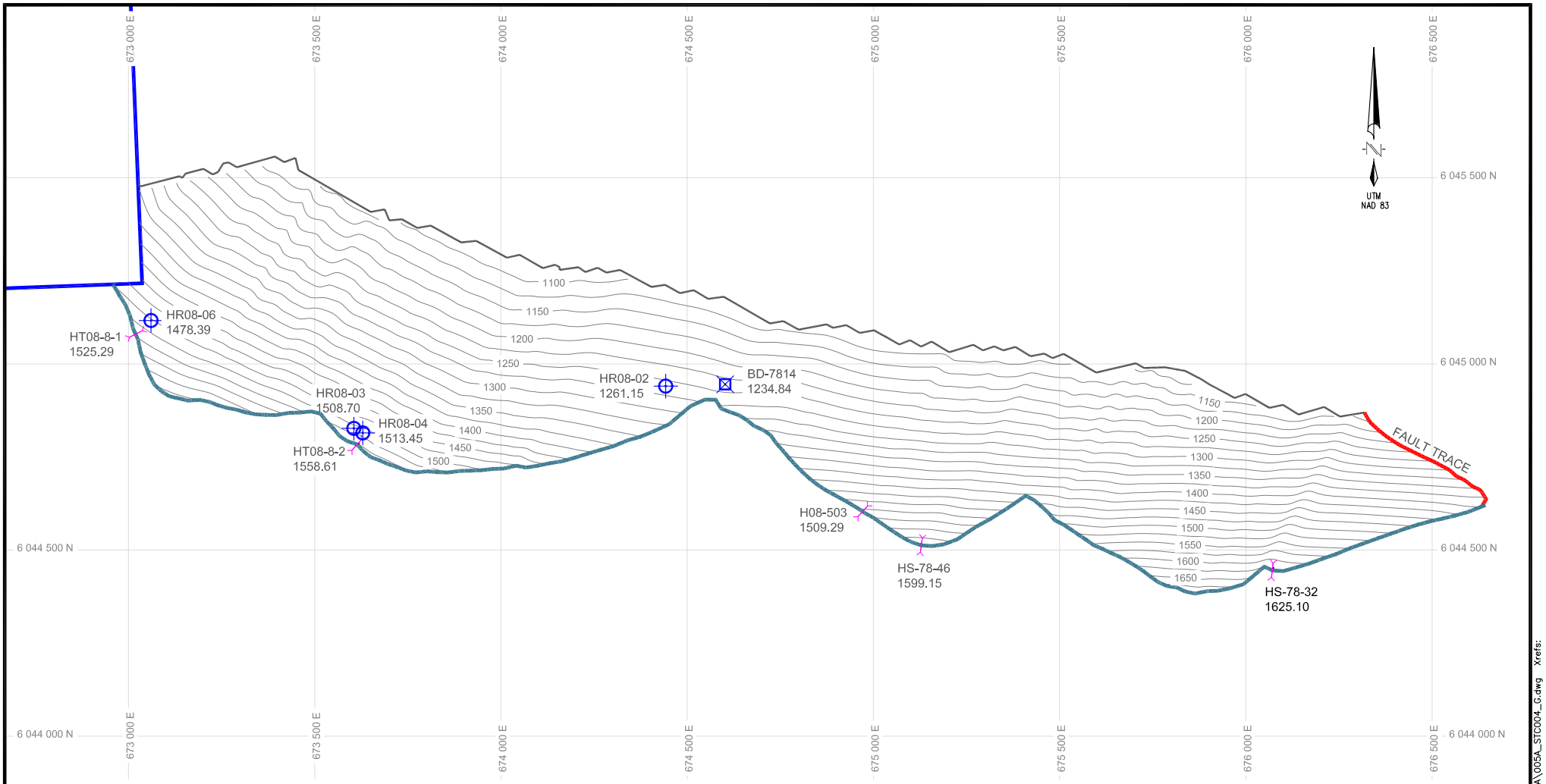

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- HR08-03 - PENETRATION OF SEAM FLOOR 1561.87 WITH ELEVATION (ROTARY DRILL HOLE)
- SEAM 8A SUBCROP
- CONTOUR (25 M.)
- FAULT TRACE
- TRENCH
- PROPERTY BOUNDARY

NOTE:

STRUCTURE CONTOURS EXTRACTED FROM GEOLOGICAL MODEL PREPARED BY MOOSE MOUNTAIN TECHNICAL SERVICES.

100m 0 100 200 300 400 500m

SCALE

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS
Checked by:	JP
Approved by:	JP
Revision No.	G
Dwg No.	005A_STC004_G

NORTH BLOCK
STRUCTURE CONTOUR
SEAM 8A

Date: 2010/FEB/09

Document:

Figure No. 11.8

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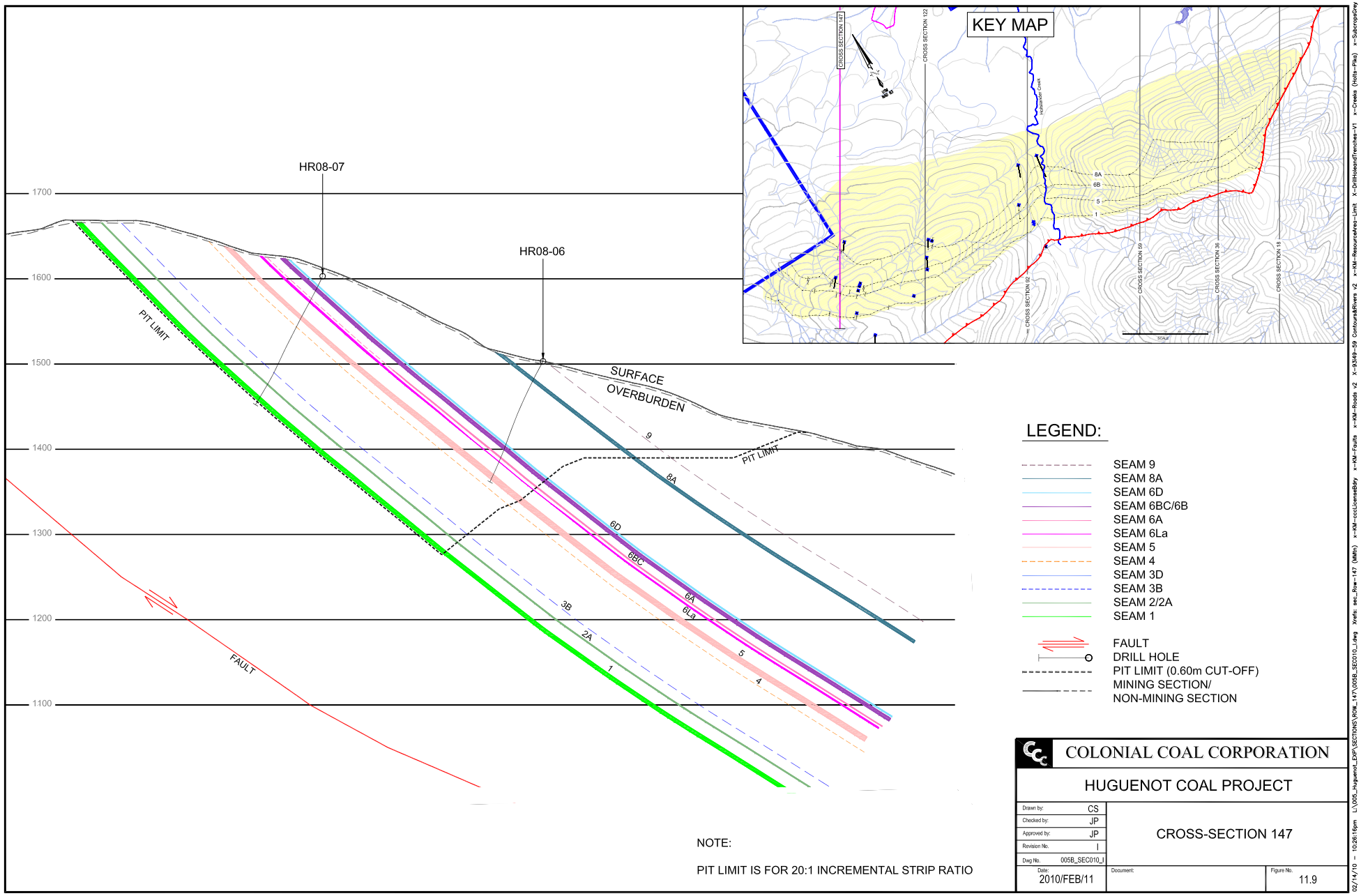
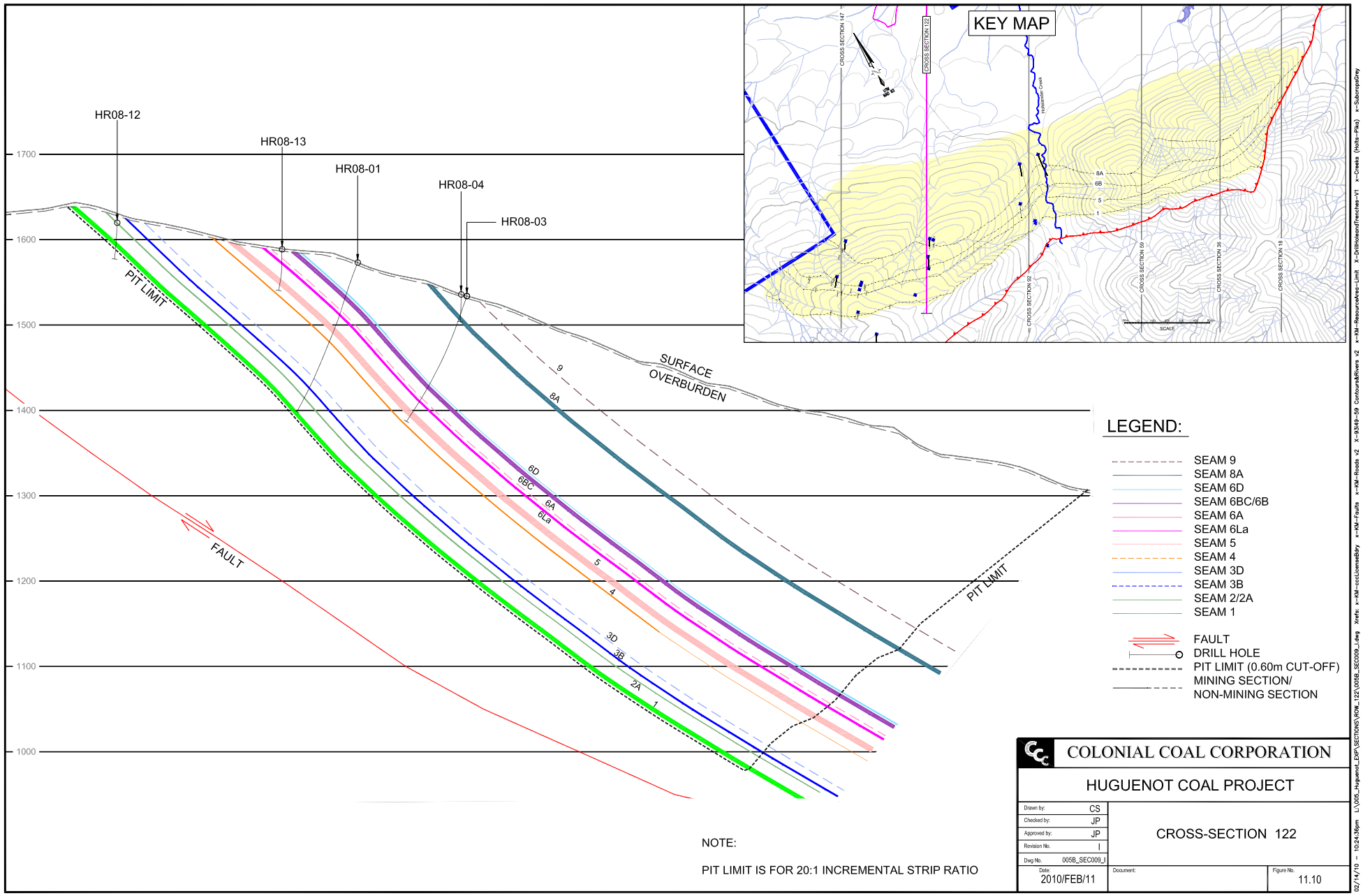

KEY MAP
CROSS SECTION 147
CROSS SECTION 122
CROSS SECTION 92
CROSS SECTION 59
CROSS SECTION 36
CROSS SECTION 18
8A
6B
5
1
HR08-07
HR08-06
1700
1600
1500
1400
1300
1200
1100
PIT LIMIT
SURFACE
OVERBURDEN
9
8A
6D
6BC
6A
6La
5
4
3B
2A
1
FAULT
LEGEND:
SEAM 9
SEAM 8A
SEAM 6D
SEAM 6BC/6B
SEAM 6A
SEAM 6La
SEAM 5
SEAM 4
SEAM 3D
SEAM 3B
SEAM 2/2A
SEAM 1
FAULT
DRILL HOLE
PIT LIMIT (0.60m CUT-OFF)
MINING SECTION/
NON-MINING SECTION
NOTE:
PIT LIMIT IS FOR 20:1 INCREMENTAL STRIP RATIO
COLONIAL COAL CORPORATION
HUGUENOT COAL PROJECT
Drawn by: CS
Checked by: JP
Approved by: JP
Revision No. I
Dwg No. 005B_SEC010_I
CROSS-SECTION 147
Date: 2010/FEB/11
Document:
Figure No. 11.9


KEY MAP
CROSS SECTION 147
CROSS SECTION 122
CROSS SECTION 92
CROSS SECTION 59
CROSS SECTION 36
CROSS SECTION 18
8A
6B
5
1
SCALE
HR08-12
HR08-13
HR08-01
HR08-04
HR08-03
1700
1600
1500
1400
1300
1200
1100
1000
PIT LIMIT
SURFACE
OVERBURDEN
FAULT
9
8A
6D
6BC
6A
6La
5
4
3D
3B
2A
1
LEGEND:
SEAM 9
SEAM 8A
SEAM 6D
SEAM 6BC/6B
SEAM 6A
SEAM 6La
SEAM 5
SEAM 4
SEAM 3D
SEAM 3B
SEAM 2/2A
SEAM 1
FAULT
DRILL HOLE
PIT LIMIT (0.60m CUT-OFF)
MINING SECTION/
NON-MINING SECTION
NOTE:
PIT LIMIT IS FOR 20:1 INCREMENTAL STRIP RATIO
COLONIAL COAL CORPORATION
HUGUENOT COAL PROJECT
Drawn by: CS
Checked by: JP
Approved by: JP
Revision No. I
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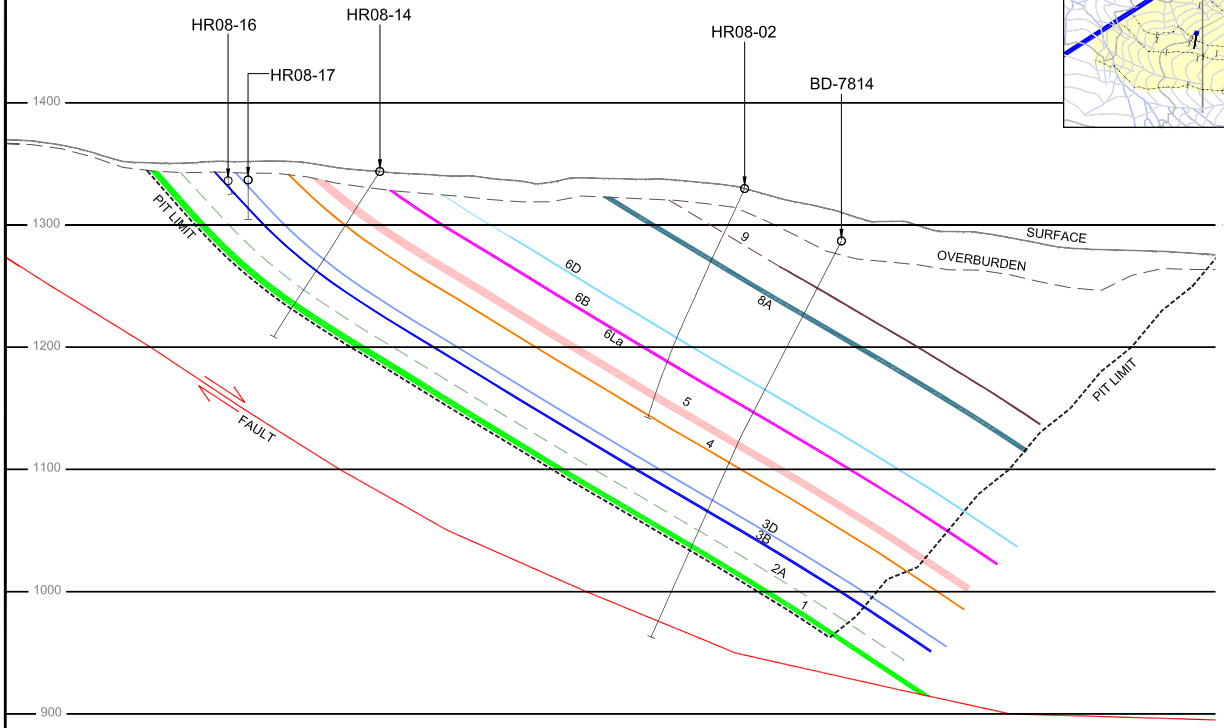
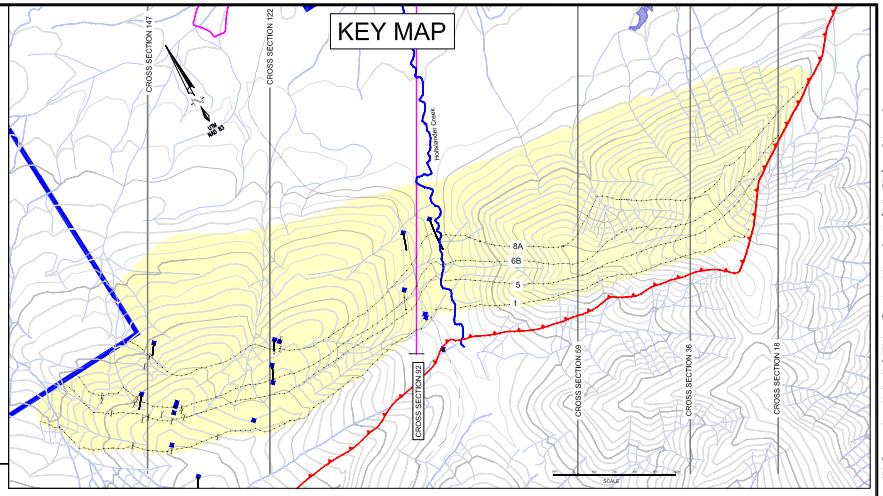
Date: 2010/FEB/11
CROSS-SECTION 122
Document:
Figure No. 11.10





