BC Geological Survey
Coal Assessment Report
943

TECHNICAL REPORT

BELCOURT PROJECT

Submitted to:
BELCOURT SAXON COAL LIMITED PARTNERSHIP,
WESTERN CANADIAN COAL CORPORATION,
PEACE RIVER COAL CORPORATION,
ANGLO COAL CANADA INCORPORATED,
NORTHERN ENERGY AND MINING INCORPORATED,
HILLSBOROUGH RESOURCES LIMITED.

Date:
JANUARY 23RD, 2009

PEACE RIVER COAL

WESTERN CANADIAN COAL CORP.

Pages 3-3 to 3-5, 22-3, and all of Sections 18, 19, 21, & 25 remain confidential under the terms of the Coal Act Regulation, and have been removed from the public version.

http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/10_251_2004#section2

Sections 25.5, 25.6 and 25.7 are not required as part of Coal Assessment Report under the Coal Act, and were removed to save file space. The complete document is available from SEDAR http://www.sedar.com/

1 TITLE PAGE

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PEACE RIVER COAL

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3 SUMMARY

The Belcourt-Saxon project lies in the Rocky Mountain Foothills between the former Smoky River and Quintette coal mines within the Peace River Regional District of north-eastern B.C., an area of northwest-southeast trending coal measures. The project extends northwest from the Alberta border for a distance of approximately 70km. Much of the property is accessed by paved and gravel roads from Tumbler Ridge, 60km away to the northwest, while access to the south-eastern area can be gained from Grand Prairie, approximately 185km to the northeast.

The property consists of three blocks of coal licenses and license applications, which cover an area of 73,519ha. These license blocks are referred to as Belcourt, Saxon Omega, and Belcourt West. These licenses are held by Belcourt Saxon Coal Ltd.

The Belcourt properties (Belcourt North and Belcourt South) lie within a belt of Mesozoic strata that form part of the Rocky Mountain Foothills of north-eastern British Columbia. These strata were uplifted during the Laramide Orogeny and now form portions of the eastern flank of the Rocky Mountains. Thrust faulting and intense folding strongly affected the strata during the mountain-building phase.

The main structural feature in the Belcourt region is the broad, northwest-plunging 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. From the core eastward, the Cretaceous succession is continuous, the youngest strata being those of the Kaskapau Formation. The Belcourt property is located along the north-eastern limb of the anticlinorium. The area of primary interest is confined to a narrow, north-westerly-trending band of tight to relatively open folds and associated, southwest-dipping thrust faults that have placed older units on younger ones.

Economic coal seams are found in Lower Cretaceous strata belonging to the Bullhead and Fort St. John Groups. These strata can be broadly 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, which are found within the Gates and Gething Formations, likely formed within deltaic depositional environments. These two phases of continental sedimentation are separated by marine deposits of the Moosebar Formation. Minor coal seams are also encountered within stratigraphically higher and lower formations but are not considered to hold any economic potential.

Coals of the Gates Formation at Belcourt are ranked as being medium-volatile bituminous. The weighted average in-seam ash values are similar for both Belcourt North and Belcourt South at 15% to 17%. The dry ash free volatile matter decreases with stratigraphic depth for both areas, indicating that rank is higher with stratigraphic depth.

Extensive exploration work was carried out on the property between 1970 and 1980 by Denison Mines Ltd and its partners. During this time, more than 10,000m of diamond and rotary drilling was carried out, 138 trenches were excavated and 4 adits were driven to collect bulk samples from five seams. Denison's work confirmed the presence of potentially economic coal seams in the Gates Formation within the existing license areas. Across the Belcourt property, nine coal seams with an aggregate thickness ranging up to about 28m, in the Belcourt North area, were identified, but no development work was undertaken at that time.

No further field work was carried out on the property until 1998 when Western Canadian Coal Corporation (WCCC) conducted a small rotary drilling program, consisting of 8 rotary holes, at Belcourt South.

Several independent engineering studies have been conducted on the Belcourt-Saxon project: Wright Engineers Ltd (WEL) feasibility study on Belcourt in 1982, Monenco Consultants Pacific Ltd (Monenco) feasibility study on Saxon in 1977, and Norwest Mine Services preliminary feasibility study on Belcourt North in May 2000. These studies all indicated the potential for large-scale open pit mining.

A field program conducted on Belcourt in 2005 was part of a larger program that included exploration on the Saxon and Omega projects, to further define the resources previously identified by Denison. At Belcourt, a total of 100 diamond and rotary holes were completed for an aggregate length of over 15,000m, with an additional 12 large diameter holes being drilled and sampled for coal characterization studies and washability tests. The holes were strategically placed in the Gates Formation to meet National Instrument 43-101 (NI 43-101) compliant resource/reserve requirements, as well as to provide additional seam correlation and geological structural data for the study.

Belcourt Saxon Coal Limited Partnership (BSC), a joint venture company owned by Western Canadian Coal Corporation (WCCC), and Peace River Coal (PRC), (Anglo Coal Canada Incorporated, Northern Energy and Mining Incorporated and Hillsborough Resources Limited) conducted a scoping study on the Belcourt Saxon properties in July 2005, which indicated the potential to produce an overall average of 8.7 million tonnes per annum (Mt/a) of clean metallurgical coal. Following this study, BSC decided to proceed with a feasibility study for Phase 1, Belcourt only (January 2009 Feasibility Study).

The Feasibility Study was compiled by Sandwell Engineering Inc. (SEI) between October 2005 and December 2008, based on work done by BSC (geology), Moose Mountain Technical Services (resources), Norwest Corporation (mining and coal processing), Knight Piesold Ltd (waste and water handling and geotechnical programs), Mohammed Khan (product quality), Gartner Lee Ltd (environmental programs) and Mesh Environmental Inc. (geochemistry) and SEI (coal handling, transportation, and infrastructure).

This Technical Report presents resource and reserve estimates based on the verified geological model and economic pit designs produced for this Feasibility Study report. The resources were verified by Moose Mountain Technical Services and the reserves were verified by Norwest Corporation.

3.1 RESOURCES

Coal resource estimations for both Belcourt North and Belcourt South deposits were carried out by Moose Mountain Technical Services (MMTS), based on geological interpretations developed by the BSC geology group and the geological models supplied by Maxwell Geoservices.

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 estimated inside a 20:1 incremental strip ratio pit is shown in the table below.

TABLE 3.1
BELCOURT NORTH IN SITU COAL RESOURCES

Class	Total (kT)	Metallurgical (kT)	Partially Oxidized (kT)	Oxidized (kT)
Measured	90,989	88,789	1,189	1,011
Indicated	2,493	2,304	102	87
Total	**93,482**	**91,093**	**1,291**	**1,098**
Inferred	0.2	-	0.1	0.1

Coal inside the 20:1 incremental strip ratio pit represents 91.1% of coal in the model; there is insignificant inferred coal and no speculative coal reported. Waste inside the 20:1 incremental strip ratio pit is 1,131,830 Kbcm, therefore the cumulative stripping ratio is 12.1 (BCMW/MTRC)

TABLE 3.2
BELCOURT SOUTH IN SITU COAL RESOURCES

Class	Total (kT)	Metallurgical (kT)	Partially Oxidized (kT)	Oxidized (kT)
Measured	75,741	72,775	1,664	1,302
Indicated	1,775	1,659	63	53
Total	**77,516**	**74,434**	**1,727**	**1,355**

Based on these resource models, it has been determined that quantities of each category of resource fall within the pit limits.

3.2 RESERVES

The calculation of recoverable run-of-mine (ROM) coal reserves is based on geological resource estimates and evaluation of reasonable mining assumptions based on the conditions at the Belcourt North and South sites and Norwest's experience with truck and shovel mining methods in western Canadian mountain coal mines.

All, save a very small portion, of the coal within the Belcourt North and South pit designs is classified as Measured or Indicated resource categories. Therefore it is suitable for conversion to Proven and Probable reserves if the coal can be recovered economically as per NI-43-101 guidelines. The financial analysis presented in Section 17 shows a positive rate of return at the base case coal price of $US 100. Therefore the coal quantities in this section may be classed as reserves as shown in Table 3.3.

TABLE 3.3
BELCOURT PROJECT RESERVES

	Class	Met Coal (Mt)	Total (Mt)
Belcourt North	Proven	47.0	47.7
	Probable	0.7	
Belcourt South	Proven	38.7	38.7
	Probable	0.0	
Total	Proven	85.7	86.4
	Probable	0.7	

3.3 COAL QUALITY

For both Belcourt North and Belcourt South deposits, the in situ coal quality of each seam was determined from the block models. Thus the reported values of the quality parameters correspond to the resources shown above. The raw coal quality data presented below are derived from HQ-size core samples taken during the 2005 drill program.

TABLE 3.4
BELCOURT NORTH IN SITU COAL QUALITY SUMMARY

Seam	Residual Moisture %	Ash %	Volatile Matter %	Fixed Carbon %	Sulfur %	Dry Mineral Matter Free Volatile Matter (%)
8A	0.8	27.9	20.0	51.0	0.5	26.8
7	1.2	26.9	22.9	49.0	0.6	30.7
6A	0.7	12.4	24.4	63.0	0.6	27.1
5	0.8	17.0	24.0	58.0	0.4	28.8
3	0.7	6.6	24.3	68.0	0.4	26.7
1	0.7	15.1	23.8	61.0	0.3	27.0

TABLE 3.5
BELCOURT SOUTH IN SITU COAL QUALITY SUMMARY

Seam	Residual Moisture %	Ash %	Volatile Matter %	Fixed Carbon %	Sulfur %	Dry Mineral Matter Free Volatile Matter (%)
8	0.9	13.4	25.0	60.8	0.4	28.8
6U	1.1	23.2	22.4	53.4	0.4	28.6
6L	0.8	23.9	21.6	53.7	0.9	27.3
5	0.8	16.8	23.5	59.0	0.3	27.8
3	0.8	17.2	22.9	59.2	0.5	27.1
1U	0.6	11.7	23.8	63.9	0.4	26.7
1L	0.8	16.1	22.9	60.2	0.3	27.0

The above data indicates that all seams at both Belcourt North and Belcourt South are classified as medium volatile bituminous.

A number of recommendations have been discussed in Section 22 of this Technical Report, and are summarized below.

1. Additional drilling should be conducted at Belcourt North within the Red Deer Syncline to refine the geological interpretation, particularly with respect to faulting and to better delimit portions of the coal seams that exhibit structural thickening or thinning.

2. Additional drilling should be conducted at Belcourt South to refine the geological interpretation, particularly where the deposit is bisected by the Holtslander North Thrust and to better delimit where economic widths of coal plies in Seams 1 and 6 start and finish.

3. Additional bulk sampling should be conducted in both deposits that incorporate all seams targeted for mining.

4. Additional carbonization tests should be done on representative sample clean product coal as a single oven charge and as part of a blend with other coals.

5. Additional mining studies should be conducted as follows:

   - Review the pit shell /stripping ratio assumptions - The selection of the 12:1 incremental strip ratio pit shell was based on assumptions made at the beginning of the project before all of the information related to coal seam dilution and potential plan yields was fully developed. These initial assumptions should be reviewed against the current state of knowledge of the geology and plant yield.

   - Review the pit wall slope parameters in Moosebar formation - Limited geotechnical information for the Moosebar formation was collected for the pit slope design and the existing pit slope designs through this unit may be overly aggressive. The pit slope design through the Moosebar formation should be re-evaluated when additional geotechnical information becomes available.

   - Study the economics of mining small seams separately - The block model contained several assumptions about which coal plies would be mined together as a unit. These assumptions should be reviewed in light of the higher dilutions expected, which is leading to elevated ROM ash values for some coal seams. It may be possible in practice to separate some of these coal seams and leave behind portions of the partings which are currently included as inseam dilution.

   - Study the trade-offs for mining small seams - The economics of mining some of the smaller coal seams should be reviewed. These seams have a high-dilution (on a percentage basis) and provide limited tonnages of coal yet force a more complex pit operational setting.

   - Study the economic advantages of leasing mining equipment - Options for leasing large mining equipment should be investigated to defer some large initial capital expenditures.

   - Study the transport of run-of-mine coal from Belcourt South pit to the truck dump - The Belcourt South pit has initial operations starting a considerable distance from the truck dump. It may prove more economical to replace a portion of this long coal haul with a conveyor for some period of the project's life.

6. Continue with the environmental assessment program.

4 INTRODUCTION AND TERMS OF REFERENCE

Sandwell has completed a feasibility study for the Belcourt project with input from a number of third party consultants. The study includes: mining, geology and resource estimates, surface mine plans, process design, coal handling, infrastructure, costing, and project economics. In addition, the feasibility study participants were asked to prepare a Technical Report in accordance with NI 43-101, Form 43-101F1. Verification of the geology, coal development and levels of assurance of existence of the coal resources and reserves were completed through site visits, data reviews and subsequent verification of the geological model. The Belcourt area licenses are controlled by BSC. No previous mines exist in the Belcourt project area.

The present report complies with the reporting requirements of NI 43-101 for Technical Reports for reporting of Coal Resources and Reserves. Personnel, who have substantial experience with the coal deposits of western Canada, prepared this report. The report provides an assessment of coal resources and reserves for the Belcourt project area which includes Belcourt North and Belcourt South.

The resource/reserve summary is based on BSC's geologic database for the Belcourt North and South coal deposits which provided data for coal seam structural and location interpretation. The data is a result of BSC's drilling programs and past programs of others on land now controlled by BSC.

BCS provided a property tour for the Moose Mountain Technical Services and Norwest Corporation personnel who are the qualified persons establishing the coal resources and reserves and the developing of the mine plan. Site visits by the Sandwell and Knight Piesold personnel who are the qualified persons responsible for other components were also provided.

4.1 SOURCES OF INFORMATION

The primary source of information for this Technical Report is the feasibility study, The Belcourt Saxon Coal Project, Phase 1 Belcourt Only, Feasibility Study Report issued January 16, 2009.

4.2 INVOLVEMENT OF QUALIFIED PERSONS

Sandwell's scope included the preliminary design and cost estimating of the following main elements:

- Coal handling and processing (with Norwest as sub-consultant)
- Product transport to market and rail loadout
- Site selection for coal processing and mine ancillaries
- Site selection and specifications for operations camp

- Site development and infrastructure,
- Power supply and distribution

Sandwell, in conjunction with Norwest, also developed a project implementation plan and implementation schedule, together with a preliminary organization for operations.

Sandwell retained Norwest's coal processing group to develop the preliminary design of a coal processing plant and to assist with the design of coal handling systems related to the coal processing plant.

BSC retained Maxwell Geoscience (Maxwell) to assist in the structural geological modelling; and retained Moose Mountain Technical Services (MMTS) to undertake independent resource estimations based on the information provided by BSC and Maxwell.

BSC retained Norwest's mine planning group to provide mine planning support. The main activities were:

- Pit optimization
- Mining method
- Mine layout
- Design criteria including pits, dumps and haul roads
- Mine scheduling
- Mining equipment
- Productivity levels
- Mining manpower

BSC retained Knight Piesold Consultants (KP) to provide advice and preliminary design and cost estimates for:

- Geotechnical conditions for mining and plant foundations
- Waste management dump design and water treatment
- Surface and ground water management
- Geophysical and geotechnical conditions for transportation corridors.

BSC retained AllNorth Consultants Limited to provide input to Sandwell for upgrades to local access roads (forest service roads and petroleum resource development roads)

BSC retained Gartner Lee Limited (GLL) to compile existing environmental data and conduct baseline studies to support the project's entry into the environmental assessment process. Additional engineering and environmental data will be required to support impact's assessment and ultimate entry into the permitting process.

BSC also retained Mesh Environmental to evaluate geochemical characteristics of waste rock, coal and process materials and to develop plans for waste rock management.

BSC retained Mohammed Khan to provide commentary on the product coal quality as tested and the likely position(s) in the market place

BSC retained Gordon Watts to conduct financial analysis for various project scenarios for coal prices and variations in project capital and operating costs.

Mr. Kobie Koornof of JV partner Western Canadian Coal Corporation provided commentary on the metallurgical coal marketplace in general, including customers worldwide, quality considerations, pricing, and market outlook.

The consultants and their related areas of expertise are summarized in Table 4.1 below.

TABLE 4.1
LIST OF CONSULTANTS

Consultant	Area of Expertise
Sandwell Engineering Inc.	Project coordination and management assistance; design of mine infrastructure; and design of the coal preparation plant by its subcontractor, Norwest Corporation.
Maxwell Geosciences.	Geological modelling.
Moose Mountain Technical Services	Resource estimations.
Norwest Corporation, Vancouver	Mine design and associated cost estimates.
Norwest Corporation, Salt Lake City	Coal washability analysis and processing design (sub-consulting to Sandwell).
Allnorth Consultants Limited	Road access studies and associated cost estimates.
Knight Piesold Consultants	Waste and water management design, geotechnical services and associated cost estimates.
Mesh Environmental	Geochemical characterization and assessment of potential for generation of acid rock drainage/metal leaching. Developed waste management strategy.
Gartner Lee Limited (now part of AECOM)	Environmental baseline studies and environmental assessment to support entry into the environmental assessment process.
Mohammed Khan	Product quality and market categories.
Gordon Watts	Financial analysis.

5 RELIANCE ON OTHER EXPERTS

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

6 PROPERTY DESCRIPTION AND LOCATION

The Belcourt property is part of the Belcourt-Saxon project and is located within the Peace River Regional District of northeastern B.C. The project covers northwest-southeast trending coal measures situated in the Rocky Mountain Foothills between the former Smoky River and Quintette coal mines. It extends northwest from the Alberta border for a distance of approximately 70km, coming to within 60km of the town of Tumbler Ridge. The general location of the Belcourt-Saxon project is shown in Figure 6.1.

The project comprises three blocks of coal licenses that contain four coal properties; three have seen significant historical work, while the fourth has seen limited exploration. The three most advanced properties are Belcourt (Belcourt North and Belcourt South), Omega, and Saxon (Saxon East and Saxon South); their locations are shown in Figures 6.2 and 6.3. The fourth property consists of a long block of contiguous coal licenses that encompasses several historical coal properties; it is now referred to as Belcourt West and is shown in Figure 6.3. The entire Belcourt-Saxon project covers an area of 73,519ha.

The Belcourt property is located at the northern end of the project area. It encompasses a group of 31 contiguous coal licenses (18,880ha) and one license application (300ha) that cover a total area of 19,180 hectares. The property is approximately centred on Latitude 54º 37' N and Longitude 120º 27.5' W, is located on NTS Map Sheets 93-I/08 and 93-I/09, and falls within the Liard Mining Division.

6.1 COAL LICENSES

The relevant details of each coal license are shown in Table 6.1 and their locations are shown in Figure 6.3. All issued and applied for coal licenses are held by Belcourt Saxon Coal Ltd.

TABLE 6.1
COAL LICENSE INFORMATION – BELCOURT-SAXON PROJECT

Revised name	Tenure Number	Coal Titles Reference Map Number	Renewal Date	Area (ha)
Belcourt	336921	093I058	2009.06.15	300
Belcourt	336922	093I058	2009.06.15	300
Belcourt	336923	093I059	2009.06.15	300
Belcourt	336924	093I059	2009.06.15	300
Belcourt	343944	093I068	2009.03.11	300
Belcourt	343945	093I059	2009.03.11	301
Belcourt	353022	093I058	2009.12.12	300
Belcourt	405133	093I058	2009.09.19	300
Belcourt	405134	093I058	2009.09.19	300

Belcourt	405135	093I068	2009.09.19	300
Belcourt	416943	093I058	2009.06.28	300
Belcourt	416944	093I068	2009.06.28	1497
Belcourt	416945	093I067	2009.06.28	898
Belcourt	417003	093I058	2009.07.21	1498
Belcourt	417004	093I068	2009.07.21	1198
Belcourt	417005	093I068	2009.07.21	1198
Belcourt	417006	093I068	2009.07.21	898
Belcourt	417007	093I068	2009.07.21	300
Belcourt	417008	093I068	2009.07.21	599
Belcourt	417009	093I067	2009.07.21	599
Belcourt	417010	093I058	2009.07.21	299
Belcourt	417011	093I058	2009.07.21	600
Belcourt	417012	093I058	2009.07.21	975
Belcourt	417013	093I058	2009.07.21	975
Belcourt	417015	093I059	2009.07.21	1201
Belcourt	417157	093I058	2009.12.21	300
Belcourt	417158	093I068	2009.12.21	75
Belcourt	417159	093I068	2009.12.21	75
Belcourt	417565	093I067	2009.01.09	1196
Belcourt	417604	093I068	2009.04.25	599
Belcourt	417605	093I068	2009.04.25	599
Belcourt	417623	093I058	Under Application	300
Total Belcourt				**19180**
Belcourt West	416921	093I048	2009.06.22	1502
Belcourt West	416922	093I058	2009.06.22	1501
Belcourt West	416923	093I057	2009.06.22	1499
Belcourt West	416924	093I067	2009.06.22	1498
Belcourt West	416925	093I067	2009.06.22	1497
Belcourt West	416926	093I066	2009.06.22	1496
Belcourt West	416927	093I076	2009.06.22	1345
Belcourt West	416928	093I076	2009.06.22	1345
Belcourt West	416929	093I076	2009.06.22	1195
Belcourt West	416946	093I029	2009.06.28	1425

Belcourt West	416947	093I029	2009.06.28	1208
Belcourt West	416948	093I038	2009.06.28	1508
Belcourt West	416949	093I038	2009.06.28	1507
Belcourt West	416950	093I048	2009.06.28	1505
Belcourt West	416951	093I048	2009.06.28	903
Belcourt West	416952	093I048	2009.06.28	902
Belcourt West	416961	093I029	2009.06.30	535
Belcourt West	416962	093I039	2009.06.30	302
Belcourt West	416963	093I039	2009.06.30	604
Belcourt West	417136	093I048	2009.12.14	451
Belcourt West	417137	093I048	2009.12.14	301
Belcourt West	417138	093I048	2009.12.14	151
Belcourt West	417139	093I048	2009.12.14	151
Belcourt West	417140	093I048	2009.12.14	76
Belcourt West	417141	093I058	2009.12.14	76
Belcourt West	417142	093I058	2009.12.14	76
Belcourt West	417143	093I058	2009.12.14	75
Belcourt West	417144	093I057	2009.12.14	75
Belcourt West	417145	093I039	2009.12.14	76
Belcourt West	417146	093I076	2009.12.14	75
Belcourt West	417147	093I076	2009.12.14	75
Belcourt West	417148	093I076	2009.12.14	299
Belcourt West	417149	093I076	2009.12.14	75
Belcourt West	417150	093I076	2009.12.14	150
Belcourt West	417151	093I066	2009.12.14	449
Belcourt West	417152	093I067	2009.12.14	75
Belcourt West	417153	093I067	2009.12.14	75
Belcourt West	417154	093I067	2009.12.14	75
Total Belcourt West				**26133**
Saxon-Omega	394080	093I030	2009.06.18	303
Saxon-Omega	394086	093I040	2009.06.18	302
Saxon-Omega	394087	093I040	2009.06.18	302
Saxon-Omega	394088	093I040	2009.06.18	302
Saxon-Omega	394089	093I040	2009.06.18	302

Saxon-Omega	394090	093I040	2009.06.18	302
Saxon-Omega	394091	093I040	2009.06.18	302
Saxon-Omega	394092	093I040	2009.06.18	302
Saxon-Omega	394093	093I040	2009.06.18	302
Saxon-Omega	394094	093I030	2009.06.18	302
Saxon-Omega	394099	093I030	2009.06.18	303
Saxon-Omega	394102	093I030	2009.06.18	303
Saxon-Omega	394103	093I030	2009.06.18	302
Saxon-Omega	394104	093I040	2009.06.18	302
Saxon-Omega	409666	093I040	2009.04.20	302
Saxon-Omega	409667	093I040	2009.04.20	302
Saxon-Omega	409668	093I039	2009.04.20	302
Saxon-Omega	409669	093I039	2009.04.20	302
Saxon-Omega	409670	093I039	2009.04.20	302
Saxon-Omega	409671	093I039	2009.04.20	302
Saxon-Omega	409672	093I039	2009.04.20	302
Saxon-Omega	409673	093I030	2009.04.20	303
Saxon-Omega	413871	093I030	2009.09.09	303
Saxon-Omega	413872	093I030	2009.09.09	303
Saxon-Omega	413873	093I030	2009.09.09	303
Saxon-Omega	413874	093I039	2009.09.09	302
Saxon-Omega	413875	093I039	2009.09.09	302
Saxon-Omega	413876	093I039	2009.09.09	302
Saxon-Omega	416860	093I030	2009.03.12	303
Saxon-Omega	416955	093I039	2009.06.29	1507
Saxon-Omega	416956	093I040	2009.06.29	302
Saxon-Omega	416957	093I040	2009.06.29	302
Saxon-Omega	416958	093I050	2009.06.29	301
Saxon-Omega	416959	093I050	2009.06.29	301
Saxon-Omega	416960	093I040	2009.06.30	906
Saxon-Omega	416964	093I040	2009.06.30	302
Saxon-Omega	416965	093I040	2009.06.30	302
Saxon-Omega	416966	093I040	2009.06.30	604
Saxon-Omega	416967	093I040	2009.06.30	302