LEGEND:

- SEAM 9
- SEAM 8A
- SEAM 6D
- SEAM 6BC/6B
- SEAM 6A
- SEAM 6La
- SEAM 5
- SEAM 4
- SEAM 3D
- SEAM 3B
- SEAM 2/2A
- SEAM 1
- FAULT
- DRILL HOLE
- PIT LIMIT (0.60m CUT-OFF)
- MINING SECTION/ NON-MINING SECTION

NOTE:

PIT LIMIT IS FOR 20:1 INCREMENTAL STRIP RATIO

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS	CROSS-SECTION 92
Checked by:	JP	
Approved by:	JP	
Revision No.	I	
Dwg No.	005B_SEC007_I	
Date: 2010/FEB/11	Document:	Figure No. 11.11

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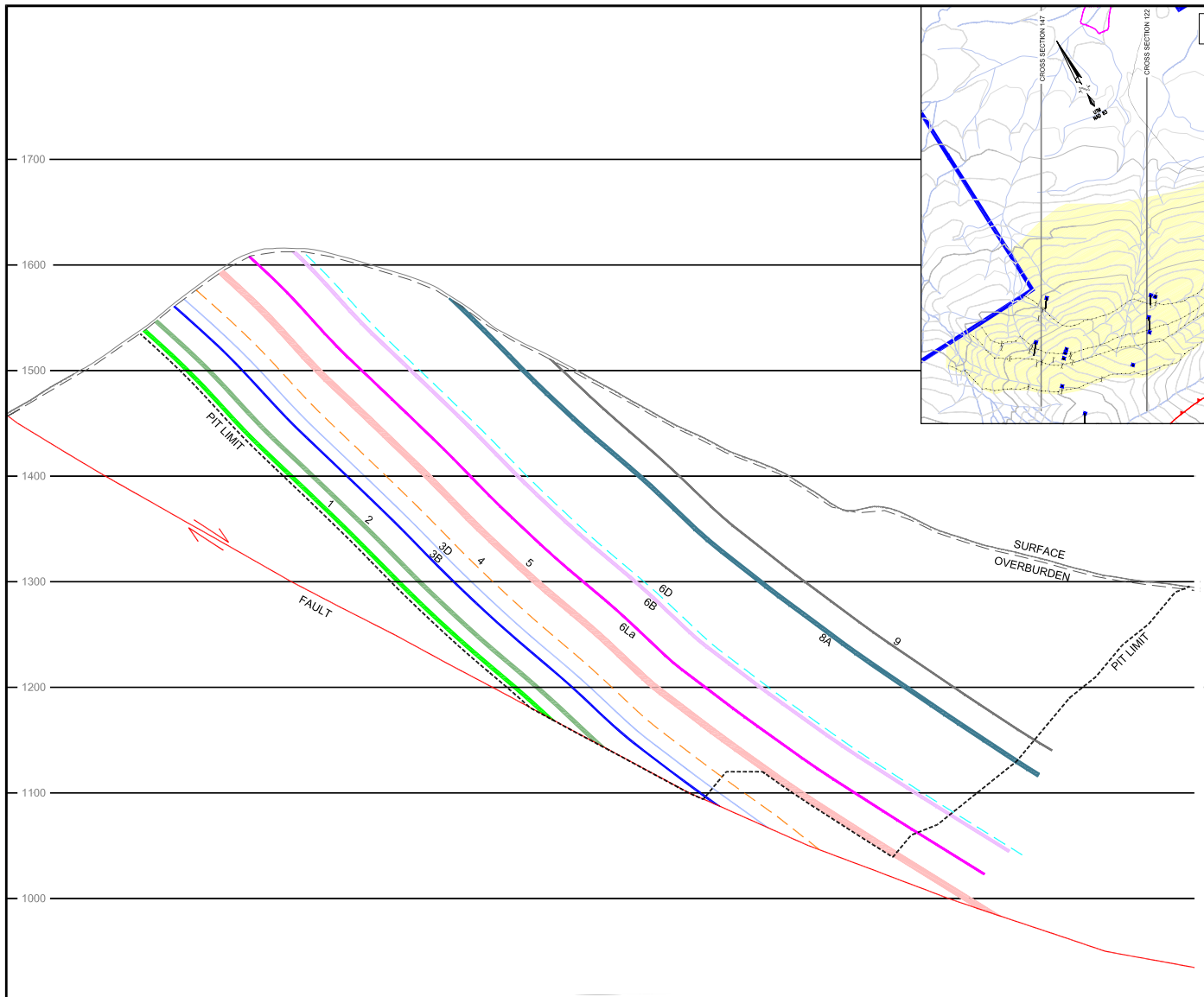

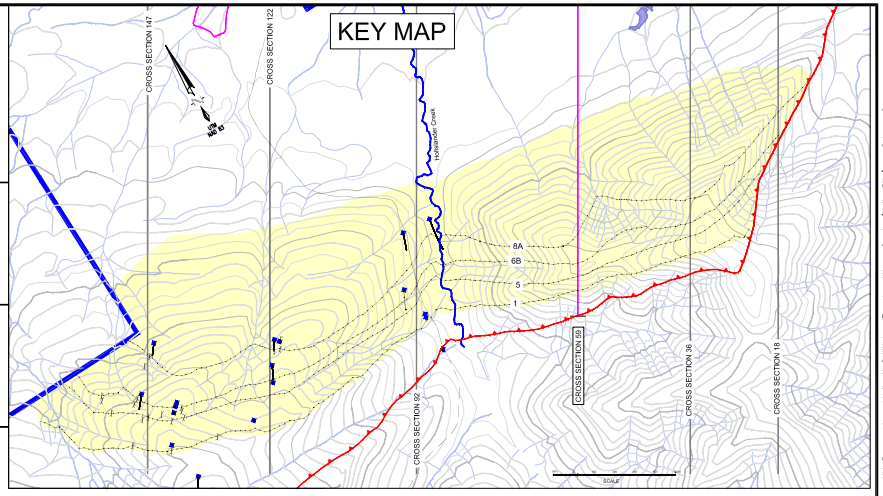

LEGEND:

- SEAM 9
- SEAM 8A
- SEAM 6D
- SEAM 6BC/6B
- SEAM 6A
- SEAM 6La
- SEAM 5
- SEAM 4
- SEAM 3D
- SEAM 3B
- SEAM 2/2A
- SEAM 1
- FAULT
- DRILL HOLE
- PIT LIMIT (0.60m CUT-OFF)
- MINING SECTION/ NON-MINING SECTION

NOTE:

PIT LIMIT IS FOR 20:1 INCREMENTAL STRIP RATIO

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS	CROSS-SECTION 59
Checked by:	JP	
Approved by:	JP	
Revision No.	I	
Dwg No.	005B_SEC006_I	
Date: 2010/FEB/11	Document:	Figure No. 11.12

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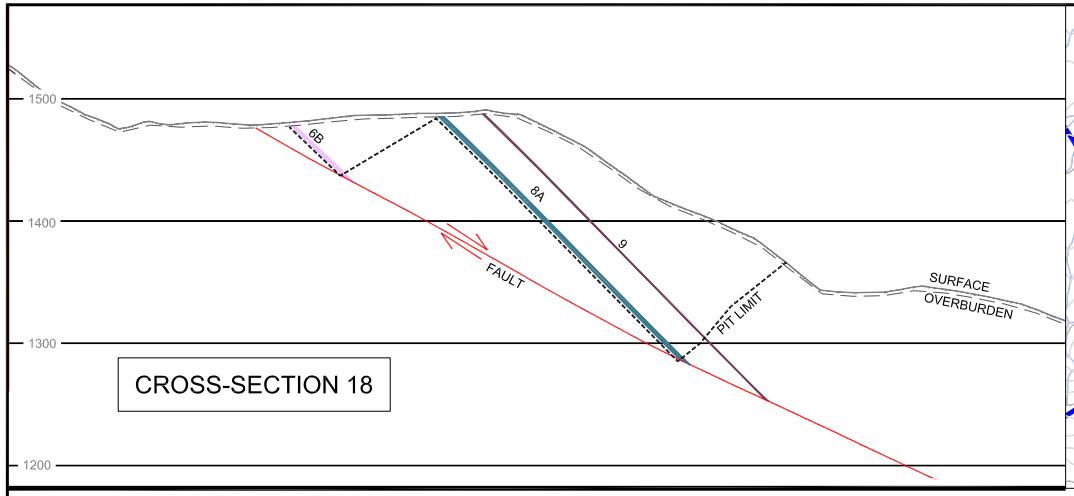

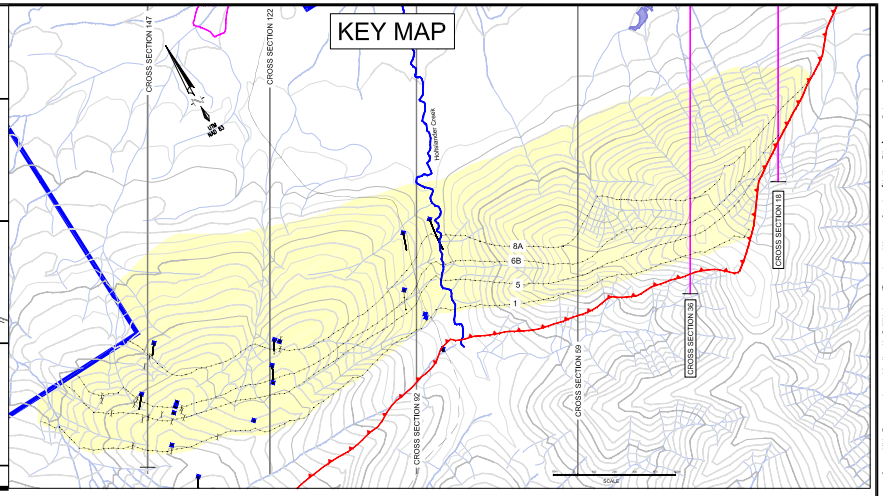

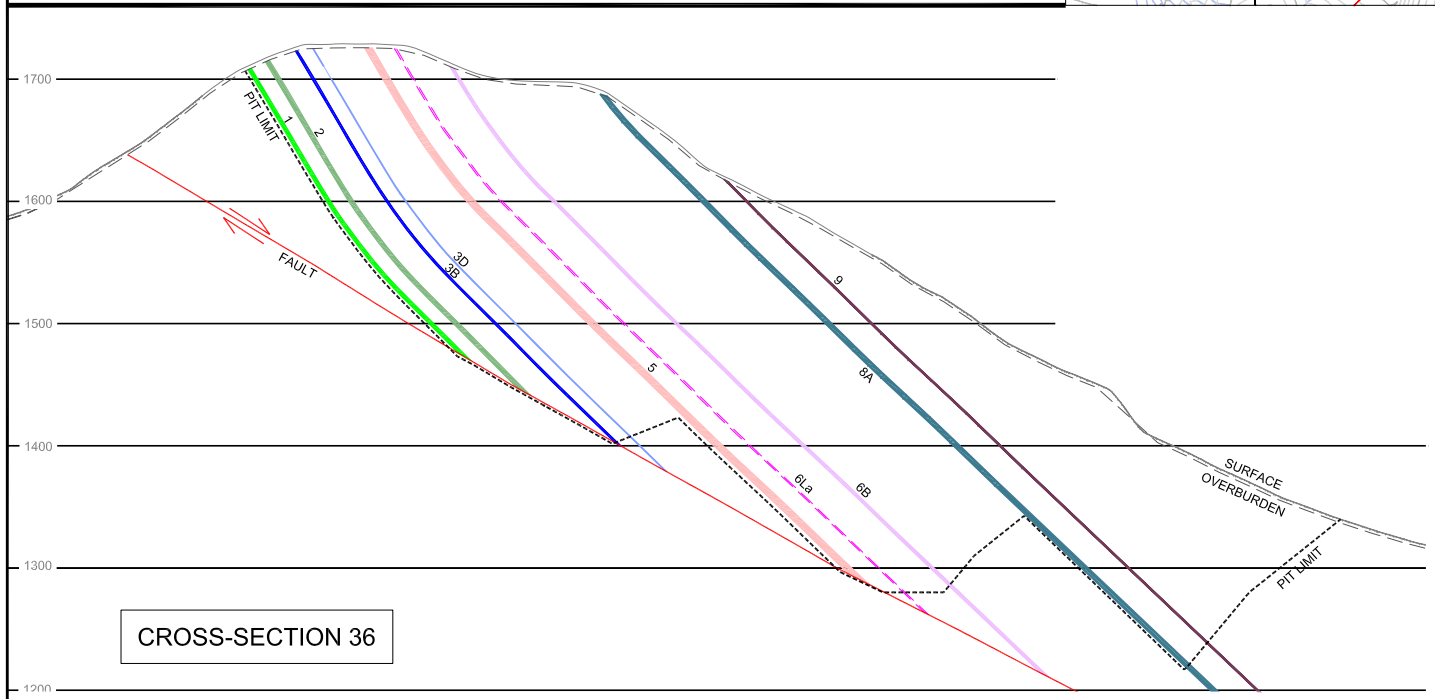

LEGEND:

- SEAM 9
- SEAM 8A
- SEAM 6D
- SEAM 6BC/6B
- SEAM 6A
- SEAM 6La
- SEAM 5
- SEAM 4
- SEAM 3D
- SEAM 3B
- SEAM 2/2A
- SEAM 1
- FAULT
- DRILL HOLE
- PIT LIMIT (0.60m CUT-OFF)
- MINING SECTION/ NON-MINING SECTION

NOTE:

PIT LIMIT IS FOR 20:1 INCREMENTAL STRIP RATIO

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS	CROSS-SECTIONS 18 AND 36
Checked by:	JP	
Approved by:	JP	
Revision No.	I	
Dwg No.	005B_SEC002_I	
Date: 2010/FEB/11	Document:	Figure No. 11.13

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SECTION 12 • EXPLORATION

12.1 DENISON MINES 1971 – 1979

Details of Denison's exploration conducted between 1971 and 1979 are presented in Section 8.3 of this report and a discussion of the results obtained from their work is presented in Section 8.4. All the detailed work was carried out from 1975 onwards; the only work conducted prior to 1975 was reconnaissance mapping in 1971, Exploration targeted coal seams contained within the Lower Cretaceous Gates and Gething Formations (see Section 9). In 1976, one core hole was drilled on the current property to ascertain seam thickness and coal quality data. Twenty-five hand trenches were dug during 1977 as part of a detailed mapping program. Between 1978 and 1979, seven core holes were drilled and 113 hand trenches excavated; 1: 2500 scale mapping was also carried out. In total, 2,452 m of core were obtained from 8 diamond drillholes, and 138 hand trenches excavated.

Historical dry, in-place coal resources were estimated for a series of thickness cut-offs ranging from 0.50 to 3.0 m. Using these minimum mining thickness cut-offs, resource estimates across the current Huguenot property were: 0.5 m = 181 Mt; 1.0 m = 159 Mt; 2.0 m = 134 Mt; and, 3.0 m = 111 Mt.