Saxon-Omega	416968	093I030	2009.06.30	1208
Saxon-Omega	416969	093I029	2009.06.30	604
Saxon-Omega	416970	093I050	2009.06.30	301
Saxon-Omega	416971	093I050	2009.06.30	301
Saxon-Omega	416972	093I050	2009.06.30	904
Saxon-Omega	416973	093I039	2009.06.30	1509
Saxon-Omega	416974	093I039	2009.06.30	603
Saxon-Omega	416975	093I039	2009.06.30	603
Saxon-Omega	416976	093I030	2009.06.30	755
Saxon-Omega	416977	093I030	2009.06.30	1202
Saxon-Omega	417133	093I030	2009.12.14	138
Saxon-Omega	417134	093I030	2009.12.14	85
Saxon-Omega	417135	093I030	2009.12.14	139
Saxon-Omega	417162	093I040	2009.12.22	302
Saxon-Omega	417163	093I040	2009.12.22	604
Saxon-Omega	417164	093I040	2009.12.22	1207
Saxon-Omega	417165	093I030	2009.12.22	1208
Saxon-Omega	417166	093I040	2009.12.22	603
Saxon-Omega	417167	093I050	2009.12.22	1355
Saxon-Omega	417168	093I050	2009.12.22	76
Saxon-Omega	417169	093I050	2009.12.22	76
Saxon-Omega	417170	093I050	2009.12.22	76
Saxon-Omega	417171	093I050	2009.12.22	452
Total Saxon-Omega				**28206**
TOTAL				**73519**

Information pertaining to coal license tenure is posted on the British Columbia Ministry of Energy and Mines web site (current for January 5th, 2009). 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 by application (paper "staking"); claim posts are not required.

As far as can be reasonably ascertained, the property appears to be free of any significant environmental liabilities associated with previous exploration activities. The last operator (a senior company) undertook appropriate reclamation which met the standards of the day. The original, main access trails were de-commissioned, not fully reclaimed; they were re-activated during the 2005 drilling program. Old drill and adit sites were well reclaimed and, consequently, not easily identified.

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 over most of the property. Parts of the property and its immediate surrounds are covered by various tenures including petroleum and natural gas (conventional plus coal bed methane), forestry, wind farm, guide outfitting and trapping. High levels of natural gas exploration and development currently exist in the project area, although no gas wells have been drilled within the deposits areas that are the subject of this report. A number have been drilled on the property, but to the east of the main coal resource areas.

6.2 OWNERSHIP

Coal licenses that comprise the Belcourt Saxon project are owned by Belcourt Saxon Coal Limited. This private company is a joint venture, owned 50% by Western Canadian Coal Corporation (WCCC) and 50% by Peace River Coal. Western Canadian is a public company trading on the TSX and London stock exchanges. Peace River Coal (PRC) is a private, joint venture company owned by Anglo Coal Canada Limited (a subsidiary of Anglo American), NEMI Northern Energy and Mining Limited, and Hillsborough Resources Limited; Anglo retains majority interest in PRC and is operator of the company's Trend Coal Mine.

Belcourt Saxon project is operated under Belcourt Saxon Coal Limited Partnership. From May 2008 (i.e., through the 2005 drilling program and subsequent feasibility study stage) the limited partnership operated independently from either joint venture partner or associated company. Since June 2008, Anglo Coal has been operator.

The Belcourt property is subject to a royalty of 0.75% on gross revenue.

7 ACCESSIBILTY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

7.1 ACCESSIBILITY

The Belcourt property is remote relative to population centres, but is reasonably easy to access. Road access is south from Tumbler Ridge via paved secondary road. West of Stony Lake, this connects with the un-paved Wapiti, later, Red Deer Forest Service roads, that link with a gravel road built to provide access to an old oil/gas exploration site. These roads are maintained year-round in good, drivable condition in support of extensive gas-field development and operational traffic and forestry operations within the Belcourt area.

7.2 CLIMATE

The climate within the project area is characterized by long, cold winters and short, cool summers. Average annual summer and winter temperatures are about 10°C and -15°C, respectively. Frost can occur throughout the year, and the snowpack often 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. Precipitation ranges between 800 to 1,100 mm annually.

7.3 LOCAL RESOURCES AND INFRASTRUCTURE

The centre of the property is located about 170 km east-northeast of city of Prince George and 120 km southwest of the city of Grande Prairie (Alberta); the smaller cities of Fort St John and Dawson Creek are located approximately 180 km and 130 km to the north, respectively. These cities are serviced by regularly scheduled, flights from major western Canadian cities such as Vancouver, Edmonton and Calgary. The town of Tumbler Ridge is situated approximately 60 air kilometres north of the license block; this town was built in the mid-1980's to service the Quintette and Bullmoose coalmines. In good weather conditions, it takes about 1.5 hours to drive from the property to Tumbler Ridge and between 2.5 and 3.5 hours to travel to Dawson Creek, Fort St. John or Grande Prairie.

The location of the property with respect to regional and local population centres, roads, and rail lines is shown in Figures 6.1 and 6.2. The nearest railhead is the CN Rail Tumbler Subdivision, which terminates 12 km south of Tumbler Ridge at the Quintette Rail loadout. This is approximately 1,000 km by rail from the coal export facility at Ridley Terminal Inc., Prince Rupert, BC.

An airstrip suitable for light aircraft is located alongside Red Deer Creek, immediately adjacent to the property while a permanent, open, 150-room trailer camp is situated 6 km southeast of the airstrip.

Industrial activities conducted within the general area of the property include significant gas exploration and development and limited forestry. Other current land use includes guide outfitting, trapping, and recreational activities such as snowmobiling and driving ATV's.

7.4 PHYSIOGRAPHY

The property lies in the Rocky Mountains Foothills physiographic region. The Foothills consist of a series of ridges that parallel the Rocky Mountains to the west. The topography varies from rolling hills to a series of moderate- to steep-sided massifs that break to stretches of gently-sloping plateau, culminating in steep-sided ridges. The highest elevation within the areas targeted for mining is 1750 m while the lowest elevations are around 900 m.

Various surface materials and soils are present. Colluvium is the dominant material at higher elevation with Brunisolic soils below treeline. Podzols are developed in areas of better moisture supply. Poorly developed Regosolic soils are dominant in Alpine areas. At lower elevations, benchlands contain finer-textured morainal deposits with assorted Luvisolic soils. Major valleys may contain areas of finer-textured lacustrine and scattered organic deposits (mostly as bogs), glacio-fluvial fans and terraces.

The ridges are cut by water courses that generally flow in an easterly to northeasterly direction; the principal drainage in the north is the Wapiti River and in the south, Red Deer Creek. Secondary drainages are Little Prairie Creek, and Triad Creek; these drain into Red Deer Creek just west of where the Red Deer empties into the Wapiti River.

Vegetation in the area is predominantly boreal to sub-alpine coniferous forests in mid-to- late fire successional stages. Tree line in this region varies between 1700 and 1800 metres. 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 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, but merchantable stands of timber are present in areas of lower elevation. Recent logging, evidenced by large cut-blocks, has taken place in various parts of this area.

8 HISTORY

8.1 INTRODUCTION

Coal was first discovered in the area in 1793 and was exploited for limited local needs and as steam coal for railroad requirements. Global expansion of steel production in the mid-1960's stimulated worldwide exploration for metallurgical (or coking) coal. This led to exploration throughout the North-East Coal Block which, in the early 1980's, culminated in the development of the Quintette and Bullmoose coal mines. Project development included building the town of Tumbler Ridge, 129km of rail line, 95km of highway, 127km of high voltage transmission line, a new port at Ridley Island and upgrading the 752km of existing rail line from Prince George to the port at Prince Rupert.

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. Clean coal production in the years prior to closure ranged between 3 and 4 Mt/a.

Bullmoose Coal Mine began production in 1984 from the South Fork deposit, located 40km west of Tumbler Ridge. Coal production capacity was 2.3 Mt/a, although shipments toward the end of the mine's life ranged from 1.4 to 1.9 Mt/a. The Bullmoose Mine closed in April 2003.

Since 2004, four new open pit coal mines have opened within the North-East Coal Block. Two, the Wolverine and Trend South mines, are located in the Tumbler Ridge area and produce metallurgical coal from deposits once contained within the old Quintette property. The others, Pine Valley and Brule, are located in the Chetwynd area. The Brule mine produces PCI coal while Pine Valley (mining currently suspended) produces both PCI and metallurgical coal.

8.2 PRIOR OWNERSHIP

The original Belcourt coal property was acquired by Denison Mines Limited (Denison) in 1970 and consisted of 55 coal licenses totalling approximately 14,209ha. In April 1978, Denison entered into an agreement with Gulf Canada Resources, Inc. (Gulf) to form the Belcourt Coal Joint Venture (BCJV); Denison, through its subsidiary Denison Coal Ltd, was manager of the project. Shortly thereafter, the property expanded to 144 coal licenses covering an area of 36,442ha. The current Belcourt property covers the northern half of this earlier project. The two most advanced potential mine areas defined by BCJV were the Red Deer and Holtslander North deposits (now called Belcourt North and Belcourt South, respectively). These deposits never reached production due to a collapse in coking coal prices and 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. Denison subsequently fell into financial difficulties and, in the early 1990's, the Belcourt coal licenses reverted to the crown.

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, including parts of the area covered by the current licenses. These coal licenses were subsequently transferred to WCC, and formed the project upon which WCCC completed its initial public offering to become a publicly traded junior mining company. The Omega licenses lapsed and were later acquired by NEMI. In 2004/2005, a private company (0735513 B.C. Ltd.) acquired a block of coal licenses immediately south of the Belcourt property. These licenses comprise the Huguenot property; this area has historically been referred to (the BCJV) as the Holtslander South area.

8.3 SUMMARY OF PREVIOUS EXPLORATION

Initial exploration by Denison was carried out in 1971; the programme consisted of a limited geological reconnaissance to confirm the presence of coal seams within the Lower Cretaceous Gates and Gething Formations (see Section 9). Most of this work targeted the current Huguenot area, which was one of the main resource areas of the old Belcourt property until larger, potentially surface mineable, deposits were discovered at Belcourt North and Belcourt South. No other exploration occurred until 1975 when detailed geological mapping was carried out. Denison drilled two core holes in 1976 to ascertain seam thickness and obtain samples for coal quality determinations. One of these holes (BD7602) is located on the current Belcourt property. A trenching programme in 1977 focussed mainly on the area now covered by the Huguenot property. In 1978, a large exploration program was conducted across an expanded Belcourt property. The 1979 programme focussed mostly on the Belcourt North and Belcourt South open pit areas while exploration conducted in 1980 was restricted entirely to those deposits. The only exploration conducted on the Belcourt property after 1980 was in the late winter of 1998, when WCCC carried out a small rotary drilling programme in the northern part of Belcourt South.

The larger exploration programmes carried out between 1978 and 1980 included detailed geological mapping, hand trenching, diamond drilling, geophysical logging, core sampling, bulk sampling from adits, sample analysis, coal washing and coking tests. Topographic maps were prepared at various scales for general and detailed coverage from high- and low-level aerial photography and survey stations for ground control were established throughout the area. All drill holes and adit portals were surveyed and the topographic maps up-dated to incorporate these data. Reclamation was completed on areas of surface disturbance.

Detailed geological mapping was part of each exploration campaign between 1975 and 1981 and utilized a modified plane-table technique in combination with chain and compass traverses. Drill holes were logged using slim-line borehole geophysical tools. In most instances, suites of logs consisting of density, gamma ray, neutron, calliper, focussed electric (resistivity) and hole deviation were obtained. These logs were presented at a general scale of 1: 200 supplemented over the main coal seams with detailed logs at a scale of 1: 20.

Coal seam cores were described in detail, and core recoveries obtained by comparing the lithology logs to the detailed density geophysical logs. Sample increments were selected on a geological basis; geologists conducted all sampling. The entire core was removed from designated sample intervals and sent for analysis. Coal seams exposed in trenches were described in the same manner as core.

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. An abbreviated set of analyses was performed on coal seams where the core recovery was less than 40%. Coal logging (for drill core and trenches) was conducted according to prescribed guidelines so that a consistent approach was followed from one year to the next and from one project to another. These guidelines were modified as required from experience gained in practice. The methods used for sample selection met industry standards of the time and are essentially the same as used today.

Exploration activities conducted by previous operators on ground covered by the current Belcourt property are summarized in Table 8.1. Major items include: 22 core holes totalling 7,406m; 138 hand and mechanical trenches; and, bulk sampling from 5 coal seams accessed from 4 adits. The locations of drill holes, adits and (selected) trenches that lie within the property are shown in Figures 8.1 and 8.2. Results from this work are incorporated into ensuing chapters of this report.

TABLE 8.1:
SUMMARY OF EXPLORATION ACTIVITIES – BELCOURT PROPERTY, 1971 – 1998

Year	Drill Holes	Metres Drilled	Geophysical Logs	Hand/Mech Trenches	Adits	Geological Mapping	Other	Assess. Report
1971	-	-	-			Recon.	AP/Topo	457
1975	-	-	-			1: 2500	AP/Topo	458
1976	1 (DHQ)	54	-			-	Topo	460
1977	-	-	-	1 (h)		-		461
1978	5 (DHQ)	2,080	d,g,n,c,fr,dev	30 (h)		1: 2500	Topo	462 / 463
1979	5 (DHQ)	1,648	d,g,n,c,fr,dev	56 (h) / 37 (mech)	2 (3 Seams)	1: 2500		465
1980	11 (DHQ) / 25 (R)	3,624 / 2719	d,g,n,c,fr,dev	13 (h)	2 (2 Seams)			466
1998	8 (R)	618	d,g,n,c,fr,dev					none
Total	22 (D) / 33 (R)	7,406 (DHQ) + 3,337 (R)		137				

Note: (D/HQ) – Diamond Drill Hole / Core Size. AP/Topo – Air Photography and Topographic Mapping. d,g,n,c,fr,dev. – density, gamma ray, neutron, caliper, focused beam resistivity, deviation survey logs. (h) – hand dug trench, (mech) – mechanically excavated trench.

Denison filed assessment reports with the B.C. Government detailing exploration activities, geological interpretations, reserve estimations and coal quality parameters for each of their exploration campaigns. No assessment report was filed for WCCC's 1998 programme. Various geological, geotechnical and environmental studies were completed in conjunction with mine engineering studies for large-scale open pit mining in addition to evaluations of coal preparation requirements and coal product expectations. Wright Engineers Ltd (WEL) completed a pre-feasibility study in 1980 followed by a detailed feasibility study 1982. This latter study called for annual production of 4 million clean coal tonnes from an open pit developed on the Belcourt North deposit.

Data available from past exploration programmes appear to be in good order and form an excellent foundation for further work. The approaches taken to drilling and sampling are similar to current exploration practices. Geological base maps, mostly at a scale of 1: 5000, exist for the main target areas; they present stratigraphic and structural data and show the locations of drill holes, trenches, plus rock and coal seam exposures. An exhaustive check on the availability of the data has not been undertaken but most of the descriptive and geophysical logs generated during these programmes are available, in addition to coal quality data for all major coal seams. Structural cross-sections, stratigraphic and coal seam correlation charts, seam thickness isopach, coal quality and structure contour maps are also available.

Denison and others reported a number of tonnage estimates for the property. At the time, the tonnages were referred to as “reserves.” However, under NI 43-101, such estimations would now be called resources. Current resource estimates are presented in Section 19.

9 GEOLOGICAL SETTING

The Belcourt Saxon properties lie within a belt of Mesozoic strata that form part of the Rocky Mountain Foothills of northeastern British Columbia. These strata were uplifted during the Laramide Orogeny and now form portions of the eastern flank of the Rocky Mountains. Thrust faulting and intense folding strongly affected the strata during the mountain-building phase.

Economic coal seams are present in Lower Cretaceous strata belonging to 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 those within the Gates and Gething Formations; they are believed to have formed within deltaic and marine strandplain depositional environments. Marine deposits of the Moosebar Formation separate these two phases of continental sedimentation. Minor coal seams are present within stratigraphically higher and lower formations; however, such coals are thin and considered not to hold any economic potential.

The stratigraphic sequence in the study area is shown in Figure 9.1. A regional geology map that illustrates the relationships between the various formations that occur within and adjacent to the Belcourt property and shows the main structural geological features is presented as Figure 9.2.

The stratigraphic succession exposed in the Belcourt area ranges in age from late Triassic to Upper Cretaceous. Triassic rocks are of limited distribution, and are restricted to small areas located in low valleys that expose the core of a regional anticlinorium. These are overlain by an Upper Jurassic to Upper Cretaceous sequence of inter-bedded shales and clastic lithologies of both marine and continental origin; most of the coal-bearing strata reflect continental deposition.

Brief descriptions of the Cretaceous formations encountered in this region, from oldest to youngest, are presented below (see also Figure 9.1).

9.1 CADOMIN FORMATION (BULLHEAD GROUP, LOWER CRETACEOUS)

The Cadomin Formation is the basal unit of the Lower Cretaceous Bullhead Group and lies unconformably on Minnes Group strata. This formation is predominantly composed of massive to poorly bedded conglomerate; a layer of coarse-grained sandstone, located immediately below the conglomerate, is included within this formation. Typically, the conglomerate is poorly sorted. It consists of well-rounded cobbles, boulders and pebbles of black, white and green chert, white and grey quartzite and quartz, and (in places) minor limestone. Clasts are cemented by fine- to coarse-grained sandstone matrices, although horizons may also be clast supported. Due to its resistant nature, the Cadomin is usually well exposed and forms a prominent marker horizon that is traceable throughout much of the property.

9.2 GETHING FORMATION (BULLHEAD GROUP, LOWER CRETACEOUS)

The Gething Formation conformably overlies the Cadomin. The Gething Formation forms the upper unit of the Bullhead Group. It is primarily a non-marine sequence composed of fine- to coarse-grained sandstones, conglomerate, siltstone, carbonaceous claystone, and thin coal seams. Regionally, this formation varies in thickness due to a number of depositional factors including facies changes. It attains a thickness of 385m at Bullmoose Mountain but ranges between 60 and 90m thick at Belcourt.

Along the Belcourt trend, conglomeratic units occur within the middle portions of the formation and towards its base. At Belcourt, the upper portions of the Gething are dominated by a series of brown, calcareous, lithic, thinly bedded (0.5 to 1m) sandstones containing pebbles and coal stringers. These sandstone beds are cross-laminated and show evidence of soft sediment deformation and bioturbation.

Historical exploration reports describe three coal zones named, in ascending stratigraphic order, Zones A, B, and C. Although projected across the length of the property, correlations are tentative due to variable coal zone development and limited data. The lowermost zone (A) occurs just above the Cadomin contact. It appears to be the best developed of the three zones and contains two potential mining sections, each in excess of 1.5m thick. A thick sandstone unit separates the middle coal zone (B) from Zone A. Zone B consists of several thin, poorly developed seams capped by a thick conglomerate unit. The upper zone (C) consists of two thin seams located close to the upper formational contact.

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 which commonly has a muddy matrix containing aphanitic glauconite.

9.3 MOOSEBAR FORMATION (FORT ST. JOHN GROUP, LOWER CRETACEOUS)

The Moosebar Formation rests abruptly on the Gething Formation. The contact is taken at the base of a thin glauconite-bearing conglomerate, which represents the onset of the Moosebar marine transgression, and is interpreted to represent a minor disconformity.

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 20m of dark grey to black shale grading upward to laminated siltstone and claystone. These beds, in turn, grade upward into a sequence of alternating claystone, siltstone, and very fine-grained sandstone. The sandstone beds thicken and become more numerous upwards, together with an overall coarsening of grain size, with an attendant decrease and gradual disappearance of siltstone and claystone. This inter-layered sequence of sandstone, siltstone, and claystone comprises the upper part of the formation and represents the pro-deltaic transition from marine sediments to massive continental sands at the base of the overlying Gates Formation.

Traditionally, the contact between the Moosebar and overlying Gates Formation is taken at the base of the first thick succession of sandstone (typified by the first sandstone that is at least one metre in thickness). The arbitrary selection of the Moosebar - Gates contact contributes to regional variability in formation thickness. Within the Belcourt property, however, the thickness of the Moosebar is relatively constant, varying between 66 and 72m.

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

9.4 GATES FORMATION (FORT ST. JOHN GROUP, LOWER CRETACEOUS)

The Gates Formation conformably overlies the Moosebar Formation and contains the largest systematically explored coal resources within the North-East Coal Block. 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. In the project area, no sub-division of the formation has been attempted other than recognition of the Torrens member. At Belcourt, the Gates Formation ranges in thickness from 304m (Belcourt North) to 312m (Belcourt South).

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 230km (Lamberson and Bustin, 1989).

The Torrens member forms the lowermost sub-division of the Gates Formation. It includes those portions of transition zone strata above the Moosebar contact plus an overlying, resistive, sandstone unit. This upper sandstone is a prominent cliff- and ridge-forming unit that outlines the various structural configurations of the coal measures in this region. In Belcourt South, the Torrens member is approximately 45m thick; it thickens northward, ranging between 60 and 65m in Belcourt North.

The Torrens is overlain by several cycles of coal deposition, most of which are contained within a stratigraphic interval of approximately 200m. The cycles represent fining-upward sequences that culminate with coal deposition; typically, each lies above a coarsening-upward sandstone sequence. Coal seams developed in the lower cycles show the greatest seam thickness and continuity. In some instances, coal seams may coalesce to form one thicker continuous seam, or a zone composed of several minor coal seams with aggregate thicknesses up to 10m.

In the Quintette – Bullmoose area, the middle Gates is overlain by a massive medium-to-coarse-grained, conglomeratic sandstone and pebble conglomerate sequence, informally called the Babcock member. This conglomeratic unit is absent at Belcourt, although a thick, sandstone-dominated sequence with occasional conglomeratic lenses, located above Seam 5 may be its equivalent. It is overlain by predominantly finer grained lithologies consisting mostly of intercalating fine-grained sandstone, siltstone and claystone with several thin coal seams.

9.5 HULCROSS FORMATION (FORT ST. JOHN GROUP, LOWER CRETACEOUS)

The Hulcross Formation is a marine sequence predominantly composed of rubbly or blocky, medium to dark grey, sandy shale with thin interbeds of siltstone and very fine-grained, often laminated or cross-laminated, sandstone. Across the Belcourt property, the Hulcross varies from approximately 50 to 55m thick; regionally, there is a marked thinning towards the southeast.

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, with thicker sandstone interbeds towards the top. The contact with the overlying Boulder Creek Formation is gradational.

9.6 BOULDER CREEK FORMATION (FORT ST. JOHN GROUP, LOWER CRETACEOUS)

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 20m thick; coarse-grained sandstone, conglomerate beds and carbonaceous layers are common. The middle unit is approximately 30m thick and consists of predominantly grey to black claystone and siltstone with occasional coaly and carbonaceous horizons. The upper 35m consists mostly of fine- to coarse-grained, grey to brown, sandstone and grey siltstone. A thin pebble conglomerate in a siltstone to claystone matrix marks the upper contact.

The thickness of Boulder Creek Formation tends to increase where the Hulcross thins. At Belcourt, it averages about 85m.

9.7 SHAFTESBURY FORMATION (FORT ST. JOHN GROUP, LOWER CRETACEOUS)

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.