Resources estimated for the North Block (derived from the data presented by Denison, 1979b) total 56.6 Mt using a minimum 0.5 m thickness cut-off, and 48.3 Mt using 1.0 m. If these tonnages are adjusted to reflect a minimum thickness of 0.6 m, and the elimination of the internal rock band within Seam 8A, then historical resources for the North Block total 53 Mt for a 0.6 m cut-off and 46 Mt for a 1.0 m cut-off. These tonnages compare very closely to current estimates presented in Section 19.

No attempt is made in this report to classify any of the historical resource estimates discussed above, into N.I. 43-101 compliant resources.

12.2 COLONIAL COAL 2008

Colonial 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 main exploration activities carried out during the 2008 program are summarized in Table 12-1.

Table 12-1: Summary of 2008 Exploration Activities

Drillhole Type	Number of Holes	Metres Drilled	LD Type RC/Core (m)	Geophysical Logs	Trenches	Geological Mapping	Drill Trail (km) (re-open / new)
RC	17	1,623	-	d,g,n,c,fr,dev,(+/- dm)	M: 19 (246 m)	Rec. &	1.00 / 5.50
LD	10	442	334 / 88	d,g,n,c,fr,dev	H: 36	1: 2500	
Total	**27**	**2,045**			**55**		**6.50**

Note: RC = reverse circulation; LD = large diameter (RC + 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 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. All boreholes were geophysically logged to provide density, gamma, neutron, caliper, focused beam resistivity, and deviation logs. A dipmeter tool was used in some holes to provide estimates of bedding dips in order to confirm interpretation of structural geology. The percussion holes totalled 1,623 m of drilling. Most of the boreholes were strategically spaced so that subsequent resource estimates would be compliant with NI 43-101 requirements (see Section 19) as well as provide appropriately spaced data for coal seam correlation and structural interpretation. In addition, many of the trenches were used to provide data points for resource classification purposes.

All but one drillhole was located to intersect coal seams within the Gates Formation. Drillhole HR08-05 (131 m) was positioned to intersect coal seams within the lower Gething Formation. Three holes (HR08-15, -16, and -17) totalling 67 m were abandoned prior to encountering bedrock. These holes, located along the lower, northern slopes of Holtslander Creek, indicate the presence of a narrow, linear area of deeper overburden, possibly representing glacial scour-fill, immediately adjacent to the creek.

The 10 large diameter (6-inch) core holes totalled 422 m of drilling comprising 88 m of core and 334 m of percussion drilling. These holes were generally positioned to intersect the top of each coal seam at vertical depths between 25 m and 30 m from surface. Experience on nearby projects indicates that at these depths the coal can be expected to be un-oxidized. In order to obtain an adequate size of bulk sample, 2 sets of core were recovered for each seam. Three sets of core were taken for Seam 8A due to low core recovery for the first hole drilled. Core was logged and sampled on site, then sent for detailed coal characterization, washability, and carbonization testing. Core from one borehole was also obtained from the 6 Lower coal zone (situated below Seam 6A) in order to confirm the precise

composition of this zone. One coal interval (referred to as Seam 6La) was sampled and sent for preliminary coal quality analysis and washability testing.

Nineteen back-hoe trenches totalling approximately 246 linear metres and 36 hand trenches were excavated. The back-hoe trenches were geologically logged to provide infill data on seam continuity, characterization, thickness, and for roof and floor bedding measurements. Hand trenches were constructed to confirm continuity of the coal seams and provide data regarding the precise positions of the exposed seams plus bedding dips. Of the 36 hand trenches, 13 were excavated on the northwest side of Holtslander Creek and 23 were completed to the south. A number of the trenches south of Holtslander Creek were positioned to confirm the location of coal seams at the sites of trenches excavated by previous operators in 1978/79.

Approximately 1 km of previously existing trail was utilized while another 5.5 km was constructed.

The results obtained from the 2008 exploration, in conjunction with selected data from historical programs, are sufficient for the definition of the targeted coal seams across the North Block and allow reliable resource estimation and classification plus coal quality characterization. Details of the of the results obtained and interpretations formed from the 2008 exploration are presented together with the retained historical data in Sections 9 to 11, 18, 19 and 21 of this report and are summarized in Section 3.

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SECTION 13 • DRILLING

Drilling activities carried out on the Huguenot property are summarized in Table 13-1. The first hole drilled on the property was by Denison in 1976, as a follow-up to earlier 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. The information gathered during these programs is contained in historical Assessment Reports listed in Section 23.

Drilling conducted in 2008 mostly utilized existing access and, as such, focused on the area northwest of Holtslander Creek. The purpose of the 2008 work was to demonstrate geological, coal seam and coal quality continuity between the North Block and the Belcourt South coal deposit and to provide sufficient data to allow estimation of North Block coal resources and coal quality.

Drilling on the Huguenot property currently totals 35 holes for a total of 4,497 m. Historical drilling accounts for 8 holes (totalling 2,452 m), while drilling conducted by Colonial in 2008 totals 27 holes (for 2,045 m). Details of historical and recent exploration are provided in Sections 8 and 12.

Table 13-1: Drilling Summary

Year	Operator	Core (HQ)	Reverse Circulation	Large Diameter (Bulk Samples)	Total Holes	Metres Drilled
1976	Denison	1	-	-	1	59
1978	Denison – Gulf JV	5	-	-	5	1,389
1979	Denison – Gulf JV	2	-	-	2	1,004
2008	Colonial		17 (1,623 m)	10 (442 m)	27	2045
Total		**8**	**17**	**10**	**35**	**4,497**

The geology of the property been characterized from geological mapping, trenching, drill core descriptions, and interpretations of geophysical logs obtained from both core and non-core holes. Analytical data obtained from HQ-size drill core and bulk samples large diameter (6-inch) cores have been used for coal quality characterization.

Apart from one drillhole (BD7814), all the historical drilling lies south of Huguenot's North Block and therefore outside the area modelled for the N.I. 43-101 compliant resources presented in Section 19. In addition to the 2008 drilling and hole BD7814, the drillhole database for the North Block also contains hole BD7801. This latter drillhole is located within the Belcourt South deposit area and is situated approximately 800 m to the north of the property boundary. This drillhole has been used to provide additional control for the northernmost portions of the North Block.

Coal seam thicknesses from exploration drillholes are measured along the length of the hole. As the angle of intersection between the hole and the seam is often less than perpendicular, these intersections represent an 'apparent' rather than 'true' thickness of the seam. Adjustment from apparent to true seam thickness is therefore a critical step 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. The modelling software (in this instance, MineSight®) is used to transform drilled thickness to true thickness by determining the relationship between the coal seam thickness from drilling, and the seam dip from the 3D footwall shape. With each seam bottom linked from section to section over the length of the deposit to create surfaces, seam solids are created by adding the seam thickness to the seam footwall surfaces. All seam thicknesses reported herein represent true thickness; thickness ranges are presented in Section 11 (Table 11-1).

For the North Block, each seam true thickness generated by the model was checked against nearby data points for consistency. For cored drill holes this involved comparisons with true thicknesses determined from bedding to core angles. For percussion holes, where no cores were generated, comparisons were made to true thicknesses calculated using bedding dips obtained from the footwall geometry.

While sample lengths taken from core represent apparent thickness they are directly proportional to the calculated true thicknesses for each seam. As is typically for coal projects, the sample data presented herein are applied to the true thickness of each coal seam. Where obtained, incremental sample data were composited (by weight) to represent the entire seam. Although of limited number, the analyses obtained for each seam are considered to be representative of the entire North Block.

The results obtained and interpretations formed from the 2008 exploration are presented, in conjunction with data from previous exploration programs, in Sections 9 to 11, 18, 19, and 21 of this report; they are summarized in Section 3.

SECTION 14 • SAMPLING METHOD & APPROACH

Historically, Huguenot coal seams were sampled by diamond drilling (HQ-size core). For 2008, the four main seams were sampled using large diameter drilling to produce a 6" diameter core.

14.1 HQ CORE (HISTORICAL)

With respect to historical coal handling, description and sampling, the following procedures usually applied:

- At the drill, HQ cores were placed in numbered, wooden boxes that were covered prior to being transported to camp for description and sampling. In some instances, a plastic liner was used to wrap the coal core sections.
- Drill cores were described for general lithology and bed thickness and structural data (principally, bedding angles) were recorded. Coal seam cores were geologically logged in detail; the coal was logged on the basis of estimated ash content (C1 through to C4, reflecting increasing levels of ash content). The most common rock type found within and immediately adjacent to the coal seams is carbonaceous claystone. Non-carbonaceous claystone and siltstone may also be present.
- All core samples were sent to independent laboratories for testing.
- For the one core hole drilled on North Block (BD7814), each coal seam constituted one sample that included minor rock bands deemed to be mineable with the coal. Seam samples ranged from 0.50 to 5.26 m thick. The exception was Seam 8 where three samples were taken; these were composed of two coal plies (1.21 m and 1.36 m thick) separated by a 0.72 m thick rock band. Denison's geologists either conducted, or supervised, all sampling. For each sample interval, the entire core was submitted for analysis. Immediate roof and floor lithologies were also sampled.
- Core recoveries were obtained by comparing the lithological logs to the detailed density geophysical logs. For the coal seams of interest in BD7814, recoveries varied from 58% to 84%; most of the coal seams of interest reported greater than 67% core recovery.
- Typically, samples were placed in thick plastic bags with each bag containing a sample tag that recorded drillhole number, seam, and bag number; in some instances, the sampled interval and (initial) analyses required were also added. All but the latter information was also written on the outside of the bags. Large samples were often double-bagged. The sample bags were placed in plastic or burlap sacks and securely tied for shipping. Duplicate tags were retained by the company.
- The samples were shipped by Greyhound bus from Dawson Creek, to one of several commercial laboratories located in Edmonton or Calgary (Alberta) where they underwent analysis and testing.

Historical coal core logging and sampling followed prescribed guidelines to ensure a consistent approach by each geologist and to provide consistency from one project to another. Their approach to

sample selection, met industry standards of the time. The historical approaches to core logging and sampling are consistent with industry standards of today and with those employed by Colonial during the 2008 exploration program.

14.2 LARGE DIAMETER CORE (2008)

- Large diameter cores were employed for bulk sampling in 2008. These cores were described and sampled at the drill rig by Colonial's geologists. The approaches taken to core description and to sample collection and bagging were similar to those described above for the historical HQ cores, except that coal was logged according to 'brightness'. Sample increments were selected on a geological basis (modified as necessary for core recovery).
- Sample thickness ranged from 0.15 to 1.05 m; the minimum sample size was predicated by the need for sufficient weight required to complete a variety of analyses. Rock bands and poor (high ash) coal plies were usually taken as separate samples if greater than 0.10 m thick. Coal plies were taken to a minimum of 0.15 m. Thicker coal plies were usually taken to a maximum sample width of 1.0 m, but may have been divided into smaller increments reflecting potentially "lower " and "higher" ash contents, as represented by variations in the detailed geophysical density logs.
- Samples were taken of rock above and below the coal seams to determine the quality of potential out-of-seam dilution that would occur during mining. The bulk samples included all coal and non-coal plies that would be mined (which required the inclusion of some rock bands excluded from resource estimations due to GSC 88-21 criteria).
- Samples were placed into large plastic bags which were then double-bagged, placed into large rice bags and trucked to the selected laboratory for testing. Sample tags were placed into the first set of bags and duplicate tags were taped to the outside of the rice bags. The drillhole number, seam number and sample interval were also written on the outside of the rice bags. A third set of sample tags were retained by the company.
- Core recoveries were determined by reconciling the core descriptions with the detailed density geophysical logs. Coal seam recoveries from the large diameter core ranged between 77% and 100%, although most were between 87% and 97%.

14.3 DISCUSSION

All 2008 drillholes that intersected the coal measures were geophysically logged for gamma ray, sidewall density, calliper, focussed beam resistivity, neutron, directional and, in a few instances, dip-meter logs. The geophysical logs were evaluated for lithological types in addition to comparison and reconciliation of the detailed density logs to coal seam core descriptions, in order to ensure accurate determinations of seam thickness, identification of internal lithological variations, core recoveries and appropriate characterization of any missing core. The same approach to geophysical logging was used by Denison for the historical work, although there has been significant improvement in certain geophysical log types since; no dipmeter logs were run during the historical programs. All the available historical core description and geophysical logs have been re-assessed; wherever possible, this has been done in conjunction with nearby, 2008 drill data.

In northeast British Columbia, coal core recovery from HQ-size core drilling of Gates Formation coal seams is often highly variable. While core recoveries of less than 100% could potentially impact reliability of results, characterization of Gates Formation coal quality data typically rests on those coal seam intersections that show the highest core recoveries supported by bulk sample data from adits (yielding 100% recovery) and/or large diameter core (often with very high recoveries). Drill data from intersections with moderate or low core recoveries are used in a semi-quantitative to qualitative way to either extrapolate or confirm basic coal quality data across the deposit. Historically, this approach has been found to work quite well.

For Gates coal seams, potential sample bias is of concern mostly with regard to quantification of in-situ ash content and, hence, specific gravity and washing yield. The variability exhibited for in-situ ash content primarily reflects the thickness and continuity of in-seam rock partings. Although inherent ash produces some variability, its effect is usually minor in comparison to the in-seam partings. Rock partings and coal splits are quantifiable from the geophysical logs and so the effects of minor rock and/or coal loss can reasonably be mitigated by mathematical adjustments to the coal quality data. Consequently, it is considered that coal quality data presented herein are representative and that sample bias is within laboratory and industry standards

In order to establish the roof and floor of a seam where there are multiple interbedded rock bands and coal splits, or where there are one or more thin coal splits near the seam roof or floor, a theoretical yield was determined using assigned specific gravities for rock and coal. Peripheral rock bands and coal splits were incorporated into the coal seam until overall seam theoretical yield fell below 65%.

The results obtained from representative samples and composites together with estimated true widths are presented in Sections 11 and 18 of this report.

SECTION 15 • SAMPLE PREPARATION, ANALYSIS & SECURITY

15.1 SAMPLE PREPARATION & ANALYSES

Testing and analysis of Huguenot coal samples by Denison and BCJV (between 1976 and 1980) was conducted on HQ-size (63 mm) drill cores. During the same period, drill core and bulk samples were also taken from the Belcourt South and Omega-Ptarmigan areas that adjoin the Huguenot property to the northwest and southeast, respectively. The bulk samples were taken from two of the main coal seams in Belcourt South (Seams 1 and 5) and from Seam 1 at Omega-Ptarmigan. No adits were constructed on the current Huguenot property). Samples collected by Colonial in 2008, came from large diameter (6" or 152 mm) cores.

Sample preparation and analysis was carried out at commercial laboratories experienced with requirements for coal testing (details are provided in Section 19), and can be summarized accordingly:

- Between 1976 and 1980, General Testing Laboratories, Vancouver, B.C., Cyclone Engineering and Sales, Edmonton, Alberta and Warnock-Hersey Laboratories, Calgary, Alberta carried out analysis of HQ-size core samples. Cascade Coal Petrography Limited, Calgary carried out coal petrography.
- Bulk samples taken from adits (constructed on adjoining projects) during 1979 and 1980 went to Birtley Coal & Mineral Testing, Calgary, Alberta for analysis; wet attrition testing on these samples was conducted by Warnock-Hersey. Metallurgical clean coal was sent for carbonization tests to CANMET's Western Research Laboratories in Edmonton. A thermal blend of three oxidized samples was sent for combustion testing at CANMET's facilities in Ottawa, Ontario.
- In 2008, bulk samples from the four main coal seams obtained from large diameter (152 mm) cores, were sent to Birtley Coal & Mineral Testing (a division of GWIL Industries), Calgary. A blend of washed (clean), simulated product metallurgical coal from these seams was submitted to CanmetENERGY, Ottawa for carbonization testing. Pearson & Associates (Victoria, B.C.) carried out coal petrography.

For the historical HQ-size cores, a comprehensive series of tests on coal samples were undertaken including; proximate analysis, sulphur, free swelling index, specific gravity, size distribution, float/sink and froth flotation tests. Abbreviated procedures were often used where core recoveries were low (typically, less than 40%), and for oxidized coal samples (i.e., where the FSI was less than 4), internal rock bands, and seam roof and floor lithologies.

For both the historical and 2008 bulk samples, in addition to standard analyses (as outlined above), laboratory tests included attrition tests, and float-sink analysis at various size fractions with froth flotation tests on the ultrafine material. Washability studies were completed in order to evaluate the chemical and physical properties of the main coal seams, primarily as a source of coking coal. Ash analysis, ash fusion, fluidity, and dilatation tests and petrographic analyses were completed on selected clean coal samples. For the historical adit bulk samples, pilot scale wash tests were carried out to produce blends

for carbonization studies. Attrition tests on the 2008 bulk samples were preceded by 'drop tests' to simulate coal size degradation during mining. The 2008 samples were bulk washed at designated size and S.G. parameters in order to produce a blended, simulated product that was sent for carbonization testing.

The laboratories used to determine both the historical and current coal quality, employed standard coal-analytical methods established by ASTM, as is common Canadian industry practice. The analytical methods used by Birtley are shown in Table 15-1.