9.8 Coal Seam Development

9.8.1 Gething Formation

Three coal zones are present, the best developed of which appears to be the lower zone that occurs near the contact with the Cadomin Formation. This zone consists of two coal seams, each greater than 1.5m thick. Thick sandstone separates the lower from the middle coal zone, which consists of several thin, poorly developed coal seams. The upper zone consists of two or three thin coal seams located close to the Moosebar contact. The stratigraphic position of the upper coal zone appears to be similar to that of the Bird-GT zone, which is mined at the Trend Mine approximately 70km northwest of Belcourt North.

Geological mapping, trenching and drilling carried out by Denison suggest that the Gething coal seams offer limited economic potential. However, additional work is warranted to fully evaluate these coal measures, as Denison reported 9.5m of coal in a trench south of Holtslander Creek. The possibility exists that structurally or stratigraphically thickened coal seams may provide an opportunity for localized, small-scale development.

9.8.2 Gates Formation

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

On the Belcourt property, the coal seams and coal zones are numbered in ascending stratigraphic order with 1 representing the oldest and 9 the youngest. The term ‘coal zone’ was used by Denison to encompass a number of closely-spaced coal horizons within a distinct lithological unit. These lithological 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). Where possible, historical seam/zone/coal split designations are maintained, although some modifications have occurred based upon results from the 2005 drilling.

Of the nine coal seams and zones, only five (Belcourt South) or six (Belcourt North) coal seams are currently considered to present any economic potential. Correlations have been established for the main coal seams within each of Belcourt North and Belcourt South, although correlations between these deposits have not been definitively demonstrated for every seam or coal zone. The Torrens sandstone provides a marker horizon for the base of the Gates Formation coal measures. The more important characteristics of the seams that reach minimum mining section thickness criteria (i.e., 1.0m) within each of the deposit areas are summarized in Section 11.

9.8.3 Structure

Structural geology within the region is characterized by large-scale folding with associated thrust faults within alternating layers of competent sandstone units and incompetent mudstone and coal strata. The regional structural trend is northwest-southeast although structural styles vary across this trend, reflecting differences in lithology and distance from the Front Ranges of the Rocky Mountains.

Folding within stratigraphic units dominated by finer-grained lithologies (such as parts of the Minnes Group) can be extremely complex, typified by short-wavelength, chevron folds. More competent sequences (such as Fort St. John Group strata), commonly form macroscopic, long-wavelength folds, ranging from relatively tight anticline-syncline pairs to box folds. Less competent components contained within the broader competent sequences maintain the same structural style as the unit as a whole. Typically, major fold axes plunge gently to moderately northwest or southeast. Folding on major limbs is uncommon but, where present, varies from gentle warps to chevron folds.

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 southeast, although northeasterly-dipping thrusts are present. Within the major thrust sheets, faulting preceded folding; consequently, some thrusts are folded. On a regional scale the large thrust faults display staircase-type geometry, characterised 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. This is not always the case, however, particularly where smaller structures are involved and where thrusts are dying out.

The main structural feature in the Belcourt region is the broad, northwest-plunging 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. From the core eastward, the Cretaceous succession is continuous, the youngest strata being those of the Kaskapau Formation. The Belcourt property is located along the northeastern limb of the anticlinorium. The area of primary interest is confined to a narrow, northwesterly-trending band of tight to relatively open folds and associated, southwest-dipping thrust faults that have placed older units upon younger.

The structural geology of Belcourt North is dominated by a north-westerly-trending anticline - syncline pair. The western syncline is an asymmetrical fold that is partially truncated along its western flank by a large thrust. The eastern anticline has box-like fold geometry; strata occupying the east limb of this structure have fairly uniform steep, northeasterly dips that, in places, may pass through vertical to be steeply overturned towards the southwest.

Belcourt South lies within a thrust-bounded, open synclinal structure referred to as the Holtslander Synclinorium. In the northern half of the deposit, three minor, upright, anticline-syncline pairs occupy the broad nose of the synclinorium. The southern portion of the deposit is located on the southwestern limb of the synclinorium where the strata dip moderately towards the northeast.

10 DEPOSIT TYPES

This section discusses the designation of the Belcourt coal deposits, in terms of both 'Deposit Type' and 'Geology 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 Belcourt property includes both moderate and complex geology. 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 1.5km) 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 Belcourt North deposit is divided into two geology types:

1. A western portion that contains a sometimes tight, steep-limbed syncline, considered to be Complex.

2. An adjoining, relatively open, anticline with moderately-dipping central and steeply-dipping eastern areas, taken to be Moderate.

The entire Belcourt South 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."

Both of the Belcourt deposits are considered potentially surface mineable deposits.

11 MINERALIZATION

11.1 BELCOURT NORTH

Six coal seams provide potentially mineable thicknesses; these are, in ascending order, Seams 1, 3, 5, 6A, 7, and 8A. Although other splits within coal zones 6 and 8 might locally exceed one metre in thickness, only Seams 6A and 8A are persistent enough to present mineable targets across the deposit. The distributions of the Gates coal seams and other stratigraphic units are shown on the geological map (Figure 11.1).

Thickness ranges for the coal seams, together with average thicknesses (derived from drilled intersections), are presented in Table 11.1. Based upon a summation of the average thicknesses, the cumulative thickness for all seams is approximately 19m. Within parts of Red Deer Syncline, certain coal seam intersections exhibit limited structural thickening or thinning. Typically, such intervals show minor to moderate differences compared to thickness ranges established from other portions of the deposit; affected intersections are omitted from the thickness data presented in Table 11.1.

TABLE 11.1
BELCOURT NORTH SEAM THICKNESS

Seam	Average Thickness (m)	Thickness Range (m)	
		Minimum	Maximum
8A	1.18	0.83	1.68
7	1.48	1.07	2.33
6A	1.19	0.74	1.81
5*	4.59 / 0.95	2.15 / 0.47	6.88 / 2.13
3	2.76	1.78	3.58
1	6.90	4.42	9.34
Aggregate Thickness	19.05		

Note: 5* = 5A / 5B

11.1.1 Seam 1

Structurally undisturbed intersections range in thickness from 4.42m to 9.34m and average 6.90m. Several structurally-thickened intervals are found within the hinge zone of Red Deer Syncline. These reach up to 10.43m in thickness; a 21.2m intersection in the nose of the syncline is believed to have been drilled along part of the coal seam.

Seam 1 comprises a single mining section characterized by a thick, relatively clean, lower section and an upper section containing a carbonaceous claystone band located approximately 0.5 to

0.75m below the roof. The roof and floor of the seam are claystone (shale). The inter-seam separation between Seams 1 and 3 typically ranges from 29 to 35m, although it thins to 20m at the northwest end of the deposit.

11.1.2 Seam 3

Seam thickness typically varies between 1.78m and 3.58m, averaging 2.76m. Thickened sections in the hinge of the syncline range as high as 5.37m and the seam thins to 1.03m along the eastern limb of the Red Deer Syncline. Typically, Seam 3 contains no significant rock partings although a thin band is sometimes present near the base. The seam roof is composed of highly carbonaceous claystone with coaly bands while the floor consists of a thin layer of claystone that grades downwards to inter-layered siltstone and fine-grained sandstone. The interval between Seam 3 and Seam 5 is very thin, ranging from 3 to 9m.

11.1.3 Seam 5

This seam is divided into three parts; two coal splits (a lower split referred to as 5A, and an upper split, 5B) separated by an inter-banded coal and rock interval (5C). The 5A split, is the thickest part of Seam 5 and is characterized by relatively clean coal with a 0.1 to 0.7m rock band positioned between 0.5m to 1m from the top. The 5B coal split is typically free from rock bands. It thins, and eventually disappears northwest of drill hole BND05-04 (located on the northeast limb of Red Deer Anticline). Interval 5C contains variable amounts of coal and rock and, at best, is a high to very high ash portion of the seam.

Typical thicknesses for Seam 5 (5A, 5B, plus 5C) fall between approximately 5 and 10m. Split 5A ranges from 2.15m to 6.88m and averages 4.59m. Within the syncline, thickened intervals reach 7.94m, while structurally thinned intersections (to 0.71m) are present along the eastern limb. The 5C interval ranges in thickness from 0.71 to 5.10m. Split 5B varies between 0.4m and 2.13m, averaging 0.95m.

The roof of Seam 5 is a carbonaceous to coaly claystone with associated thin coal splits. Where 5B split is absent, the roof is formed by the 5C coal and rock interval. The floor of Seam 5 is composed of inter-banded carbonaceous and non-carbonaceous claystones, with occasional thin coaly horizons. Seams 5 and 6A are separated by 64 to 91m of thick sandstones, with interbedded siltstones and minor claystones; the sandstone horizons sometimes contain conglomeratic lenses.

11.1.4 Seam 6A

This coal seam forms the lowest coal split within Zone 6. The zone ranges in thickness between 20 and 34m and is represented by three seams, (6A, 6C, and 6D) which reach 1m or greater, plus a thin coaly zone designated as 6B. Only Seam 6A persists across the deposit and so, is the only coal split from Zone 6 evaluated for mining.

Seam 6A varies in thickness between 0.74m and 1.81m, averaging 1.19m. The seam is relatively clean although a thin rock/poor coal band in the lower half of the seam is sometimes present. The roof and floor consist of carbonaceous claystone. The interseam thickness between Seam 6A and Seam 7 varies from approximately 28 to 44m.

11.1.5 Seam 7

This seam ranges in thickness from 1.07m to 2.33m and averages 1.48m. The top of Seam 7 is generally free of partings except along the northern parts of the northeast limb of Red Deer Anticline where a thin rock band is present. The bottom two-thirds of the seam tends toward higher ash with one to two thin rock bands. The roof and floor of Seam 7 are composed of claystones. The interval between Seam 7 and Seam 8A ranges from approximately 26 to 28m in thickness.

11.1.6 Seam 8A

This coal seam forms the lowest coal split within Zone 8. The zone ranges in thickness between 11 to 14m and contains two seams, 8A and 8B. Only Seam 8A is sufficiently developed to be evaluated for mining.

The thickness for Seam 8A ranges from 0.83m to 1.68m, averaging 1.18m. The thinner intersections of this coal seam are generally located along the northeast limb of Red Deer Anticline, northwest of drill hole BND05-02. A thin rock parting is often present near the centre of this seam. Another, thinner, band is sometimes present above the floor. Both the roof and floor of the seam are composed of claystone.

11.1.7 Structure

The structural geology of Belcourt North is illustrated on the geology map (Figure 11.1) and structure contour map for Seam 1 (Figure 11.2) and is shown on the cross-sections (Figures 11.3 to 11.5). The northwest-trending anticline - syncline pair that form the Belcourt North deposit are named the Red Deer Anticline and Red Deer Syncline. Overall, both folds plunge to the southeast at approximately 8° although, in detail, the plunge of each fold is variable. In the southeastern portions of the deposit, the folds outline a step-like structure; this changes to box-like fold symmetry towards the northwest. The western limb of the syncline is bounded by the westerly-dipping Red Deer Thrust, which places older, Minnes Group strata on top of Gates coal measures.

A number of smaller, reverse faults are found within and adjacent to the hinge zone of the syncline; these are interpreted to be associated with thrusting.

The Red Deer Anticline is an open, asymmetric fold with a steep, southwest-dipping axial plane. The northeast limb is characterized by steep to sub-vertical bedding. Dips vary from 50°NE near the nose and range from 75°NE to 85°NE along the limb's northwest extension; in places bedding is vertical or overturned, to dip steeply towards the southwest. Occasional minor, steep to sub-vertical reverse faults are present along this limb; they cut across bedding at relatively low angles. Dips on the long southwestern limb of the anticline are towards the south-southeast and typically range between 15° and 25°.

The geometry of the Red Deer Syncline varies from south to north. In the south, the syncline is asymmetric, with a very steep to sub-vertical western limb and shallow to moderately-dipping eastern limb. The fold tightens and the fold axis becomes more upright towards the northwest (i.e., towards the nose of the fold) as evidenced by steeper dips along the eastern limb and along the southwest-dipping axial plane. Near the nose of the syncline, dips on the east limb approach 50°SW while those on the west limb vary between 65°NE and 70°NE. The plunge of the syncline reaches 15° in the nose but flattens to 1° to 2° in the southeast. The syncline is cut by a series of high-angle, west-dipping, reverse faults that are considered splays from, or otherwise associated with, the Red Deer Thrust.

Minor structural thickening of coal seams exists along the axial portion of the Red Deer Syncline and several instances of structural thinning are recorded along the fold limbs.

11.2 BELCOURT SOUTH

Within Belcourt South, a total of seven coal seams and splits provide potentially mineable intervals. These are, in ascending order, Seams 1 (divided into Upper and Lower), 3, 5, 6 (divided into Upper and Lower), and 8. One of the coal splits developed within coal zone 7 (Seam 7B) sometimes exhibits a thickness in excess of one metre. However, these thicker intervals cover only a small area and are not, at this time, considered to provide mineable targets. Seam and zone designations are generally consistent with those used by Denison in historical reports. The distributions of the stratigraphic units and of the main Gates coal seams are illustrated on the geological map (Figure 11.6).

Thickness ranges for the coal seams, together with average thicknesses (derived from drilled intersections), are presented in Table 11.2. Based upon a summation of the average thicknesses, and taking into account the distribution of the coal seams within the deposit, the cumulative thickness for all seams is approximately 13.5m. There is no evidence of thickening or thinning of coal seams due to structural deformation.

TABLE 11.2
BELCOURT SOUTH SEAM THICKNESS

Seam	Average Thickness (m)	Thickness Range (m)	
		Minimum	Maximum
8	1.75	1.46	2.08
6U[1]	2.18	1.37	3.19
6L	1.12	0.64	1.74
5	5.05	3.81	9.53
3[2]	1.62	1.09	3.52
1U[2]	3.14	1.23	5.87
1L	2.12	1.00	4.98
Aggregate Thickness	13.51		

Notes: 1. Restricted to southern half of deposit. 2. Restricted to northern half of deposit.

11.2.1 Seam 1

Seam 1 is present throughout the deposit, although its development varies considerably from northwest to southeast. The seam consists of up to six main coal plies separated by rock bands of variable thickness; in ascending order, the coal plies are 1A to 1F. Coal plies 1A to 1D form Seam 1 Lower, while plies 1E and 1F comprise Seam 1 Upper.

The thickness of Seam 1 Lower mining sections ranges from 1.00m to 4.98m and averages 2.12 metres. The proportion of coal contributed by each ply varies from north to south; however, plies 1A and 1B are the thickest. In the north, ply 1A provides the only mining target whereas plies 1A and 1B comprise the mining section in the central parts of the deposit. Throughout most of the south, ply 1B is the main coal interval. Plies 1C and 1D are mineable together with 1B southeast of cross-section 31300; all four plies form one mining section southeast of cross-section 30500. The roof of Seam 1 Lower is generally composed of carbonaceous and non-carbonaceous claystone and minor coal plies, depending upon which plies are considered potentially mineable.

The thickness of the 1D/1E parting increases from north to south, varying from 0.54m in the north to 12.5m in the south.

Seam 1 Upper provides coal plies of economic interest only in the northern half of Belcourt South. This coal interval ranges between 1.23m and 5.87m in thickness and averages 3.14 metres. For most of this northern area, plies 1E and 1F comprise one mining section, averaging 3.72m in thickness. Further south, only ply 1F reaches potentially economic thickness, averaging 1.84

metres. Typically, both the roof and floor of Seam 1 Upper are composed of carbonaceous claystones. In the southern half of Belcourt South, as the parting between plies 1D and 1E thickens, ply 1F thins and eventually disappears.

From north to south, the interval between Seams 1 and 3 varies from approximately 30m to 80m in thickness. Sandstone lenses thicken toward the south and contain increasing amounts of conglomerate.

11.2.2 Seam 3

Potentially economic widths occur only in the northern half of Belcourt South. Mining sections range from 1.09m to 3.52m and average 1.62m. Thin rock bands may be present either near the top or just above the base of the seam. The roof and floor are primarily composed of claystone to silty claystone. The interval between Seam 3 and Seam 5 ranges in thickness from about 30m in the south to 50m in the north. It is primarily composed of silty claystone and siltstone, overlain by chert-pebble conglomerate lenses that fine upward into sandstone units and then siltstones. In the north, individual conglomerate units reach in excess of 6m in thickness and occur slightly above the roof of Seam 3.

11.2.3 Seam 5

Seam 5 is the most consistently developed coal seam within Belcourt South and maintains potentially mineable thickness over the length of the deposit. The overall thickness of Seam 5 varies from 4.41m to 10.66m, although this range includes an interval of inter-banded coal and rock at the top of the seam. In the northern sector of the deposit this coal – rock zone is excluded from the mining sections; it is included, in whole or in part, towards the south, where the rock bands diminish in thickness. Mining section thicknesses range from 3.81m to 9.53m and average 5.05 metres. In the north, the roof of Seam 5 mining section comprises highly carbonaceous claystone with coal splits; in the south it is a silty claystone. The floor consists of claystone interbedded with siltstone and sandstone.

The interval between Seam 5 and Seam 6A varies from approximately 25m in the south, to 57m in the centre of the deposit, to 45m in the north. The central area of the deposit contains significant coarse sandstone and thicker conglomerate units which tend to thin and become finer grained to the north and south.

11.2.4 Seam 6

This coal zone is composed of four main coal plies separated by rock bands of variable thickness; in ascending order, the coal plies are named 6A to 6D. The overall thickness of the zone varies from 6.12m in the south to 11.30m in the north due, primarily, to a widening of the interval between plies 6C and 6D. Coal ply 6A is designated as Seam 6 Lower while ply 6B and, in places, ply 6C comprise Seam 6 Upper.

Seam 6 Lower varies in thickness from 0.64m to 1.74m, and averages 1.12m. It typically contains thin, higher-ash coal or rock partings near the centre and at the top of the ply. Intersections thinner than 1m, are found in several drill holes located in the southern half of the deposit. The floor of this mining section consists of carbonaceous claystone. The 6A/6B parting is a competent, poorly-bedded, siltstone. Where both Seam 6 Lower and Seam 6 Upper form independent mining sections, the 6A/6B parting averages 1.73m in thickness.

Seam 6 Upper is composed of ply 6B and, south of cross-section 31300, ply 6C. This seam ranges in thickness from 0.68m to 3.19m; averaging 2.18m. Seam 6 Upper only provides a mining section in the southern and central parts of the deposit. Thin rock bands are invariably present near the centre and top of ply 6B. The 6B/6C parting thins towards the south. Where included as part of Seam 6 Upper, ply 6C is relatively free of rock bands. Roof lithologies consist of carbonaceous claystone with thin coal bands.

In the central portion of Belcourt South (between drill holes BSR05-26 and BD 7904), Seams 6 Lower and 6 Upper, including the inter-seam rock parting, have been combined into a single mining section and grouped with Seam 6 Lower. Folding associated with the Holtslander North Thrust, provided difficulties in modeling these mining sections independently. This resulted in a thicker than usual Seam 6 Lower mining section, with resultant high ash. Within this portion of the deposit, ply 6A ranges from 0.85m to 1.74m in thickness and averages 1.18 metres. The 6A/6B parting varies between 0.28m and 2.67m, and averages 0.85metres. Ply 6B ranges from 0.68m to 3.19m in thickness and averages 1.53 metres. Future work should attempt to separate the two mining sections and, wherever possible, eliminate the intervening rock parting.

The inter-seam strata between Zone 6 and Seam 8 varies from approximately 35m to 57m in thickness. The thinner intervals are found in the central parts of Belcourt South while the thicker, southern, intervals include coarse sandstone and conglomerate lenses. Coal Zone 7 containing up to three thin coal plies (designated 7A to 7C) is located approximately 20m to 25m below Seam 8. In the northern part of the deposit, ply 7B is occasionally greater than one metre thick but characteristically includes an upper and a lower rock parting that provides a high ash content. Currently, 7B is considered uneconomic for mining.

11.2.5 Seam 8

This seam ranges between 1.46m and 2.08m, and averages 1.75m in thickness. It contains a clean lower section and a thin rock band or high-ash zone near its roof. Both the floor and roof are composed of carbonaceous claystone and claystone with occasional coaly stringers. Historically, this seam formed the middle ply (8B) of Coal Zone 8.

11.2.6 Structure

The structural geology of Belcourt South is illustrated on the geology map (Figure 11.6) and the structure contour map for Seam I Lower (Figure 11.7) and is shown on the cross-sections (Figures 11.8 to 11.10). The deposit is contained within a broad, southeast-plunging synclinal structure referred to as the Holtslander Synclinorium. The synclinorium is cut by a major folded thrust fault, the Holtslander North Thrust, which divides Belcourt South into northern and southern sectors.

In the northern sector, the synclinorium contains three minor, open, anticline-syncline pairs. Two of the fold pairs are located within the hinge zone of the synclinorium; fold axes plunge towards the southeast between 8° and 17°. Dips along the flanks of these folds are mostly to the east, east-southeast, and south-southwest at angles between 18° and 25°. The long, east-dipping limb of the western syncline dips between 25° and 30°. This long limb also forms the eastern limb of the western anticline-syncline pair, and represents part of the western limb of the Holtslander Synclinorium.

The western fold pair is located in the footwall of the Holtslander North Thrust, where that fault cuts across the southwestern limb of the synclinorium. The plunges of the fold axes vary such that the plunge of the anticline increases towards the southeast, while the plunge of the syncline decreases to the southeast. Overall, the plunge along these fold axes varies between 5° and 13°. Strata on the shared limb of the two folds dip to the south at 20° while dips along the short, western limb of the syncline are in the order of 25°SW.

The southern sector of the deposit covers relatively uniform, easterly-dipping coal measures that also comprise the southwest limb of the Holtslander Synclinorium. Except for some minor folding located immediately above the Holtslander North Thrust, the structure is near homoclinal. Bedding in the northern part of this sector dips from 15°NE to 20°NE; dip values increase to 35°NE and 40°NE at the southern end.

Two major thrust faults are present in Belcourt South; these are the Holtslander North Thrust and the Red Deer Thrust. The Holtslander North Thrust cuts across the western limb of the syclinorium and divides the deposit into two sectors, while the Red Deer Thrust defines the northeastern limit of Belcourt South. Several other minor faults are also present that appear to be minor splays off the two main thrust faults.

12 EXPLORATION

BSJV carried out exploration at Belcourt in 2005, as part of a much larger programme that included exploration on the Saxon and Omega projects. The purpose of this work was to confirm and refine resources previously outlined by Denison and BCJV between 1970 and 1980. The 2005 fieldwork commenced in late June and drilling ended during the third week of January 2006; core logging was completed by late February. On completion of the larger program, 144 holes (52 diamond drill holes and 92 air rotary holes) had been drilled for a total of approximately 22,500m, together with 18 large (6") diameter core holes for bulk samples.

Exploration conducted specifically on Belcourt started in late June 2005; work on Belcourt North finished in mid-December but extended into late January for Belcourt South. Drilling at Belcourt accounted for 100 boreholes; this included 21 diamond drill holes for a total of 3,922m and 79 air rotary holes totalling 11,364m. Most of these holes were strategically spaced to meet NI 43-101 compliant resource/reserve requirements (see Section 19) as well as to provide additional data for seam correlation, geological structure and coal quality. Two holes (on Belcourt North) were drilled in non-coal-bearing strata to obtain samples for ARD testing.

Fieldwork also included access trail construction, limited trenching, and associated geological activities. Twelve large diameter (6") cores were taken from the three main coal seams in each deposit area (two holes per seam) to provide bulk samples. These were submitted for detailed coal characterization, washability, and carbonization tests. Initially, personnel were housed at a local, open camp but were later moved to a BSC-dedicated trailer camp. Table 12.1 summarizes the main exploration activities carried out on each deposit.