Table 15-1: ASTM Procedures Used (Birtley, 2008/2009)

Parameter	Lab Method
Preparation of Coal Samples	ASTM D 2013
Air Dried Moisture Loss%	ASTM D 3302
Residual Moisture wt%	ASTM D 3173
Ash wt%	ASTM D 3174
Volatile wt%	ASTM D 3175
Sulphur wt%	ASTM D 4239
Specific Gravity	ISO 1014 (modified)
Calorfic Value (Cal/g)	ASTM D 5865
Free Swelling Index	ASTM D 720
Carbon, Hydrogen, Nitrogen wt%	ASTM D 5373
Light Transmittance% (Oxidation)	ASTM D 5263
Hardgrove Grindability Index	ASTM D 409
Rhur Dilatation	ASTM D 5515
Gieseler Fluidity	ASTM D 2639
Mineral Analysis of Ash	ASTM D 3682
Phosphorous Analysis of Ash	ASTM D 2795
Sieve Analysis	ASTM D 4749
Washability (Float Sink)	ASTM D 4371
Froth Flotation	ASTM D 5114

No additional work was undertaken on thermal product characterization during 2008.

All of the laboratories and service providers listed for the historical work were considered to operate at industry-acceptable standards of the time and were recognized for their expertise in coal testing and analysis. It is not known if any of the laboratories used for the 1976 to 1980 coal quality work were certified by any standards association. The coal quality analyses and testing are generally considered reliable and recent work tends to confirm previous results and provides a level of confidence to the work performed. The one exception appears to be for some results obtained from coal petrography. The values obtained for mean maximum reflectance are significantly higher than those obtained more recently. Results obtained from the historical coal petrography are, therefore, discarded.

For the 2008 samples, thermal rheology (fluidity and dilatation) results are not considered to be representative due to incipient oxidation of the coal prior to analysis. Certain minor coal seams were not

sampled during 2008, although historical are available. While their coal is not represented in the simulated product upon which carbonization test were carried out, the simulated product represents approximately 78.3% of the resources estimated herein for a 0.60 m thickness cut-off and 89.5% if a 1.0 m cut-off is used. As coal from the minor seams is of the same rank (medium volatile bituminous) and float-sink data suggest similar behaviour regarding coal beneficiation, the results from the simulated product are considered to provide an acceptable characterization of potential product coal.

Each laboratory adheres to internal QA/QC protocols and criteria. Elements of quality control employed by Colonial included reviews of analytical data obtained from incremental (in-seam) samples and full seam sample composites. This involved comparisons of various results obtained from one sample (e.g., for ash vs. S.G. and/or ash vs. FSI) and for composited data sets representing individual coal seams. Also included were comparisons of analyses with core decriptions and/or detailed geophysical logs. Samples deemed to be anomolous, or potentially anomalous, were re-analyzed. Minimal re-analysis of samples obtained from the 2008 Huguenot exploration was required; the few performed, principally required re-analyses of ash content and FSI.

The laboratories used for the current program are recognized across the Canadian coal industry and internationally for their expertise and experience in coal testing and analysis. Birtley Coal & Mineral Testing subscribe and adhere to Quality Associates International®, LLC's Coal/Coke Quality Conformance Program™ (CQCP™). This is a quality system designed specifically for accreditation of coal and coke laboratories using American Society for Testing and Materials (ASTM), Committee D 05 on Coal and Coke, standards. Birtley is in the process of seeking accreditation under ISO 17025. CanmetENERGY is certified under ISO 9001:2008. Dr. David Pearson (of Pearson & Associates) is an Accredited ICCP (International Committee for Coal & Organic Petrography) Petrographer, and is Canada's representative on ISO/TC27 Working Group 19 (on Coal Petrography), and wrote the section on sample preparation of the new ISO 7404 "Methods for the Petrographic Analysis of Coals". Therefore, it is the opinion of the authors of this report that the sample preparation and analytical procedures meet current industry standards.

15.2 SECURITY

Special security measures are not commonly employed for coal projects, due to the nature of the commodity. Concerns that pertain to sample security are typically directed towards proper bagging and labelling for shipping and proper handling procedures and storage at the laboratory, to ensure no mix up occurs between samples and sample tags.

Sample tracking sheets were completed for each set of samples sent to the laboratory. The information recorded which samples were sent, the date the samples left site, the date received by the trucking company and the sample numbers received by the laboratory and date of receipt. No samples were lost.

None of the sample preparation was conducted by an employee, officer, director, or associate of either Colonial or Ananda.

SECTION 16 • DATA VERIFICATION

The geological interpretations of Huguenot were developed by geologists employed by Denison Mines Limited (1970-1980) and Colonial Coal Corp (since 2008). Geological modelling for the North Block was completed by Moose Mountain Technical Services using the up-dated geology generated by Colonial.

MMTS provided Mr. R. J. Morris, P.Geo, an Independent Qualified Person (and a senior coal geologist) to undertake a site visit in 2008, during which time exploration and data gathering practices employed by Colonial's personnel were reviewed. MMTS's IQP maintained involvement with the project on an intermittent basis during the post-field period and is conversant with the data handling methods and approaches to data extrapolations and geological interpretations developed by Colonial. In addition, MMTS conducted data validation, reviewed the geological interpretation, formatting and treatment of data to support model development, plus the construction of the 3D resource model. In addition to the resource estimation MMTS also conducted the resource classification.

MMTS completed numerous levels of verification, including:

- Site visit, 24 October 2008, which included:
  - a helicopter flight over the property
  - observation of the operating, large diameter core rig, and location checks on two nearby drillholes
  - fly-over of the locations of the other 2008 drillholes
  - observing core logging procedures
  - reviewing sampling procedures
  - reviewing geophysical log picking procedures
  - reviewing data collection procedures.
- Numerous telephone and e-mail discussions plus visits to Colonial's offices for reviews and discussions, including:
  - mineable coal seam thickness
  - minimum mineable rock parting thickness
  - coal seam details
  - coal quality parameters
  - classification of resource categories.
- Review and checking of the geological models for consistency in general interpretation, coal seam thickness, rock parting thickness, oxidation limits, overburden thickness, application and extrapolation of coal quality data.
- Checking of 14 drillhole logs.
- Checking all drillhole collar elevations against topography.

The MMTS Independent Qualified Person (Mr. R. J. Morris, P.Geo) and Colonial's QP (Mr. J. H. Perry, P.Geo) have extensive experience within the Peace River Coal Block which includes first-hand knowledge of the geology of the adjoining Belcourt South property, and many other properties throughout the region. No samples were taken during the recent site visit, and no new data were generated. That the property covers significant coal potential is well documented. Historical data and interpretations incorporated into this study were collected, generated and/or compiled directly by, or under the immediate supervision of, professionals well versed in the geological and engineering requirements of coal projects located in this region. In light of the foregoing, the available historical information is considered to be reliable.

SECTION 17 • ADJACENT PROPERTIES

The Huguenot property lies within a geological trend that contains a number of contiguous coal properties. Some of these properties contain past (Quintette and Bullmoose) or currently producing (Trend, Wolverine, and Grande Cache) metallurgical coal mines. Other potentially mineable coal deposits also exist within these properties, and within other properties (such as Saxon, Omega, Belcourt and Duke) that lie along this coal belt.

Huguenot is bounded to the northwest by the Belcourt property and to the southeast by the Omega property, each of which is owned by BSCP. These properties host significant metallurgical coal resources contained within the Gates Formation. Some distance west of the Huguenot property is another NW-trending series of coal licenses that comprise the Belcourt West property (also owned by BSCP). Information on the Belcourt and Omega properties is summarized below. As the Belcourt West licenses cover a separate belt of Gates Formation coal measures and are not contiguous with the Huguenot licenses, they are not discussed herein.

17.1 BELCOURT

A full discussion of the Belcourt Coal Project is presented in a study entitled “Technical Report – Belcourt Project”, dated January 23, 2009, that was prepared for WCC and PRC and is filed on SEDAR (by WCC, NEMI, and Hillsborough) as a requirement of N.I. 43-101 (Borntraeger, et al, 2009). The report summarizes the results of a feasibility study, prepared under the umbrella of Sandwell Engineering Inc, which was presented to the BSCL partners in January, 2009. Both the Technical Report and Feasibility Study had multiple authors; two of the primary contributors include the authors of this Technical Report on the Huguenot property.

Two mining areas have been defined; these are the Belcourt North and Belcourt South open pit areas (formerly called Red Deer and Holtslander, respectively). Measured and Indicated resources for the two pit areas total 168.5 Mt of metallurgical coal and 2.5 Mt of thermal (oxidized) coal. The Belcourt North and Belcourt South pits total 93.5 and 77.5 Mt, respectively. Details of the resource estimates within two 20:1 incremental strip ratio pits are presented in Table 17-1.

Table 17-2 shows Belcourt metallurgical reserves as in-situ coal, recoverable (run-of-mine) material, and saleable (product) clean coal for each pit area and for the combined pits.

The coal qualities for simulated products for each deposit are presented in Table 17-3 together with the coal quality of a blend (60% from Belcourt North and 40% from Belcourt South). The results indicate that the coal is of medium volatile bituminous rank and at a moderately low ash level, the product blend is low in both sulphur and phosphorus, and has a high FSI.

Table 17-1: Belcourt Project – In Situ Coal Resources

Pit Area	Resource Class	Total (Mt)	Metallurgical[1] (Mt)	Thermal[2] (Mt)
Belcourt North	Measured	90.989	99.978	1.011
	Indicated	2.493	2.406	0.087
	Total	**93.482**	**92.384**	**1.098**
	Inferred	0.002	0.001	0.001
Belcourt South	Measured	75.741	74.439	1.302
	Indicated	1.775	1.722	0.053
	Total	**77.516**	**76.161**	**1.355**

Notes: 1. Includes partially oxidized coal; **2.** Oxidized coal.

Table 17-2: Belcourt Project – Summary of Metallurgical Coal Reserves

Pit Area	Reserve Type	Proven (Mt)	Probable (Mt)	Total (Mt)
Belcourt North	In Situ	38.0	0.5	38.5
	Recoverable (ROM)	47.0	0.7	47.7
	Saleable Coal	32.0	0.5	32.5
Belcourt South	In Situ	32.0	-	32.0
	Recoverable (ROM)	38.7	-	38.7
	Saleable Coal	24.5	-	24.5
North + South	In Situ	70.0	0.5	70.5
	Recoverable (ROM)	85.7	0.7	86.4
	Saleable Coal	56.5	0.5	57.0

Table 17-3: Belcourt Project – 2005 Deposit & Blended Simulated Products (dry basis)

Sample Type	Seams	Ash %	Volatile Matter %	Fixed Carbon %	Sulphur %	Phosphorus %	Free Swelling Index
Belcourt North	1-3-5	7.72	25.74	66.54	-	0.027	7
Belcourt South	1-5-6	8.23	25.29	66.48	-	0.042	7.5
Belcourt Blend	all	8.00	25.53	66.48	0.35	0.034	7

Coal quality data and results from a 2007 carbonization test indicate the Belcourt coal could be an excellent “bridging” component in an industrial blend.

As previously stated, the authors of this Technical Report on the Huguenot property have recently signed-off on certain sections of the Technical Report on the Belcourt property (see Borntraeger, et al, 2009). Furthermore, as Huguenot’s North Block is simply a continuation of the Belcourt South deposit,

much of the information presented for Belcourt South is indicative of the coal geology of the North Block of the Huguenot property.

17.2 Omega

Most of the licenses that form the current Omega property were originally acquired by Denison-Gulf (BCJV) in 1978. At that time, the area now referred to as the Omega property was divided (from NW to SE) into the Huguenot, Ptarmigan and Omega Blocks. The old Huguenot Block lies immediately south of the current Huguenot property; the current Huguenot property covers the old Holtslander South Block and the southern end of the old Holtslander North Block.

Exploration conducted by BCJV between 1977 and 1979 on what is now the Omega property, (completed as part of the same programs described in Section 6) demonstrated the continuation of Gates Formation coal measures throughout the length of the property. In addition to detailed geological mapping and hand trenching, 13 core holes were drilled for a total of 3,566 m. According to Perry (2004), Denison identified approximately 49 Mt of in-place coal resources within a potential open pit and reported an additional 169 Mt from surface to 500 m of coal for seams greater than 1.0 m thick. Perry classified approximately 45 Mt of the potential open pit resources as Inferred, in-place and of immediate interest and considered another 107 Mt to be Speculative and of immediate interest. Expansion of the property during 2005-2006 has likely taken the resource potential back to Denison's original tonnage.

Clean coal residual moisture values are usually less than 1%. Volatile matter on a dry, mineral matter-free basis ranges from 19.33% to 22.76%. Using ASTM criteria, all the coal seams and zones are of low volatile bituminous rank with the exception of the uppermost seam of interest (referred to as No. 6 Zone) which is of medium volatile bituminous rank. Coal seams in the northern portions of the targeted pit area typically have higher volatile contents than those found in the southern parts. Further northwest the coals are of medium volatile bituminous rank.

The coals mostly exhibit moderate FSI's, with most indices ranging between 3½ and 6. FSI's are greater in the stratigraphically higher (younger) coal seams; in No. 6 Zone, most of the indices range between 6 and 9. The coal seams are low in sulphur and phosphorus, with values for the three main seams of less than 0.43% and 0.059%, respectively. While the caking properties of Omega coals are not as favourable as those found on neighbouring projects, their coking properties as a blending coal have been demonstrated in pilots-scale oven tests.

During 2005, BSCL carried out additional drilled on Omega. No public information is available from this work.

The geology of Huguenot's South Block is contiguous with that of the northern part of the Omega property. However, the area reported upon by Denison (and included in the Technical Report by Perry, 2004) as having open pit potential, is situated some distance south of Hugenot. The authors of this technical report have not been able to verify information on the immediately adjacent (northern) part of the Omega property, and so the information presented above is not necessarily indicative of the mineralization on the property that is the subject of this technical report.

SECTION 18 • MINERAL PROCESSING & METALLURIGICAL TESTING

Data presented in this section include historical coal quality taken from Denison (1979a, 1979b, and 1981), and results obtained from the most current work phase.

18.1 NORTH BLOCK

18.1.1 Raw Coal Quality

For the North Block, the overall, in-situ coal quality data for the major seams and for some of the minor seams for which there is reliable data (essentially determined by core recovery) are presented in Table 18-1. The 1978 and 1979 data were obtained from higher recovery cores from diamond drilling while the 2008 data were obtained from simulated head raw samples, compiled as splits from each of the main, bulk sampled coal seams (see below).

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 24.66% to 26.54%. This would normally be taken to indicate that all the coal seams fall within the medium volatile bituminous classification. However, maximum reflectance values from coal petrography indicate that the seam series 6BCD and seam 8A fall just within the high volatile A bituminous rank (see below, also).

Table 18-1: North Block In-Situ Coal Quality Summary (air dried basis)

Seam	Data Point	RM %	Ash %	VM %	FC %	S %	Dmmf VM %	% Core Rec.
8A[1]	HB08-8-C	0.81	25.49	21.15	52.55	0.37	26.54	94.6
6D	HB08-6C-B	0.64	8.56	23.71	67.09	0.73	25.34	100
6BCD[1]	HB08-6C-B	0.71	27.86	20.07	51.36	0.51	25.59	94.0
6BC[2]	HB08-6C-B	0.69	16.93	22.83	59.55	0.45	26.36	93.0
6B	HB08-6C-B	0.66	11.08	23.83	64.43	0.47	26.12	100
6La	HB08-6A-A	0.66	27.16	19.10	53.09	0.33	24.05	91.1
5	HB08-5-B	0.48	14.29	22.31	62.91	0.34	25.07	97.3
4	BD 7906[3]	0.62	7.60	22.72	69.06	0.56	24.09	85.0[4]
3B	BD 7814	0.67	33.05[5]	18.54	47.74	0.31	24.85	84.3
1	HB08-1-A	0.68	11.91	22.39	65.02	0.43	24.66	90.3

Notes: 1. includes internal rock bands omitted from resource estimates but expected to be included as part of run-of-mine material; **2.** adjusted to remove rock band above 6C; **3.** located in Middle Block; **4.** coal loss; **5.** approx. 28% if adjusted for core loss.

Huguenot coals are low to very low in sulphur; values range between 0.31% and 0.73%, although most are less than 0.6%. 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. Seam raw ash contents used to determine specific gravities for resource estimations were adjusted for core loss; they are presented in Section 19.

18.1.2 Clean Coal Quality

18.1.2.1 Historical Data

Clean coal data from the 1978 and 1979 drilling are derived from float-sink tests conducted on three size fractions; namely, 3/8" x 28 M, 28 M x 100 M, and 100 M x 0. The coarse and middle size fractions underwent float-sink tests over a specific gravity range of 1.40 to 1.90 while the fines fraction underwent froth flotation. Representative clean coal samples were generated by compositing floats from: i) the 1.55 floats from the 3/8" x 28 M fraction; ii) the 1.70 S.G. floats from the 28 M x 100 M fraction; and, iii) froths from runs targeted to achieve ash contents of 10% or less (consequently, with variable run times) for the 100 M x 0 fraction. Proximate, sulphur and phosphorus analyses were performed on each the clean coal, as well as FSI, specific gravity, Hardgrove Grindability Index (HGI), plasticity, and dilatation tests.

Prior to 2008, the bulk sample location closest to the property was collected by Denison from the Belcourt South deposit. During 1980, Denison constructed adits on Seam 1 (Upper) and Seam 5; these adits are located approximately 4.5 km north of the property boundary. Belcourt South's Seam 1 (Upper) is not represented on the North Block but Seam 5 is found throughout both deposit areas. The samples underwent standard testing and analysis, washing, and preparation of a simulated product for carbonization tests. Coal characterization tests and analyses were carried out on channel samples and sub-samples taken from the main bulk samples; these were treated in the same manner as the core samples. Bulk samples from the adits were combined and washed at the Birtley pilot plant using a dense medium cyclone (3/8" x 28 M, two-stage water only cyclone (28 M x 65 M), and froth flotation (65 M x 0). Dry and wet attrition tests were conducted at Warnock-Hersey prior to washing.

18.1.2.2 Recent Data

Bulk samples taken by Colonial consisted of two sets of large diameter (6"; 152 mm) drill cores from the main seams on the North Block (Seams 1, 5, 6BCD, and 8A). One set of core was used for coal characterization and analysis while the second set was stored until washed, using criteria determined from washability tests, to provide a clean coal product for each seam. Both sets of cores were kept in cold storage throughout the process in an attempt to reduce any effects of oxidation.

Work on the first set of 6" core samples included the following:

- each 6" core was dropped 7 times; photographs were taken before drop shatter and after the 2nd, 4th & 7th drops. After the 7th drop the core was sized from 3" down to 100 M and the +3" was crushed to pass 3" and re-screened

- dry attrition was then performed; each core was tumbled for 3 minutes (no steel cubes). Core was then wet attrited for 5 minutes (water & steel cubes prorated for weight). Core was then screened from 1 1/4" down to 325 M. The +1 1/4" size fraction was then crushed to pass 1 1/4" and re-screened;
- representative sub-samples (1/8th) were taken from each of the full 11/4" x 16 M fractions; sub-samples were taken from splits of the -16 M fractions and screened down to 325 M. All screen sizes were then analyzed for ash% and a simulated head raw sample was made up from these screen sizes and analyzed for proximate, sulphur, FSI and S.G.
- composites were made up for each of the 4 seams and float sink analysis was performed on the 1 1/4" x 3/8", 3/8" x 16 M, and 16 M x 60 M at the following specific gravities: 1.30, 1.35, 1.40, 1.45, 1.50, 1.60, 1.70 & 1.80. Three seams were re-floated at 1.55 (Seams 5 and 8A) and 1.65 S.G. (Seam 6BCD) to provide further detail over a reduced S.G. range
- a representative split of the 60 M x 0 size fraction was frothed by the modified tree flotation procedure in which kerosene and MIBC were used as collector and frother. The modified tree flotation required the sample to be frothed and the froth and tails to be re-frothed in order to produce 3 froth and 3 tail stages, pulp density was 8%. This was intended to simulate what would happen in a plant froth cell. The rest of the 60 M x 0 size fraction was bulk frothed at 10% pulp density to simulate the 2nd stage yield% and ash% obtained from the modified tree flotation results
- all floats, sink and froth fractions were analyzed for proximate and FSI, except for the tree flotation sinks, that were analyzed for ash only
- after examining the float sink results the bulk float sinking of the 16 x 60 M size fraction was done at 1.75 S.G.
- simulated clean coal composites for each of the 4 seams were made up from the S.G. and froth fractions in the correct proportion as per the cut-points recommended by Colonial and Norwest. The +16 M fractions used the 1.55 floats for Seams 5 and 8A, the 1.60 floats for Seam 1, and the 1.65 floats for Seam 6BCD to target an overall ash content of approximately 8% for all seams combined
- the clean products were analyzed for proximate, sulphur, FSI, gieseler fluidity and dilatation, mineral analysis of ash, calorific value, HGI and specific gravity; petrography splits were sent to Pearson and Associates
- an overall simulated seam product (SSP) was made up from these 4 clean coal composites calculated in the correct proportion according to yield of each clean coal composite. This SSP was analyzed for proximate, sulphur, phosphorus, S.G. and FSI.

Information derived from the above was used to develop coal processing options, estimate product yields, and to provide data to guide bulk washing of the second set of 6" cores for preparation of a North Block simulated "product" coal for carbonization tests.

For the second (or twinned) set of cores, the 6" core sample plies were crushed to pass 1 1/4" and composited together to form one composite per seam. Each composite was screened at 16 and 60 M. The 1 1/4" x 16 M fractions were bulk float sank at the same gravities selected for the first cores; i.e.,

Seams 5 and 8A at 1.55, Seam 1 at 1.60, and Seam 6BCD at 1.65 S.G. As with the first set of cores, the 16 x 60 M size fractions were bulk float sank at 1.75 S.G.; the 60 M x 0 fractions were bulk frothed at the same parameters selected previously. Samples split from the floats/froth and sinks/tails were analyzed for ash.

A simulated clean coal composite for each of the 4 seams was compiled from the S.G. and froth fractions in the correct proportion and analyzed for proximate, sulphur, FSI, S.G., dilatation, and giesler fluidity. Finally, an overall SSP was made up from each of the four seam clean coal composites using proportions determined from the overall yields from the first set of cores (these yields were considered to be more representative due to higher core recoveries). This SSP was analyzed for proximate, sulphur, S.G., and FSI.

An overall, clean, “product” weighing 450 kg (332 kg from the second SSP and 118 kg from the first SSP) was formed from the SSP's derived from each set of cores. A 5 kg representative split taken for proximate, sulphur, FSI, S.G., dilatation, giesler fluidity, ultimate, and mineral analysis of ash with a sub-split sent to Pearson & Associates for petrography. The SSP from the second set of cores was preferentially used for this overall simulated “product” as it was felt that it was "fresher." While each set of cores was kept in cold storage, the second set was un-crushed for a longer period of time and considered to have had less exposure to air. Three barrels (445 kg in lined drums) of this clean “product” were sent to CanmetENERGY Technology Centre (Canmet) in Ottawa for carbonization tests.

The 6” core samples were obtained during September and October 2008. Limitations on laboratory availability and manpower prevented the immediate testing of these samples and the speed at which the early stage testing (through to completion of the washability tests) could be carried out. Drop shatter and attrition tests on the first set of large diameter cores were conducted between December 2008 and mid-February 2009. Coal characterization test work extended from March through early May and work on individual seam clean coal composites extended from June through to early August. Bulk washing and analysis of the second set of cores was carried out between late May and early August. The simulated product for carbonization was sent to Canmet on August 7, 2009. Prior to dispatching this sample, FSI’s were re-determined; the results were consistent with those obtained earlier. No indication of oxidation was reported from the coal petrography. Consequently, the results obtained from the cores are considered reliable, except for those reported for Gieseler fluidities, which are considered to be abnormally low, and possibly for dilatation. This is discussed further, below.

Clean coal values reported for 2008 are within or close to the ranges reported from historical drilling, although it is to be noted that some of the variability in the old data may be partly due to highly variable core recoveries.

Once again, dmmf volatile matter contents suggest that all the seams should fall within the medium volatile bituminous rank. Clean coal FSI levels are good for Gates Formation coals and are similar to those obtained from the historical data (although the latter range to somewhat higher and lower values for equivalent ash contents). The bulk sample from the Seam 5 adit (Adit 8002) in Belcourt South returned an FSI of 6.5 at 7.5% ash (air dried basis). Concentration of sulphur from the unwashed raw coal into a washed clean coal is not evident. Phosphorus content is consistently low.

Table 18-2: North Block Clean Coal Quality Summary (dry basis)

Seam	Ash %	VM %	FC %	S %	FSI	% P (in coal)	Dmmf VM %	Theoretical Yield %	% Core Rec.
8A[1]	7.85	26.23	65.92	0.44	6.5	0.036	27.85	66.92	94.6
6BCD[1]	6.85	26.05	67.11	0.57	6.5	0.045	27.39	66.62	94.0
6La	9.11	22.92	67.97	0.39	6.0	0.070	24.50	62.94	91.1
5	8.04	23.74	68.22	0.36	6.0	0.036	25.19	85.47	97.3
3B	8.01	23.98	67.06	0.49	8.0	0.026	25.68	62.30	84.3
1	7.70	23.76	68.54	0.40	6.5	0.035	25.13	92.85	90.3

Notes: Data points used are the same as those listed in Table 18-1; **1.** includes internal rock bands omitted from resource estimates but expected to be included as part of run-of-mine material.

In-seam yield values (i.e., with no out-of-seam dilution) obtained from cleaning to approximately 8% ash, are good to excellent. Yields can be expected to vary somewhat across the deposit due to variations in rock band thickness, the number of coal plies and rock bands included in the mining sections and core recoveries from historical drilling. The Seam 5 bulk sample from Adit 8002 (in Belcourt South) reported a yield of 74.9%. Some of the differences noted between the 2008 results and historical ash contents and yields reflect the targeted clean coal ash values. The historical work targeted a "product" ash content of 7.5% compared to 8.0% for recent work.

Mineral compositions of ash were determined for coal seams 1, 5, 6La, 6BCD, and 8A. The results provide base: acid ratios for each coal seam accordingly: Seam 1 = 0.054; Seam 5 = 0.065; and, Seam 6La = 0.054; Seam 6BCD = 0.109; and, Seam 8A = 0.139.

Based upon reviews of the historic and 2008 core descriptions, geophysical logs, coal quality and washability data, including nearby data from adjoining properties, it is the opinion of the authors that the samples are representative and reasonably characterize the coal quality of the deposit.

18.1.3 Simulated Product Coal

The coal qualities of two clean coal composites formed from the combination of the four main seams from each set of 6" cores are presented in Table 18-3. The analyses for the overall simulated product sent to Canmet, is also provided. These composite samples were obtained from the main coal seams (Seams 1, 5, 6BCD and 8A) which comprise approximately 78.3% of the resources as currently defined by the 0.60 m thickness cut-off as presented in Section 19. Using a 1.00 m cut-off, they represent 89.5% of the resource base.

Table 18-3: North Block Clean Coal Composites (dry basis)

Sample ID	Ash %	VM %	FC %	S %	FSI	% P (in coal)	Dmmf VM %
1st CCC	7.88	23.94	68.18	0.44	6.5	0.039	25.35
2nd CCC	7.80	24.30	67.89	0.43	6.5	0.044	25.74
Sim. Product	8.10	23.43	68.47	0.42	6.5	0.047	24.85

Note: CCC = clean coal composite.

Overall, the values are consistent with those presented for the individual coal seams in Table 18-2. The simulated product is low in both sulphur and phosphorus, and has a good FSI. The ash value for the second set of cores is lower than its calculated value (8.20%); this accounts for the composite ash value falling outside the range of its two component parts and also contributes to the slightly higher sulphur and phosphorus values seen in the composite.

The composite has a low base: acid ratio of 0.078, as determined from the mineral composition of ash results shown in Table 18-4.

Table 18-4: Simulated Product – Mineral Analysis of Ash

SiO_2	Al_2O_3	TiO_2	CaO	Fe_20_3	MgO	Na_2O	K_20	P_20_5	SO_3	Undet.
62.55	25.47	1.33	2.03	2.44	0.90	0.70	0.92	1.32	0.97	-1.37

Note: Undet. = Undetected.

Thermal rheology data from the individual coal seams, seam clean coal composites and simulated product indicate that the coal has low fluidity with a narrow melting range and no dilatation. For the individual seams (from the second set of cores) maximum fluidities were in the 2-5 ddpm range, with a melting range of 44°-55°C. The simulated product yielded a maximum fluidity of 2.1 ddpm and a melting range of 43°C. In reviewing the coal quality data for their report on the carbonization test, Canmet (2009) state:

"The low fluidity and non-existent dilatation would indicate this coal to be aged as both fluidity and dilatation are very sensitive parameters to early stages of coal oxidation at low temperature."

They further commented that the relatively high oxygen content (4.9%, db) for a coal of this rank could also be a sign of partial oxidation.

Historical thermal rheology data for the main coal seams, obtained from HQ-core across both the Belcourt South and Huguenot properties show significant ranges in fluidity and maximum dilatation values, while melting ranges and maximum contraction values are more constrained. The ranges for each seam were: Seam 1, from 10 to 375 ddpm (includes values of 124 and 149 ddpm; 450 ddpm was obtained from one intersection with 39% core recovery); Seam 5, from 7 to 154 ddpm (most <77 ddpm); Seam 6, from 4 to 88 ddpm; Seam 8, from 1 to 258 ddpm (most <27 ddpm). The melting range for all seams varies from 32° to 75°, although for most samples the range is between 50° and 75°. Dilatation results showed maximum contraction ranging between -18 and -30 with maximum dilatation ranging to +41. The time lapse between drilling and analysis is not known.

Adit samples from Seam 5 and Seam 1 (Upper) at Belcourt South returned the following results: Seam 1 (Upper): maximum dilatation = +60, maximum fluidity = 291 ddpm, melting range = 72°; Seam 5: maximum dilatation = +59, maximum fluidity = 215 ddpm, melting range = 65°. It is of interest to note that the oxygen content (as determined from Ultimate Analysis) for Seam 5 was 5.26%, while that for Seam 1 (Upper) was 2.82%.

18.1.4 Coal Petrography

The maximum reflectance values obtained for each individual coal seam seams are: Seam 1 = 1.16; Seam 5 = 1.17; Seam 6La = 1.17; Seam 6BCD = 1.09; and, Seam 8A = 1.05. The values for Seams 1, 5, and 6La confirm their classification within the medium volatile bituminous rank. The values obtained for Seams 6BCD and 8A fall just below the medium volatile bituminous - high volatile bituminous boundary and therefore, these coals classify being of high volatile bituminous A rank. When combined into a simulated product, the coals return overall maximum reflectance values of medium volatile bituminous rank (i.e., 1.14). Table 18-5 presents the results of petrographic analyses conducted on the simulated product that was sent for carbonization testing. Predicted FSI values are consistent with measured values.

Table 18-5: Petrographic Data for Simulated Product (Clean Coal Basis)

Petrographic Indices	
Mean Maximum Reflectance	1.14
Composition Balance Index	1.32
Calculated Strength Index	4.29
Calculated Stability Index	56.0
Estimated Coke Strength DI 30/15	94.01
Predicted Free Swelling Index	7
Total Reactives	**67.2**
Total Inerts	**32.8**
%Ash (db)	8.1

18.1.5 Coal Carbonization

The simulated product underwent coke tests at Canmet's laboratories in mid-August 2008. Initially, a representative sample was carbonized in a 15 kg Stelco sole-heated oven for determination of its expansion/contraction characteristic. FSI was also determined. The sample then underwent carbonization in Canmet's larger-scale Carbolite oven (nominal charge capacity of 350 kg).

The Coal Evaluation and Carbonization Project Report (Canmet, 2009) that documents the procedures and describes the results of the testing includes the following conclusions:

"The coal has 8.1% ash, low sulphur, 0.42%, high oxygen content, 4.9% potentially indicating partial oxidation and low thermal rheological properties. It has a low basicity index, 0.08, considered advantageous for cokemaking. However, the coal makes a rather weak ambient strength coke as measured by ASTM and JIS drum tests. A moderate CSR of 53 is considered too low to be used as a stand-alone product in present ironmaking blast furnace operations but would be acceptable as part of a blend."

And,

"….the clean coal sample …… provided by Colonial to CanmetENERGY for evaluation of its coking properties, could potentially find useful application as a bridging coal for blending."

Canmet recommended that:

"….. it would be advantageous in the future for CanmetENERGY to receive freshly-obtained coal samples for evaluation in order that their coking potential is maximized."

Considering the possibility that the simulated product may have been partially oxidized, the results are viewed as establishing a baseline from which a number of parameters can be expected to improve. The results compare reasonably to those stated for the Belcourt Project where the fluid (melting) range and FSI are considered to indicate that Belcourt coal *"… could be an excellent "bridging" component in an industrial blend where low and high volatile coals comprise the essential components."* (Borntreager et al, 2009). This conclusion was judged to be consistent with conclusions contained within a 1982 feasibility study on the Belcourt Project. The carbonization tests on the Belcourt coals were also undertaken on samples that had undergone lengthy testing prior to carbonization and which also reported low fluidities.

18.1.6 Process Simulation

Based upon the washability and coal quality data, Norwest undertook process simulation using Limn process simulation software (Norwest, 2010). This software allows for the testing of multiple scenarios for process and product optimization in order to reliably predict true coal product yield as well as determining optimal product quality for a given process flow-sheet design. For the Huguenot seams, they applied a high performance preparation plant process design appropriate for recovering high value metallurgical grade coals. The process consists of controllable large diameter heavy media cyclones (HMC) for the plus 1.5 mm coal, a high performing spiral concentrator circuit for the 1.5 x 0.25 mm size range and froth flotation for the ultra fines, minus 0.25 mm.