TABLE 12.1
SUMMARY OF 2005 EXPLORATION ACTIVITIES

Deposit	Drill Holes	Depth (m)	Geophysical Logs	6" – Diameter Core Holes	Trenches
Belcourt North	11 (DHQ) / 47 (R)	2,509 / 7,098	d, g, n, c, fr, dev	6 (220m)	1 (mech)
Total	58	9,607			
Belcourt South	10 (DHQ) / 32 (R)	1,413 / 4,266	d, g, n, c, fr,dev	6 (238m)	
Total	42	5,679			
Overall	21 (DHQ) / 79 (R)	3,922 / 11,364		12 (458m)	

Note: (D/HQ) – Diamond Drill Hole / Core Size. AP/Topo – Air Photography and Topographic Mapping. d, g, n, c, fr, dev. – density, gamma ray, neutron, caliper, focused beam resistivity, deviation survey logs. (h) – hand dug trench, (mech) – mechanically excavated trench.

13 DRILLING

Drilling activities carried out within the Belcourt North and Belcourt South areas are summarized in Table 13.1. The first drilling at Belcourt North, in 1976, was as a follow-up to earlier mapping and trenching programs. Historical drilling accounts for 55 holes, totalling 10,743 metres. Drilling conducted by BSJV in 2005, totals 112 holes for 15,744 metres. Details of historical and recent exploration are provided in Sections 8 and 12.

TABLE 13.1
DRILL HOLE SUMMARY – BELCOURT NORTH AND SOUTH

Year	Operator	Core	Rotary and Percussion	Large Diameter (Bulk Samples)	Metres Drilled
1976	Denison	1	-	-	54
1978	Denison-Gulf JV	5	-	-	2,080
1979	Denison-Gulf JV	5	-	-	1,648
1980	Denison-Gulf JV	11	25	-	6,343
1998	Western Canadian	-	8	-	618
2005	Belcourt Saxon JV	21	79	12	15,744
Total		43	112	12	26,487

The geology of the pit areas has 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 from adits and large diameter (6”) cores were used for coal quality characterization.

Some of the drilling included in Table 13.1 includes holes located outside the areas modeled for the current study. The drill hole database for Belcourt North deposit contains a total of 76 holes totalling 13,358 metres, while that for the Belcourt South deposit has 83 holes totalling 10,923 metres.

14 SAMPLING METHOD AND APPROACH

Coal seams were sampled primarily by diamond drilling to provide HQ-size core; bulk samples were obtained from adits and from large diameter cores. Selected intervals were cored in some percussion holes.

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

- At the drill, HQ cores were placed in 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. Coal seam cores were geologically logged in detail, and core recoveries obtained by comparing the lithology logs to the detailed density geophysical logs.

- Sample increments were selected on a geological basis (modified, as necessary, for core recovery). 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.

- Typically, samples were placed in thick plastic bags with each bag containing a sample tag that recorded drill hole number, seam, and bag number; in some instances, the sampled interval and (initial) analyses required were also added. All but the latter information was 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.

- Bulk samples from adits were obtained in 1979 and 1980; from each seam sampled, several tonnes were taken. On-site testing for free swelling index was used to confirm the sample point. Prior to bulk sampling, coal faces were geologically logged and marked for channel sampling, using the same approaches employed for core samples. Bulk sampling was carried out after channel sampling was completed. Sampling of the coal seams was by air pick.

- The coal was placed into metal drums and trucked to the selected laboratory for testing. Each drum contained a sample tag that recorded the adit number, seam, and drum number. This information was painted on the outside of the drums. Duplicate tags were retained by the company.

- Large diameter cores were employed for bulk sampling in 2005. These cores were described and sampled at the drill rig. The approach taken to sample selection, collection and bagging was similar to that described for HQ cores, above. The samples were trucked to the selected laboratory for testing.

- Denison's (i.e. 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 both core logging and sampling are consistent with those employed by BSCLP during the 2005 exploration program.

15 SAMPLE PREPARATION, ANALYSIS AND SECURITY

15.1 SAMPLE PREPARATION AND ANALYSES

Testing and analysis of Belcourt coal samples by Denison and BCJV (between 1976 and 1980) was conducted on HQ-size (63 mm) drill core and adits. Samples collected by BSC came from HQ-size drill core and large diameter (6"/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.

- Similar samples obtained from the 2005 drilling were analyzed at Loring Laboratories, Calgary, Alberta.

- Bulk samples taken from adits constructed 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 to CANMET's Western Research Laboratories in Edmonton for carbonization tests, while a thermal blend of three oxidized samples was sent for combustion testing at CANMET's Ottawa facilities.

- Bulk samples obtained in 2005 from large diameter (152 mm) cores also went to Birtley Coal & Mineral Testing. A blend of metallurgical clean coal from both Belcourt deposits was sent to CANMET, Ottawa, for carbonization testing. Pearson & Associates (Victoria, B.C.) carried out coal petrography.

For 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%), for oxidized coal samples (i.e., where the FSI was less than 4), internal rock bands, and seam roof and floor lithologies.

For bulk samples, in addition to standard analyses (as outlined above), laboratory tests included a more comprehensive series of float-sink analysis on several size fractions with froth flotation tests on the ultra-fine material. Washability studies and pilot-scale testing 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. Pilot scale wash tests were carried out on bulk samples taken from adits and large diameter drill cores to produce samples for carbonization studies.

No additional work was undertaken on thermal product characterization during the most recent work phase.

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.

16 DATA VERIFICATION

The geological interpretations of Belcourt North and South were developed by geologists employed by Belcourt Saxon Coal Limited Partnership (BSCLP). Geological modeling for both deposits was completed by Maxwell Geoservices using BSCLP's geology. MMTS provided a Qualified Person (a senior geologist) to undertake a site visit in 2005, during which time exploration and data gathering practices employed by Belcourt Saxon personnel were reviewed. MMTS's QP 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 BSCLP. 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, 3 to 5 December 2005, which included:
  - a helicopter flight over both properties
  - an on ground tour of both properties
  - checking the location of eight drill holes in the field
  - observing core logging procedures
  - reviewing sampling procedures
  - reviewing geophysical log picking procedures
  - reviewing data collection procedures
- Numerous visits to the BSC 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 by geographical area depending on geological complexity

- Review and checking of the geological models for consistency in general interpretation, coal seam thickness (specifically the tight syncline in northwest area of Belcourt North), rock parting thickness, oxidation limits (oxidized coal, partially oxidized coal, metallurgical coal), overburden thickness, methodology for extrapolating coal quality
- Checking of 25 drill hole logs from Belcourt North and 23 logs from Belcourt South
- Checking all drill hole collar elevations against topography.

17 ADJACENT PROPERTIES

The Belcourt property lies along a geological trend that contains a number of other properties, some of which contain past (Quintette and Bullmoose) and currently producing (Trend South, Perry Creek, Grande Cache) metallurgical coal mines.

Belcourt is bounded to the northwest by the Monkman property, owned by Teck Coal Limited, and to the southeast by the Huguenot property, owned by Colonial Coal Corporation; both properties host significant metallurgical coal resources contained within the Gates Formation. The Trend property owned by Peace River Coal joins Monkman to the northwest, while southeast of the Huguenot property lie the Omega and Saxon properties of BSC. Some distance west of the Belcourt property are coal licenses belonging to BSC's Belcourt West property.

17.1 MONKMAN

McIntyre Mines Limited acquired the first Monkman coal licenses in 1970. Exploration was carried out by various companies in joint venture with McIntrye. The larger programmes and associated feasibility studies were conducted between the mid-1970's and early1980's by Pacific Petroleums Ltd and Petro-Canada Inc. This work culminated in definition of several proposed open-pit mines, located within the Mt Duke Block, capable of producing 3 million tonnes per year of metallurgical coal. The proposal obtained Stage II approval (as part of a three-stage process for gaining regulatory approval for taking a mining project to production) from the provincial government.

The historical, total in-place, coal resource potential is 1,183 million tonnes, using minimum coal seam thicknesses of 1m and 3m for resources from surface to 200m vertical depth and from 200m to 500m vertical depth, respectively (Petro-Canada, 1981). Total "run-of-mine reserves" are 69 Mt at an average strip ratio of 6.3: 1 (this figure includes a mining recovery of 90%). The main areas delineated for surface mining are the Honeymoon West (20.5 Mt), Honeymoon East (10.3 Mt), and Duke (38.2 Mt) areas (Petro-Canada, 1980). An additional pit area, Duke Syncline hosts another 23 – 35 Mt of open-pit mineable coal with relatively low strip ratios (Petro-Canada, 1987).

The authors are not aware of any work conducted on the property since the early 1980's.

17.2 HUGUENOT

Portions of the current Huguenot property formed some of the original Belcourt property acquired by Denison Mines in 1970. Most of the remaining area covered by the current coal licenses was also acquired by Denison, as part of the expansion of their Belcourt property, in 1978. Early exploration of the Huguenot property was completed as part of the same programmes described in Section 8. At that time, most of the current property was referred to as Holtslander South block, although the northern licenses then formed the southern portions of Denison's Holtslander North block.

From Denison (1979) the historical, dry, in-place, coal resource potential is estimated at 169 Mt using a minimum mining thicknesses of 1.0m; for minimum mining thicknesses of 2.0m, and 3.0m, the resource potentials are estimated at 149 Mt and 120 Mt, respectively. These resources were taken to a vertical depth of 500m from surface. Denison characterised coal resources within Huguenot as being underground mineable. However, it is apparent that near-surface portions of the coal seams offer potential for open-pit development. While no quantative evaluation was carried out for this study, it seems reasonable to expect that a significant portion of the reported tonnage (say, potentially 50 Mt to 75 Mt) could be targeted for future definition of open-pit mining at moderate strip ratios.

No work was conducted on the property from the end of 1979 to autumn 2008, when Colonial completed an exploration programme that included geological mapping, trenching and drilling. This work focussed on the northern coal licenses, immediately south of the Belcourt South deposit.

The reader should note that the resources and reserves quoted in the above discussion of adjacent properties are historical in nature and, as such, were not estimated in accordance with criteria recommended under NI 43-101.

22 RECOMMENDATIONS

22.1 MINING STUDIES

22.1.1 Review of Pit Shell /Stripping Ratio Assumptions

The selection of the 12:1 incremental strip ratio pit shell was based on assumptions made at the beginning of the project before all of the information related to coal seam dilution and potential plan yields was fully developed. These initial assumptions should be reviewed against the current state of knowledge of the geology and plant yield.

22.1.2 Review Pit Wall Slope Parameters in Moosebar Formation

Limited geotechnical information for the Moosebar formation was collected for the pit slope design and the existing pit slope designs through this unit may be aggressive. The pit slope design through the Moosebar formation should be re-evaluated when additional geotechnical information becomes available.

22.1.3 Study the Economics of Mining Small Seams Separately

The block model contained several assumptions about which coal plies would be mined together as a unit. These assumptions should be reviewed in light of the higher dilutions expected, which is leading to elevated ROM ash values for some coal seams. It may be possible in practice to separate some of these coal seams and leave behind portions of the partings which are currently included as inseam dilution.

22.1.4 Trade-off Study - Mining of Small Seams

The economics of mining some of the smaller coal seams should be reviewed. These seams have a high-dilution (on a percentage basis) and provide limited tonnages of coal yet force a more complex pit operational setting.

22.1.5 Study Economic Advantages of Leasing Mining Equipment

Options for leasing large mining equipment should be investigated to defer some large initial capital expenditures.

22.1.6 Belcourt South Run-of-Mine Transport to Truck Dump

The Belcourt South pit has initial operations starting a considerable distance from the truck dump. It may prove more economical to replace a portion of this long coal haul with a conveyor for some period of the project's life.

22.2 ENVIRONMENTAL ASSESSMENT PROGRAM

The project development schedule is based on continuing with the current environmental assessment program as well as developing and initiating a regulatory, First Nations and community consultation program.

22.3 GEOLOGY RECOMMENDATIONS

Geological and coal quality data on the Belcourt coal property are sufficient to support resource and reserve estimations at a feasibility level for the Belcourt North and Belcourt South pit areas. Recommendations for additional work to add to the data base with regard to refinement of certain elements of structural geology, coal seam development, coal quality and carbonization tests are:

22.3.1 Drilling - Belcourt North

Additional drilling within the Red Deer syncline, to refine the geological interpretation, particularly with respect to faulting and to better delineate portions of the coal seams that exhibit structural thickening or thinning.

22.3.2 Drilling - Belcourt South

Additional drilling to refine the geological interpretation, particularly where the deposit is bisected by the Holtslander North Thrust and to better delineate where economic widths of coal plies in Seams 1 and 6 begin and end.