After optimizing individual Limn process unit models, Norwest progressively varied the HMC separating density from about 1.25 S.G. through 1.80 S.G. measuring product output at each 0.025 S.G. step. In single seam stand-alone operations, it is readily apparent that Seams 1 and 6BCD can only produce a product within a very tight ash content range. In actual mining and processing operations, it is likely that a combination of seams will be washed simultaneously. Consequently, the data were re-worked to reflect the washing of multiple seams. Using information provided by Colonial, the data were also adjusted for the inclusion of out-of-seam dilution as well as coal losses expected in actual mining operations.

Norwest concluded that:

- the proper operating HMC density cut-point is about 1.50 S.G.
- a product ash in the range 7.5% to 8.0% (ad) is probably optimal
- the coal seams are naturally low ash coals with a virtual absence of middlings material
- the coal seams are physically compatible for washing together
- a product in the range of 7.5% ash (ad) should readily achievable
- no strict pre-blending regimen prior to washing is likely required.

18.2 MIDDLE & SOUTH BLOCKS

No recent coal seam sampling has been conducted on the Middle and South Blocks. Coal quality data comes from historical reports (Denison, 1979a, 1979b, and 1981) and have been derived from HQ-size cores from several widely spaced drillholes. This drilling was part of a series of large programs that included many other drillholes located to the northwest and southeast. The analytical procedures and tests performed on raw core samples and clean coal are the same as those described above (Section 18.1.2.1).

The results indicate that the Gates Formation coals within these blocks are of medium volatile bituminous rank. Their coal qualities are consistent with those described for the North Block for both raw (in-situ) and clean coal and include moderately low ash values, low sulphur and phosphorus contents and good to excellent FSI's. Their thermal rheology values are included in the ranges discussed for the North Block in Section 18.1.3. Within the South Block there is a tendency towards slightly lower volatile contents (as seen on a dmmf basis). Denison (1979b) noted the southeasterly decrease in volatiles across their old Belcourt property. In their proposed Omega pit area, southeast of the Huguenot property, most of the Gates coal seams report to the upper limit of low volatile bituminous rank and are demonstrated to be metallurgical coals.

SECTION 19 • MINERAL RESOURCE & RESERVE ESTIMATES

19.1 NORTH BLOCK

19.1.1 Introduction

Coal resource estimations for the North Block of the Huguenot property were completed by Moose Mountain Technical Services (MMTS). Only areas considered to be potentially surface mineable were targeted for evaluation. Coal that might be mined using underground methods was not addressed for this report.

The current geological interpretation of the North Block was developed by geologists employed by Colonial. Geological modelling was completed by MMTS using Colonial's geology. MMTS provided a senior coal geologist (Mr. R. J. Morris, P.Geo.) to undertake a site visit in 2008 during which, exploration and data gathering practices employed by Colonial's personnel were reviewed. Mr. Morris maintained involvement with the project on an intermittent basis during the post-field period and is conversant with the data handling methods and approaches to data extrapolations and geological interpretations developed by Colonial. Under Mr. Morris' direct supervision, MMTS conducted data validation, reviewed the geological interpretation, plus the formatting and treatment of data to support model development. In addition, MMTS constructed the 3D resource model and carried out resource estimation and resource classification. Mr.Morris is the Independent Qualified Person for Colonial and Ananda in the preparation of this report and takes responsibility for the resource estimates.

The North Block resource estimates were completed in accordance with the procedures and criteria of GSC Paper 88-21 as required by NI 43-101. Overall in-situ resource estimates using a 0.60 m thickness cut-off are:

- 45.2 million tonnes (Mt) of Measured and Indicated (Measured = 31.3 Mt; Indicated = 13.9 Mt), plus 10.3 Mt of Inferred.

Using a 1.0 m thickness cut-off, the overall in-situ resource estimates are:

- 36.7 Mt of Measured and Indicated (Measured = 26.4 Mt; Indicated = 10.3 Mt), plus 9.2 Mt of Inferred.

19.1.2 GSC Paper 88-21 Resource/Reserve Classification

In accordance with NI 43-101, MMTS has utilized the referenced document, GSC Paper 88-21, "A Standardized Coal Resource/Reserve Reporting System for Canada" to identify, classify and report coal resources for the Belcourt Saxon Properties. Table 19-1 shows the framework for the Resource/Reserve Criteria. Discussions regarding Geology and Deposit Types, as referenced in GSC Paper 88-21, are provided in Section 10.

Table 19-1: Coal Resource/Reserve Criteria

Coal Resource/Reserve Criteria				
	Resource		Reserve	
Class Feasibility	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	

19.1.3 Methodology & General Criteria

Factors affecting estimation of resources within the North Block are summarized below.

19.1.3.1 Model Extent & Geometry

The North Block model is 4,300 m in the northwest/southeast direction and 2,500 m in the northeast/southwest direction. The model covers a rectangular area of 1,075 ha with its longest edge striking at an azimuth of N 300°.

Model geometry follows the northeasterly-dipping Gates Formation. Block dimensions are 25 m along strike, 25 m in the dip direction, and 10 m in elevation. The resulting model measures 172 blocks (4,300 m) in length and 100 blocks (2,500 m) across and examines resources between 890 m and 1,900 m in elevation, resulting in a total of 101 blocks.

19.1.3.2 Topography & Overburden (Till) Surface

A digital elevation model (DEM) for the project area was generated from a Natural Resources Canada database of digital elevation models. This included an elevation datum on a 100 m grid with accuracy within 5 m, surface feature break lines, and general infrastructure. The drillhole data were 'draped' to the digital data and the drillhole collar elevations were adjusted to fit the topography. The base of overburden surface defines the extent of glacial-fluvial cover over bedrock. No coal seams are modelled above the base of overburden surface. Overburden thickness was created by triangulating overburden thickness from drillhole data, except for the Huguenot Creek area where a contour map was developed to portray the thick overburden in that area.

19.1.3.3 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 4 m of the base of the overburden surface. This estimate was made from experience with other mining projects in the region.

19.1.3.4 Geological Data & Geological Interpretation

The geological dataset consists of historical data from exploration programs conducted by Denison between 1971 and 1979 as well as new exploration. The work conducted by Denison included one diamond drillhole for 365 m, plus significant surface mapping and trenching. Exploration carried out by Colonial in 2008 on Gates Formation coal measures included 26 drillholes (for 1,914 m, including pilot holes), trenching and mapping. One hole was drilled in the Gething Formation (131 m). Further details of the types and amounts of exploration conducted are presented in Sections 8, 12, and 13 of this report.

All the drillhole and surface mapping and trench data were used to develop the geological model, in addition to data from a second, off-property, drillhole that was used for control purposes. Coal seam correlation was determined by Colonial using down-hole geophysical logs and surface mapping. The geologic structure was developed by Colonial, and considers bedding to core angles logged in drill core as well as bedding dips observed at surface. Colonial provided a structure contour map for Seam 5 and a selection of cross-sections to MMTS for use as structural control for the geological model. MMTS interpreted the geology on cross-section and coal seam footwall contacts were digitized to create seam locations in 3D space. The coal seam traces on cross-section were linked to create surfaces in 3D space.

Coal seam thicknesses from exploration drillholes are measured along the length of the hole and because the angle of intersection between the hole and the seam is often less than perpendicular, these intersections represent an ‘apparent’ rather than ‘true’ thickness of the seam. Adjustment from apparent to true seam thickness is therefore a critical step 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.

19.1.3.5 Mineable Thickness

On the basis of the current interpretation, the Huguenot deposit is classified as a moderate, potentially surface mineable deposit. Resource assumptions for mineable thicknesses conform to GSC Paper 88-21 guidelines at 0.6 m. Rock partings greater than 0.3 m true thickness are considered mineable and, hence, 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 Block.

19.1.3.6 Specific Gravity

In view of limited specific gravity measurements obtained from the 2008 drill core, the relationship between in-situ ash% and specific gravity (S.G.) of the coal was derived from the Quintette Formula. The formula was developed by Quintette Coal Corp. for determining in-situ specific gravity of coal, and is considered compatible with a fracture porosity of approximately 4%. The Quintette Formula is:

- In situ S.G. = 211.4306 / (172.0854 - % ash (adb))

BSCL (2008) evaluated the relationship between in-situ ash% and specific gravity (S.G.) of the coal for the Belcourt South deposit. The Quintette formula yielded slightly lower S.G.'s below 23% ash than a formula developed for Belcourt South, which used laboratory determined specific gravities. Although the differences were not significant, BSCL elected to use the formulae that yielded the lower S.G. value; in most cases this corresponded to the Quintette Formula.

For the North Block, ash values were assigned to seam data points for which no analytical data were available by comparison of the geophysical log characteristics of their coal seam intersections to geophysical logs of the same seam from drillholes where ash values were known (i.e., Seams 1, 5, 6La, 6B, 6BC, 6D, and 8A). Although these "reference" coal seams had high core recoveries their ash contents were adjusted to account for minor core losses. For seams in which portions of the geophysical logs varied from the reference data, incremental ash values associated with similar geophysical log responses from other seams with similar log response were substituted. In cases where no high core recovery "reference" data were available, (e.g., Seams 2, 3B, 3D, and 4) the ash values for the full seam were estimated using comparable geophysical log responses and their associated incremental ash contents. In the limited number of cases where trench data were used, the pictorial trench logs of each seam were compared to the "reference" geophysical logs, incremental ash values were assigned and the overall ash content was calculated.

Specific gravities were derived from these assigned ash values using the Quintette formula. The ash and S.G. data were assigned to their respective data points and entered into the block model for resource estimation purposes. Ash and S.G. were interpolated using a 5,000 m search and an inverse distance squared. The interpolated S.G. for each seam, in each block, was used to convert volume to tonnage. The average values for in-situ ash and S.G. for each seam, taken from the model, are shown in Table 19-2.

Table 19-2: Seam In-Situ Ash & S.G.

Seam	Ash (%)	S.G.	Seam	Ash (%)	S.G.
9	19.2	1.39	5	15.2	1.35
8A	19.2	1.38	4	10.4	1.31
6D	10.4	1.30	3D	8.0	1.29
6BC	17.4	1.37	3B	21.1	1.40
6B	12.8	1.33	2A	8.0	1.29
6A	23.8	1.43	2	23.0	1.42
6LA	26.4	1.45	1	15.9	1.35

19.1.4 Creating Seam Thickness & Seam Solids

MineSight® is used to transform drilled thickness to true thickness by determining the relationship between the coal seam thickness from drilling, and the seam dip from the 3D footwall shape. With each seam bottom linked from section to section over the length of the deposit to create surfaces, seam solids are created by adding the seam thickness to the seam footwall surfaces.

19.1.4.1 Compositing of Mineable Thicknesses & Interpolation

Once all intersections and model blocks were assigned seam codes, true thickness values of waste, mineable seams, and inseparable partings were aggregated for each seam intersected by a drillhole. Seam intersections were tagged to indicate whether they included both a top and bottom seam contact or only a top or bottom contact.

Populating the 3D block model required the extrapolation of known data in the drillhole composite file to individual model blocks. The true thickness interpolation used a 1,500 m search and an inverse distance power of 2.5.

19.1.5 Coal Resource Estimation

Current resource estimates for the North Block of the Huguenot coal property, for 0.6 m minimum mineable and 1.0 m minimum mineable seam thickness models are summarized in Tables 19-3 and 19-4. The resources are considered to be of ‘immediate interest’. For each model, the coal, as defined, is within a pit with 45° 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 12.0:1 (BCM waste: tonnes coal) for the 0.6 m minimum thickness model, and 12.9:1 (BCM waste: tonnes coal) for the 1.0 m minimum thickness model. With an incremental strip ratio, each block of coal within the pit must have twenty blocks of waste, or less, above it. The average strip ratio is lower than the incremental strip ratio because of the favourable geology, with shallow seam dips and some thick coal seams.

Table 19-3: Summary of In-Situ Coal Resources (0.6 m cut-off)

Resource Category	Total (Mt)	Metallurgical (Mt)	Oxidized (Mt)
Measured	31.3	31.0	0.3
Indicated	13.9	13.9	0.0
Total (Meas. + Ind.)	45.2	44.9	0.3
Inferred	10.3	10.2	0.1

Table 19-4: Summary of In-Situ Coal Resources (1.0 m cut-off)

Resource Category	Total (Mt)	Metallurgical (Mt)	Oxidized (Mt)
Measured	26.4	26.0	0.4
Indicated	10.3	10.3	0.0
Total (Meas. + Ind.)	36.7	36.3	0.4
Inferred	9.2	9.2	0.0

Tables 19-5 to 19-7 summarize North Block resources by seam, for both the 0.6 and 1.0 m minimum, mineable, seam thickness models.

Table 19-5: Summary of Total Measured Resources by Seam

	Model 1: 0.6 m Cut-off		Model 2: 1.0 m Cut-off	
Seam	**Total Coal (Ktonnes)**	**% of Total**	**Total Coal (Ktonnes)**	**% of Total**
9	200	0.64		
8A	3,400	10.86	2,900	10.98
6D	700	2.24		
6BC	2,800	8.95	2,800	10.61
6B	1,200	3.83	1,100	4.17
6A	200	0.64		
6La	2,400	7.67	2,300	8.71
5	10,000	31.95	9,600	36.36
4	700	2.24		
3B	1,300	4.15	500	1.89
3D	400	1.28		
2A	600	1.92		
1	7,400	23.64	7,200	27.27
Total	**31,300**	**100.00**	**26,400**	**100.00**

Table 19-6: Summary of Total Indicated Resources by Seam

	Model 1: 0.6 m Cut-off		Model 2: 1.0 m Cut-off	
Seam	**Total Coal (Ktonnes)**	**% of Total**	**Total Coal (Ktonnes)**	**% of Total**
9	500	3.60	300	2.91
8A	1,800	12.95	1,000	9.71
6D	100	0.72		
6BC	600	4.32	300	2.91
6B	1,300	9.35	1,100	10.86
6La	1,000	7.19	800	7.77
5	3,900	28.06	3,100	30.10
4	200	1.44		
3D	300	2.16		
3B	800	5.76	600	5.83
2A	1,200	8.63	1,200	11.65
1	2,200	15.83	1,900	18.45
Total	**13,900**	**100.00**	**10,300**	**100.00**

Table 19-7: Summary of Total Inferred Resources by Seam

	Model 1: 0.6 m Cut-off		Model 2: 1.0 m Cut-off	
Seam	**Total Coal (Ktonnes)**	**% of Total**	**Total Coal (Ktonnes)**	**% of Total**
9	600	5.83	500	5.43
8A	1,700	16.50	1,100	11.96
6B	1,200	11.65	1,200	13.04
6LA	700	6.80	600	6.52
5	3,000	29.13	3,000	32.61
3D	300	2.91		
3B	600	5.83	600	6.52
2	1,200	11.65	1,200	13.04
1	1,000	9.71	1,000	10.87
Total	**10,300**	**100.00**	**9,200**	**100.00**

19.1.6 Assurance of Existence Classification

During interpolation runs, MineSight® stores the distance from the model block to the nearest composite value in the zone that satisfies the search parameters. The distance values are then used to assign resource classification codes. The Geology Type is considered to be Moderate. Consequently, the current model requires a data point within a search cell of 450 m (measured), 900 m (indicated), and

2,400 m (inferred), 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."

The paper also states:

"Assurance-of-existence categories are intended to reflect the level of certainty with which resource quantities are known. Intuitively, one knows that the greater the distance over which seam thickness data are extrapolated, the greater the possible error; hence, several resource classification schemes have used distance from nearest data point or distance between data points as the primary criteria for assurance-of-existence categorization".

And,

"Four categories are used to define assurance-of-existence. In order of increasing uncertainty, these categories are: measured, indicated, inferred, and speculative. Measured resources have a high degree, indicated a moderate degree, and inferred resources a relatively low degree of geological assurance. Speculative resources are those based on extrapolation of few data points over large distances, and are confined to regions where extensive coal exploration has not yet taken place. Although the precise levels of uncertainty of these categories have not been calculated, geological experience with Canadian coal deposits suggests that measured resource quantities are known within about 10%, indicated within about 20%, and inferred within about 50%."

The areas covered by the various resource categories for the main coal seams are shown in Figures 19-1 to 19-4.

19.1.7 Discussion

Historical resources estimated for the North Block, derived from data presented by Denison (1979b), total 56.6 Mt using a minimum 0.5 m thickness, and 48.3 Mt using a minimum 1.0 m thickness. If these tonnages are adjusted to reflect a minimum thickness of 0.6 m, and to eliminate the internal rock band within Seam 8A, then using a minimum 0.6 m thickness the historical resources total 53 Mt, with 46 Mt for a minimum 1.0 m thickness. These tonnages compare very closely to the overall tonnages presented in Tables 19-2 and 19-3, above.

19.2 MIDDLE & SOUTH BLOCKS

Overall historical coal resources for the Gate Formation, over the entire Huguenot property, using minimum mining thickness cut-offs, were: 0.5 m = 179 Mt; 1.0 m = 159 Mt; 2.0 m = 134 Mt; and, 3.0 m = 111 Mt (Denison, 1979b).

Of these totals, the resources allocated to the Middle and South Blocks were:

Middle Block: >0.5 m = 71 Mt; >1.0 m = 59 Mt; >2.0 m = 58 Mt; and, >3.0 m = 52 Mt.

South Block: >0.5 m = 52 Mt; >1.0 m = 52 Mt; >2.0 m = 44 Mt; and, >3.0 m = 26 Mt.

In order to estimate a range for the coal resource potential of the combined Middle and South Blocks, potential tonnage estimated for the 0.6 and 2.0 m seam thickness minimums were selected. These thicknesses reflect GSC Paper 88-21 guideline minimums for Surface and Underground Deposit Types (the tonnage represented by the 2.0 m minimum is essentially the same as if the 1.5 m guideline minimum was used). The Denison data have been reviewed and various adjustments made to the Middle and South Block tonnages presented above. These are:

- Middle Block: reduce Middle Block tonnage for the 0.6 m minimum case by 3 Mt (to 68 Mt) to eliminate coal seams <0.6 m thick.
- Middle Block: reduce the 68 Mt Middle Block tonnage for the 0.6 m minimum case by 14 Mt (to 54 Mt) as potentially surface mineable resources are unlikely to exist at the northernmost end of the block as the coal seams are located at depth, below the Holtslander North Thrust.
- South Block: cumulative thickness of coal seams for Surface Deposit Type (0.6 m minimum) has been increased by 25% to reflect the expected presence of additional coal seams as found on the North and Middle Blocks and indicated by widely separated trenches within the South Block.
- South Block: cumulative thickness of coal seams for Underground Deposit Type (2.0 m minimum) has been increased by 25% to reflect the expected presence of additional coal seams (as found on the North and Middle Blocks) that exceed 1.5 m in thickness.
- Middle and South Blocks: Denison used 500 m from surface; this is acceptable for the Underground Deposit Type but has been reduced to 350 m (by using a 30% reduction in tonnage) for the Surface Deposit Type, in order to approximate limitations that would be imposed by imposition of a 20: 1 incremental strip ratio.

Based upon the foregoing, the overall Gates Formation coal resource potential for the combined Middle and South Blocks is estimated to range from approximately 84 to 113 Mt. These are order of magnitude estimates and do not meet the criteria of a Mineral Resource; it is uncertain if further exploration will result in any of this tonnage being delineated as a mineral resource.

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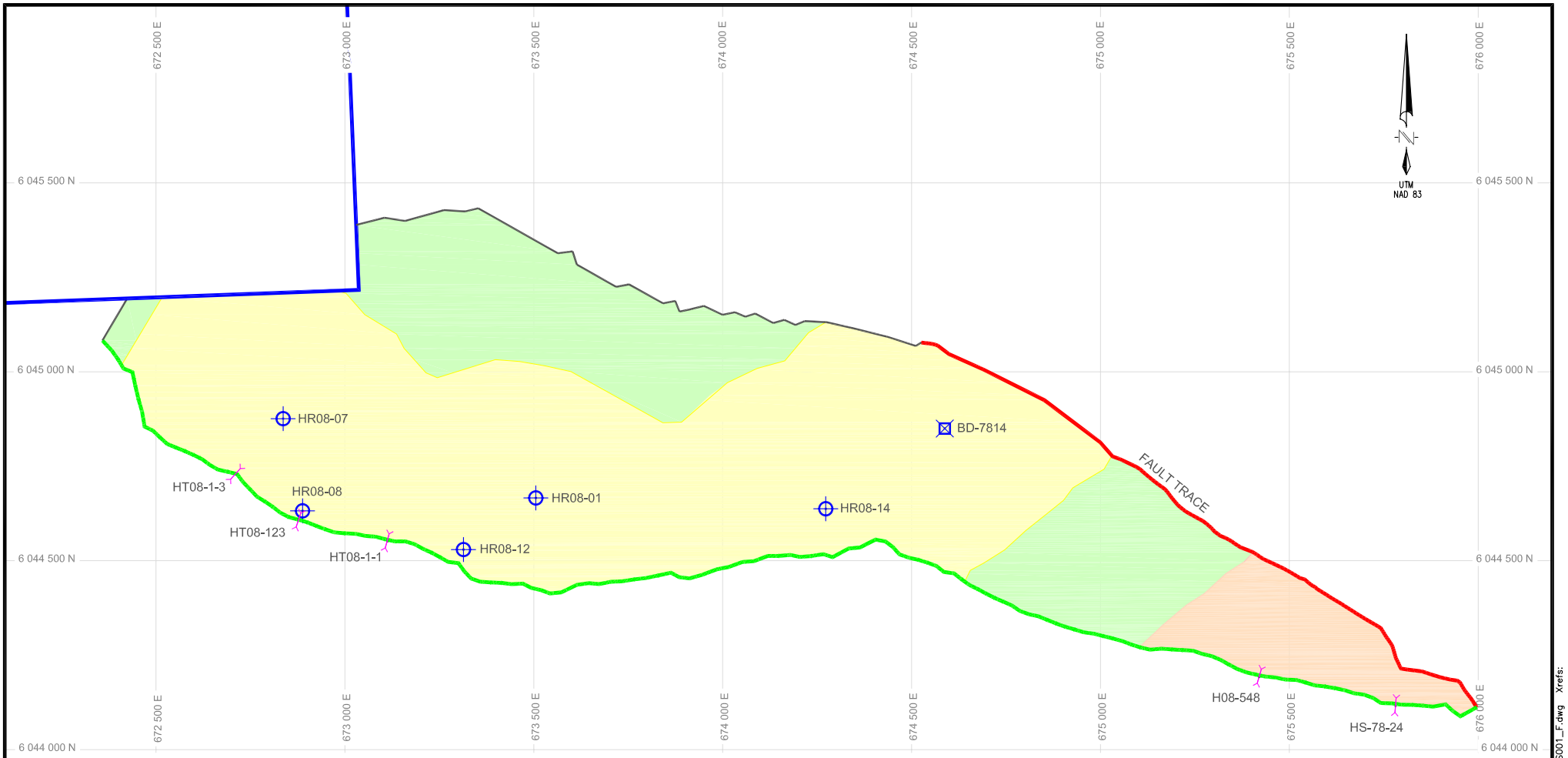

LEGEND:

- BD-7814 - PENETRATION OF SEAM FLOOR
- HR08-03 - PENETRATION OF SEAM FLOOR
- SEAM 1 SUBCROP
- RESOURCE LIMIT
- FAULT TRACE
- TRENCH
- PROPERTY BOUNDARY
- MEASURED RESOURCE AREA
- INDICATED RESOURCE AREA
- INFERRED RESOURCE AREA

NOTE:

RESOURCE AREA EXTRACTED FROM GEOLOGICAL MODEL PREPARED BY MOOSE MOUNTAIN TECHNICAL SERVICES.

100m 0 100 200 300 400 500m

SCALE

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS
Checked by:	JP
Approved by:	JP
Revision No.	F
Dwg No.	005A_RES001_F

NORTH BLOCK
RESOURCE AREA
SEAM 1

Date: 2010/FEB/09

Document:

Figure No. 19.1

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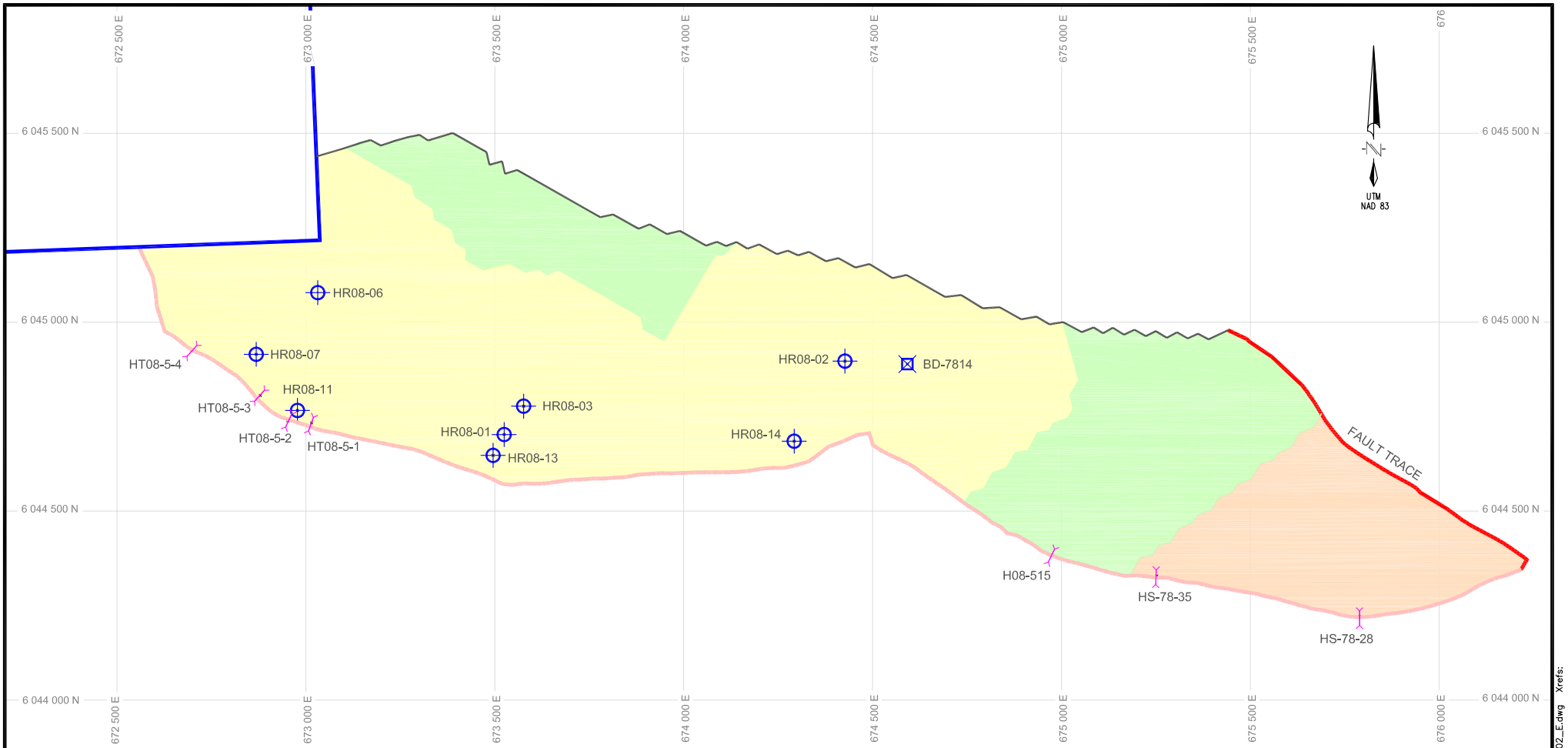

LEGEND:

- BD-7814 - PENETRATION OF SEAM FLOOR
- HR08-03 - PENETRATION OF SEAM FLOOR
- SEAM 5 SUBCROP
- RESOURCE LIMIT
- FAULT TRACE
- TRENCH
- PROPERTY BOUNDARY
- MEASURED RESOURCE AREA
- INDICATED RESOURCE AREA
- INFERRED RESOURCE AREA

NOTE:

RESOURCE AREA EXTRACTED FROM GEOLOGICAL MODEL PREPARED BY MOOSE MOUNTAIN TECHNICAL SERVICES.

100m 0 100 200 300 400 500m

SCALE

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS
Checked by:	JP
Approved by:	JP
Revision No.	E
Dwg No.	005A_RES002_E

NORTH BLOCK
RESOURCE AREA
SEAM 5

Date: 2010/FEB/09

Document:

Figure No. 19.2

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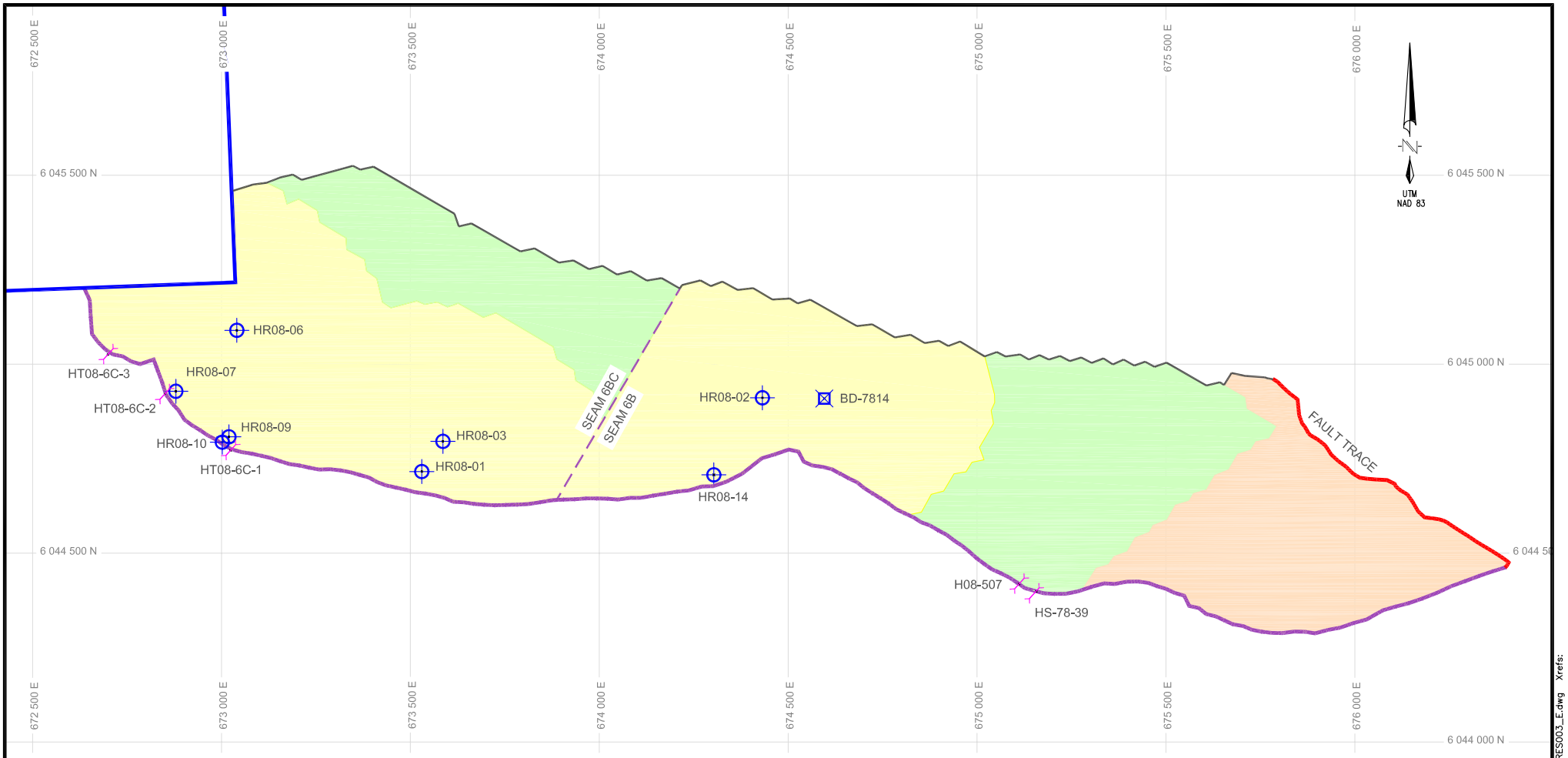

LEGEND:

- BD-7814 - PENETRATION OF SEAM FLOOR
- HR08-03 - PENETRATION OF SEAM FLOOR
- SEAM 6BC/6B SUBCROP
- RESOURCE LIMIT
- FAULT TRACE
- TRENCH
- PROPERTY BOUNDARY
- MEASURED RESOURCE AREA
- INDICATED RESOURCE AREA
- INFERRED RESOURCE AREA

NOTE:

RESOURCE AREA EXTRACTED FROM GEOLOGICAL MODEL PREPARED BY MOOSE MOUNTAIN TECHNICAL SERVICES.

100m 0 100 200 300 400 500m

SCALE

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS
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Approved by:	JP
Revision No.	E
Dwg No.	005A_RES003_E

NORTH BLOCK
RESOURCE AREA
SEAM 6BC/6B

Date: 2010/FEB/09

Document:

Figure No. 19.3

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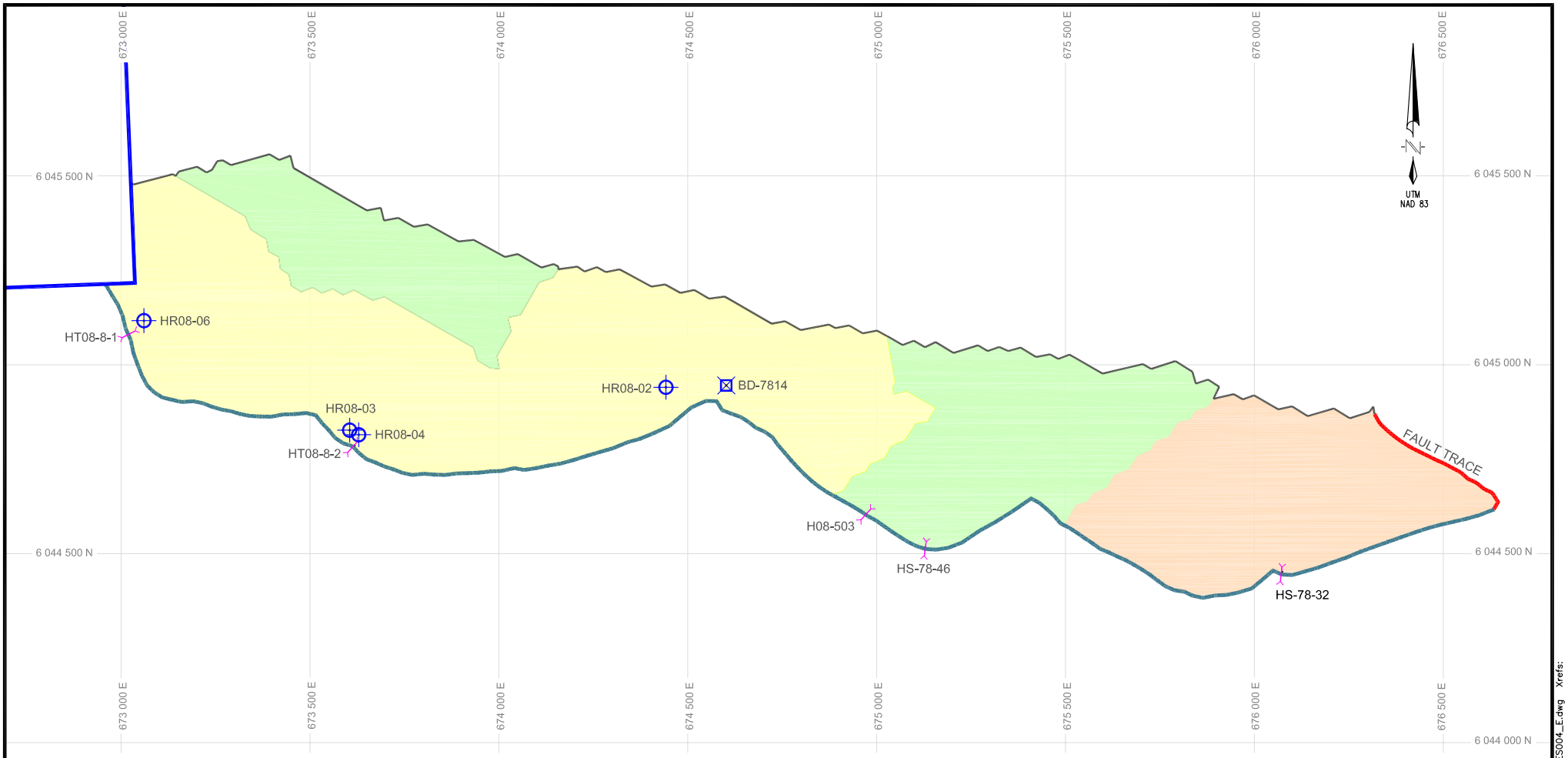

LEGEND:

- BD-7814 - PENETRATION OF SEAM FLOOR
- HR08-03 - PENETRATION OF SEAM FLOOR
- SEAM 8A SUBCROP
- RESOURCE LIMIT
- FAULT TRACE
- TRENCH
- PROPERTY BOUNDARY
- MEASURED RESOURCE AREA
- INDICATED RESOURCE AREA
- INFERRED RESOURCE AREA

NOTE:

RESOURCE AREA EXTRACTED FROM GEOLOGICAL MODEL PREPARED BY MOOSE MOUNTAIN TECHNICAL SERVICES.

100m 0 100 200 300 400 500m

SCALE

COLONIAL COAL CORPORATION

HUGUENOT COAL PROJECT

Drawn by:	CS
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Revision No.	E
Dwg No.	005A_RES004_E

NORTH BLOCK
RESOURCE AREA
SEAM 8A

Date: 2010/FEB/09

Document:

Figure No. 19.4

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SECTION 20 • OTHER RELEVANT DATA & INFORMATION

There are no other data, nor is there any other information relevant to this report.

SECTION 21 • INTERPRETATION & CONCLUSIONS

21.1 INTERPRETATION

The North Block of the Huguenot property covers 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, and geological mapping, sampling testing from both historical and recent (2008) 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.

Verification of the structural geology, coal development, and assurance of existence of the Gates coal measures within the North Block of the Huguenot property were established by site visits, data reviews and subsequent verification of the geological model and resource estimations.

Gates and Gething Formation coal measures covered by the property's Middle and South Blocks have been the focus of historical, but not recent work. Exploration has included substantial geological mapping and trenching, wide-spaced drilling, coal sampling and testing. While definition of the geology of the Gates coal measures within these Blocks is not at the same level of advancement as the North Block, appropriate verification of the historical interpretations and resource estimations has been established by site visits and data reviews.

21.2 CONCLUSIONS

Based upon the 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.
- Work undertaken by the previous operator (Denison) provides a reliable compilation of geology, resource potential and coal quality for the property as indicated by the results obtained from the most recent phase of exploration and from comparison of resource estimates for the North Block.
- Exploration carried out within the North Block during 2008 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 Block is classified as Moderate. Coal resources were estimated at three levels-of-assurance, namely: Measured (located up to 450 metres from the closest data point); Indicated (located 450 to 900

metres from the nearest data point); and, Inferred (located 900 to 2,400 metres from the closest measurement (although this distance limit was not reached)). 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 Block deposit remains open to infill drilling, with the likelyhood up-grading the level-of-assurance of the coal resources.

- Future exploration planned for the North Block relates mostly to the up-grading of areas of Inferred resource classification into the Measured and Indicated categories, drilling down-dip of the existing drill holes to confirm structural continuity, acquisition of additional, fresh, samples to perform rheology and carbonization tests (which will include minor coal seams in a new simulated product coal). This work will substantially reduce, if not remove, any levels of uncertainty that might currently exist
- The North Block resource estimates are in accordance with the procedures and criteria of GSC Paper 88-21 as required by N.I. 43-101. Overall in situ resource estimates are:
  - using a 0.60 m thickness cut-off: 45.2 Mt of Measured and Indicated (Measured = 31.3 Mt; Indicated = 13.9 Mt), plus 10.3 Mt of Inferred.
  - using a 1.0 m thickness cut-off: 36.9 Mt of Measured and Indicated (Measured = 26.4 Mt; Indicated = 10.5 Mt), plus 9.3 Mt of Inferred.
  - These resources are considered to be of immediate interest.
- Metallurgical coal resources are estimated as:
  - 44.9 Mt of Measured and Indicated, plus 10.2 Mt of Inferred (using a 0.60 m thickness cut-off).
  - 36.3 Mt of Measured and Indicated, plus 9.2 Mt of Inferred (using a 1.0 m thickness cut-off).
- Drilling, trenching and detailed mapping has outlined areas within the property where coal resources present an opportunity for high tonnage, low to moderate strip ratio surface mining. Underground mining potential exists below and alongside potentially surface mineable resources. Other than roads and access trails, there are no major infrastructure elements within or around the project area that can be used in mine development.
- Using ASTM criteria, Gates Formation coals on the Huguenot property are classified as medium volatile bituminous, although rank determinations using mean maximum reflectance values range from 1.05 (Seam 8A) to 1.17 (Seams 5 and 6La). Reflectance values for the stratigraphically lower coal seams (i.e., Seam 6La and below), confirm their classification as medium volatile bituminous rank. However, the values obtained for seams stratigraphically higher than 6La fall just below the medium volatile bituminous - high volatile bituminous boundary, and these coals should be classified as high volatile bituminous A rank. When combined into a simulated product, the coals return overall mean maximum reflectance values that correspond to a medium volatile bituminous rank. 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.

- 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.
- 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 maximimum coking potential. Such samples should incorporate any minor seams that may be considered mineable and represent other parts of the North Block.
- The overall Gates Formation coal resource potential for the combined Middle and South Blocks of the property is estimated to range from approximately 84 Mt to 113 Mt, in-place and of immediate interest and of similar coal quality as that defined on the North Block.

SECTION 22 • RECOMMENDATIONS

22.1 DISCUSSION

Exploration in 2008 was conducted across the North Block of the Huguenot property in order to confirm the presence of economically significant coal seams within the Gates Formation and to advance definition of the geology, coal quality, washability, and carbonization characteristics of the coal.

It is recommended that further work be conducted on the property. This work would comprise two phases, which are outlined below; cost estimates for each phase are presented in Section 22.2. These work programs are intended to:

- conduct confirmation drilling south of Holtslander Creek to complete the definition of the geology, resources and coal quality across the entire length of the North Block and bring all North Block coal resources into Measured and Indicated resource categories
- conduct additional bulk sampling to include all seams that could potentially be mined and provide "fresh" coal for rheological and carbonization tests
- undertake a conceptual mining study to evaluate the mining potential of the North Block
- conduct exploration throughout the Middle Block to bring coal resources and quality into, at least, the Indicated resource category
- conduct additional exploration within the South Block in order to confirm Geology Type, and to bring coal resources and quality into, at least, the Inferred resource category
- evaluate the resource potential of coal seams in the Gething Formation.

The programs conducted on the Middle and South Blocks will also include bulk sampling and testing, plus additional carbonization tests on a simulated "product," to characterize the coking potential of the coal across the property as a whole.

It is further recommended that, prior to the next field phase, a series of reviews be conducted to better position the project for future development. In light of large variations in bedding dips between blocks and the presence of a number of thin coal plies, an evaluation should be carried out to better establish practical minimum mineable coal seam thicknesses across the property. This should include the impact of anticipated coal loss and out-of-seam dilution during extraction and should be conducted by an experienced mining engineer. Assessments should be conducted of the near term requirements and costs of environmental and geotechnical data collection, plus timing and protocols for stakeholder consultations.

It is also recommended that Colonial engage in an initiative recommended in the 2009 Technical Report on the Belcourt Project. The recommendation was for the exploration of initiatives (with Government and companies engaged in the exploration/development of natural gas wells, forestry, and mining within

the region) to reduce eventual project capital costs relating to new, shared, infrastructure by way of infrastructure grants and third party cost sharing.

22.2 WORK PROGRAMS & COST ESTIMATES

The data collected from the two phases of work which are summarized below. The decision to proceed with Phase II will be contingent upon the results obtained from Phase I.

22.2.1 Phase I

This exploration phase is intended to:

- undertake pre-field reviews regarding practical mining section thickness determination, environmental and geotechnical requirements (for possible incorporation into the following field program), plus stakeholder consultation initiatives
- complete the geological, resource and coal quality definition of Gates Formation coal resources on the North Block by drilling and trenching south of Holtslander Creek (some holes may extend into the underlying thrust block); this work will require construction of drill trails
- limited, in-fill, percussion and diamond drilling north of Holtslander Creek with analytical tests on diamond drill cores
- large diameter coring for bulk samples both north and south of Holtslander Creek in order to further characterize the coal throughout the North Block and obtain fresh samples for rheological and carbonization tests
- undertake preparation of a conceptual mining study for the North Block.

22.2.2 Phase II

This exploration phase is intended 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
- conduct sufficient exploration within the South Block to advance the definition of the geology, resource, and coal quality potential of this block; the amount of exploration required to appropriately classify the resources will differ significantly if the Geology Type assigned to it is Complex rather than 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
- continue with evaluation of coal seams within the Gething Formation in those areas considered to present potential mining opportunities
- continue with any environmental and geotechnical field studies and stakeholder consultations commenced during Phase I.

Phase I	$
Field Program Planning and Reviews	120,000
Topographic Base Maps	5,000
Field Work: 3,400 m combined drilling; 6.2 km trails; (approx. 8 weeks)	1,350,000
Geological Modelling and Resource Estimation	130,000
Bulk Sampling and Coal Quality Assessment	150,000
Site Visits & Travel	25,000
Geological Report	135,000
Scoping Study	85,000
Sub-Total	2,000,000
Contingency: (@ 10%)	200,000
Total	**$2,200,000**

Phase II	$
Field Program Planning and Reviews	80,000
Topographic Base Maps	10,000
Field Work: 5,700 m combined drilling (incl. helicopter); 18.7 km trails;trenching, geological mapping (approx 12 weeks)	2,560,000
Geological Modelling and Resource Estimation	160,000
Bulk Sampling and Coal Quality Assessment	200,000
Geotechnical: sampling and testing	80,000
Geological Report	150,000
Site Visits & Travel	30,000
Environmental	150,000
Regulatory and Stakeholder Consultation	60,000
Scoping Study	120,000
Sub-Total	3,600,000
Contingency: (@10%)	360,000
Total	**$3,960,000**
Overall Total: Phase I plus Phase II cost estimates	**$6,160,000**

SECTION 23 • REFERENCES

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SECTION 24 • DATE & SIGNATURE PAGE

Herewith, our report entitled "Huguenot Coal Project – Technical Report" dated July 23, 2010 (the Effective Date). The Certificates of the Qualified Persons who prepared this report are presented in the following pages.

Respectfully submitted by:

(signed) "John H. Perry"

John H. Perry, P.Geo

Signed in Vancouver, British Columbia, on July 23rd, 2010

(signed) "Robert J. Morris"

Robert J. Morris, P.Geo

Signed in Fernie, British Columbia, on July 23rd, 2010

CERTIFICATE & DATE – JOHN H. PERRY

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

- I am a consulting geologist with offices at 306 – 525 Seymour Street, Vancouver, B.C.,V6B 3H7.
- 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 34 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 read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- I have prepared Sections 1, 2, 4 through 9, 11 through 18, 20, and 23 and have participated in the preparation of Sections 3, 10, 21, 22, 24 and sub-Section 19.2 of the report titled "Technical Report, Huguenot Coal Project"(Technical Report) dated July 23, 2010.
- I visited the property that is the subject of the Technical Report for one day on 24 October 2008.
- I have had no prior involvement with the property.
- To the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the the Technical Report not misleading.
- I am not independent of the issuers applying all of the tests in Section 1.4 of National Instrument 43-101.
- I have read National Instrument 43-101, and the Technical Report has been prepared in compliance with that instrument.

Dated July 23rd, 2010.

(signed) "John H. Perry"

_____

JOHN H. PERRY, P.Geo.

CERTIFICATE & DATE – ROBERT J. MORRIS

I, Robert J. Morris, M.Sc., P.Geo., of Fernie B.C. do hereby certify that:

- I am a Principal Geologist with Moose Mountain Technical Services.
- I graduated with a Bachelor of Science degree in Geology from the University of B.C. in 1973 and a Master of Science degree in Geology from Queen's University in 1978.
- I am a member of the Association of Professional Engineers and Geoscientists of British Columbia, (Member #18,301)
- I have worked as a Geologist for 35 years since my graduation from university. My experience in coal mining, exploration, and feasibility studies includes extensive work in the coalfields of southeast and northeast B.C., Iran, England, Colombia, Indonesia, Mongolia, and Thailand.
- I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional associations (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- I have prepared Sections 14 and sub-Section 19.1 and have contributed to Sections 3, 10, sub-Section 19.2, and Sections 21, 22 and 24 of the report titled "Technical Report, Huguenot Coal Project"(Technical Report) dated July 23, 2010. I am responsible for the overall supervision of the Technical Report and I assume responsibility for the Technical Report, in its entirety.
- I visited the property that is the subject of the Technical Report for one day on 24 October 2008.
- I have had no prior involvement with the property.
- To the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading
- I am independent of the issuers applying all of the tests in Section 1.4 of National Instrument 43-101.
- I have read National Instrument 43-101, and the Technical Report has been prepared in compliance with that instrument.

Dated July 23, 2010.

(signed) "Robert J. Morris"

ROBERT J. MORRIS, M.Sc., P.Geo.

CONSENT of AUTHOR

TO: Commission des Valeurs Mobilieres du Quebec
Ontario Securities Commission
Manitoba Securities Commission
Saskatchewan Financial Services Commission – Securities Division
Alberta Securities Commission
British Columbia Securities Commission

I, John H. Perry, P.Geo., do hereby consent to the public filing of the Technical Report titled "Technical Report, Huguenot Coal Project" dated Dated July 23, 2010 (the "Technical Report").

Dated this 23rd Day of July 2010.

(signed) "John H. Perry"

Signature of Qualified Person

JOHN H. PERRY, P.Geo

Print Name of Qualified Person

CONSENT of AUTHOR

TO: Commission des Valeurs Mobilieres du Quebec
Ontario Securities Commission
Manitoba Securities Commission
Saskatchewan Financial Services Commission – Securities Division
Alberta Securities Commission
British Columbia Securities Commission

I, Robert J. Morris, P.Geo, do hereby consent to the public filing of the Technical Report titled "Technical Report, Huguenot Coal Project" dated Dated July 23, 2010 (the "Technical Report").

Dated this 23rd Day of July 2010.

(signed) "Robert J. Morris"

Signature of Qualified Person

ROBERT J. MORRIS, P.Geo
Print Name of Qualified Person