22.3.3 Bulk Sampling - Belcourt North and Belcourt South

Additional bulk samples from the main and minor coal seams in order to:

- examine ash liberation at a top size less than 3”;
- wash seams that exhibit better ash chemistry to higher ash contents and seams with less desirable ash chemistry to lower ash contents in order to assess improvements to product coal quality, ash chemistry and carbonization characteristics;
- establish a Belcourt blend that better reflects the proportion of coal provided by the coal seams targeted for mining within each deposit, in addition to better representing the total coal produced from each deposit.

22.3.4 Carbonization Tests

Additional carbonization tests should be conducted on representative clean product coal as a single oven charge for Belcourt coal alone, and with Belcourt coal as part of a blend (or blends) with other coals.

22.4 DEVELOPMENT OPTIONS

22.4.1 Increasing Mine Production to 7 Mt/y (Run of Mine)

The coal processing and handling facilities have been designed for a stream rate of 1,000 t/h. This was largely dictated by adopting a modular concept for the process, based on the throughput of the main coal preparation equipment, such as the heavy media cyclones. With typical current practices for operations and maintenance, these facilities will be capable of processing 7 Mt/y of run-of-mine coal. The mining operations have been based on an annual ROM feed to the processing plant of 6.3 Mt/y. The economic impact of mining and processing the additional 700,000 t/y could improve the overall project feasibility.

22.4.2 Infrastructure Cost Sharing

The total capital cost of the new rail spur, power line, and road access modifications exceeds $200 million. The area south of Tumbler Ridge is becoming very active with exploration and development of natural gas wells, and continuing forestry activities. There are also other significant mining licenses in the vicinity that will benefit from the new infrastructure. Government development initiatives such as infrastructure grants and third party cost sharing could reduce the project's capital cost by $100 million.

22.4.3 Product Coal Characteristics

The project can be expected to support a large-scale mining and washing operation capable of producing a coking coal product with the following characteristics:

- Ash: 8%
- Moisture: 8.5%
- FSI: 6 to 7 1/2

Tests on bulk samples from the main seams indicate that simulated product coal from Belcourt should be classed as "Semi-Hard". Additional work is warranted in order to optimize, and potentially improve, product coal quality and coal classification. The future testwork should be focused on providing a sample for coke oven testing and to provide an index against benchmarked coal qualities as well as providing verification for the simulation program.

23 REFERENCES

AUTHOR	TITLE	DATE
Canadian Securities Administrators	National Instrument 43-101 Standards of Disclosure for Mineral Projects, Form 43-101F1, Technical Report, and Companion Policy 43-101CP, 47 p.	2005
Denison Mines Limited	Belcourt Project, Geological Report, December 1979. B.C. Min. of Mines Geol. Branch Assessment Report No. 465.	1979
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Hughes, J.D., Klatzel-Maudry, L. and Nikols, D.J.	A Standardized Coal Resource/Reserve Reporting System for Canada. Geological Survey of Canada Paper 88-21, 17 p.	1989
Lamberson M.N., Bustin, R.M.,	Petrology, Sedimentology and Geochemistry of Gates Formation Coals, Northeastern B.C., Preliminary Results; in Geological Fieldwork 1988; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Paper 1989-1, pp 571-576.	1989
Legun, A. 2002	Overview of Coalbed Methane Geology in Northeast British Columbia; in Geological Fieldwork 2001; B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 2002-1, pp 247-256.	2002
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Petro Canada	Monkman Coal Project, 1981. B.C. Min. of Mines Geol. Branch Assessment Report No. 547.	1981
Petro Canada	Monkman Coal Project, 1985 Field Exploration Report; Revised July, 1987. B.C. Min. of Mines Geol. Branch Assessment Report No. 734.	1987
Sandwell	The Belcourt Saxon Coal Project, Phase I Belcourt Only, Feasibility Study	2009
Wright Engineers	Belcourt Feasibility Study for Denison Mines Limited, December 1982.	1982

24 CERTIFICATION AND DATE

CERTIFICATE of QUALIFICATIONS

CERTIFICATE OF QUALIFICATIONS

I, Bruno Borntraeger, P.Eng., do hereby certify that:

1. I am currently employed as a Specialist Geotechnical Engineer with Knight Piesold Consulting with a business address at Suite 1400, 750 West Pender Street, Vancouver, BC, V6C 2T8.

2. I graduated with a Bachelor of Applied Science degree from the University of British Columbia in 1990.

3. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia, (Member #20926)

4. I have worked as an Engineer for 18 years since my graduation from university.

5. 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.

6. I am responsible for the preparation of Sections 25.1.3, 25.4.2 and assisted with the preparation of Sections 20, 22 of the report titled "Technical Report, Belcourt Project"(Technical Report) dated January 23, 2009.

7. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

8. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101.

9. I have read National Instrument 43-101, and the portions of the Technical Report I assisted with have been prepared in compliance with that instrument.

Dated this 23rd Day of January, 2009.

"Original Document, signed and sealed by Bruno Borntraeger, P. Eng."

____

Signature

Bruno Borntraeger

CERTIFICATE OF QUALIFICATIONS

I, John R. Cross, P.Eng., do hereby certify that:

1. I am currently employed as Senior Project Manager by:

   Sandwell Engineering Inc.
   Suite 600
   885 Dunsmuir Street,
   Vancouver, British Columbia, Canada
   V6C 1N5

2. I graduated with a Bachelor of Science degree from Leeds University in England.

3. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia, (Member 9992)

4. I have worked as an Engineer for 42 years since my graduation from university.

5. 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.

6. I am responsible for the preparation of Sections 25.3, 25.4.1, 25.4.3, 25.7.1, 25.7.2 and assisted with the preparation of Sections 20 and 22 of the report titled "Technical Report, Belcourt Project"(Technical Report) dated January 23, 2009.

7. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

8. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101.

9. I have read National Instrument 43-101, and the portions of the Technical Report I assisted with have been prepared in compliance with that instrument.

   Dated this 23rd Day of January, 2009.

"ORIGINAL SIGNED AND SEALED BY AUTHOR"

____

John R. Cross P. Eng.
Senior Project Manager

CERTIFICATE OF QUALIFICATIONS

I, Jay Q.L. Horton, P.Eng., do hereby certify that:

1. I am currently employed as Senior Mining Engineer by:

   Norwest Corporation
   Suite 830, 1066 W. Hastings Street,
   Vancouver, British Columbia, Canada
   V6E 3X2

2. I graduated with a Bachelor of Applied Science degree from the University of *British Columbia* in 1999.

3. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia, (Member #29093)

4. I have worked as an Engineer for nine years since my graduation from university.

5. 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.

6. I am responsible for the preparation of Sections 19.5, 25.1(excepting 25.1.3) and assisted with the preparation of Sections 20, 22 of the report titled “Technical Report, Belcourt Project Project”(Technical Report) dated January 23, 2009.

7. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

8. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101.

9. I have read National Instrument 43-101, and the portions of the Technical Report I assisted with have been prepared in compliance with that instrument.

   Dated this 23rd Day of January, 2009.

“ORIGINAL SIGNED AND SEALED BY AUTHOR”

____

Jay Horton, P. Eng.
Senior Mining Engineer

CERTIFICATE OF QUALIFICATIONS

I, Don McCallum , P.Eng., do hereby certify that:

1. I am currently employed as a Senior Environmental Engineer and District Manager by:
   AECOM Canada Limited

2. I graduated with a Bachelor of Applied Science degree from Queens University in 1985.

3. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia, License # 22627

4. I have worked as an Engineer for 20 years since my graduation from university.

5. 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.

6. I am responsible for the preparation of Sections 25.5 of the report titled "Technical Report, Belcourt Project" (Technical Report) dated January 23, 2009.

7. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

8. I am independent of the issuers applying all of the tests in Section 1.5 of National Instrument 43-101.

9. I have read National Instrument 43-101, and the portions of the Technical Report I assisted with have been prepared in compliance with that instrument.

   Dated this 23rd Day of January, 2009.

"ORIGINAL SIGNED AND SEALED BY AUTHOR"

____

Don McCallum, MASc., P.Eng.

CERTIFICATE OF QUALIFICATIONS

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

1. I am a Principal Geologist with Moose Mountain Technical Services.

2. 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.

3. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia, (Member #18,301)

4. 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.

5. 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.

6. I am jointly responsible for the preparation of Sections 6 through 15 and Section 18, solely responsible for Sections 16, 19.1 to 19.4, and have contributed to Sections 21 and 22 of the report titled "Technical Report, Belcourt Project Project"(Technical Report) dated January 23, 2009.

7. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

8. I am independent of the issuers applying all of the tests in Section 1.5 of National Instrument 43-101.

9. I have read National Instrument 43-101, and the portions of the Technical Report I assisted with have been prepared in compliance with that instrument.

Dated this 23rd Day of January, 2009.

"ORIGINAL SIGNED AND SEALED BY AUTHOR"

____

Robert J. Morris, M.Sc., P.Geo.

CERTIFICATE OF QUALIFICATIONS

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

1. I am a consulting geologist with offices at 306 – 525 Seymour Street, Vancouver, B.C., V6B 3H7.

2. 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

3. I am a registered Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia, (Member #19598) and am a Fellow of The Geological Society, London, UK.

4. I have practiced my profession for over 32 years within Canada and internationally. I have practiced as an independent consultant since 1979. The majority of my work has been carried out on exploration and development projects. During the period January 2005 and May 2008, I was Director of Geology on the Belcourt-Saxon project, for Belcourt Saxon Coal Limited Partnership.

5. 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.

6. I am jointly responsible for the preparation of Sections 6 through 15, Section 17, Section 18, Section 21 and relevant portions of portions of Section 22 of the report titled "Technical Report, Belcourt Project Project"(Technical Report) dated January 23, 2009.

7. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

8. I do not consider myself as independent of the issuers applying all of the tests in Section 1.4 of National Instrument 43-101.

9. I have read National Instrument 43-101, and the portions of the Technical Report I assisted with have been prepared in compliance with that instrument.

   Dated this 23rd Day of January 2009.

"ORIGINAL SIGNED AND SEALED BY AUTHOR"

____

John H. Perry, P.Geo. "Signed and sealed original on file"

CERTIFICATE OF QUALIFICATIONS

I, John Trygstad., do hereby certify that:

1. I am currently employed as a Vice President by:

   Norwest Corporation
   136 E. South Temple, 1200
   Salt Lake City, Utah USA

2. I graduated with a Bachelor of Science degree from South Dakota School of Mines and Technology in Rapid City, South Dakota, USA.

3. I have worked as an Engineer for 33 years since my graduation from university.

4. 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.

5. I am responsible for the preparation of Section 25.2 and assisted with the preparation of Sections 20, 22 of the report titled “Technical Report, Belcourt Project Project”(Technical Report) dated January 23, 2009.

6. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

7. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101.

8. I have read National Instrument 43-101, and the portions of the Technical Report I assisted with have been prepared in compliance with that instrument.

   Dated this 27th Day of January, 2009.

“ORIGINAL SIGNED AND SEALED BY AUTHOR”

____

John Trygstad

CERTIFICATE OF QUALIFICATIONS

I, Gordon D. Watts, P.Eng., do hereby certify that:

1. I reside at 347 Berkeley Street, Toronto, Ontario, Canada M5A 2X6

2. I am a graduate of the University of Toronto, Toronto, Ontario, Canada with a B.A.Sc. in Mining Engineering and I have practised my profession continuously since 1970.

3. I am a Professional Engineer licensed by the Professional Engineers Ontario (Registration Number 49149016).

4. I am currently employed by Log II Systems Inc, as a Mining Engineer and Mineral Economist.

5. I have worked as an Engineer for 38 years since my graduation from university.

6. 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.

7. I am responsible for the preparation of Sections 25.7.3 and 25.7.4 of the report titled "Technical Report, Belcourt Project Project"(Technical Report) dated January 23, 2009.

8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

9. I am independent of the issuers applying all of the tests in Section 1.5 of National Instrument 43-101.

10. I have read National Instrument 43-101, and the portions of the Technical Report I assisted with have been prepared in compliance with that instrument.

Dated this 23rd Day of January, 2009.

"ORIGINAL SIGNED AND SEALED BY AUTHOR"

____

Gordon Watts

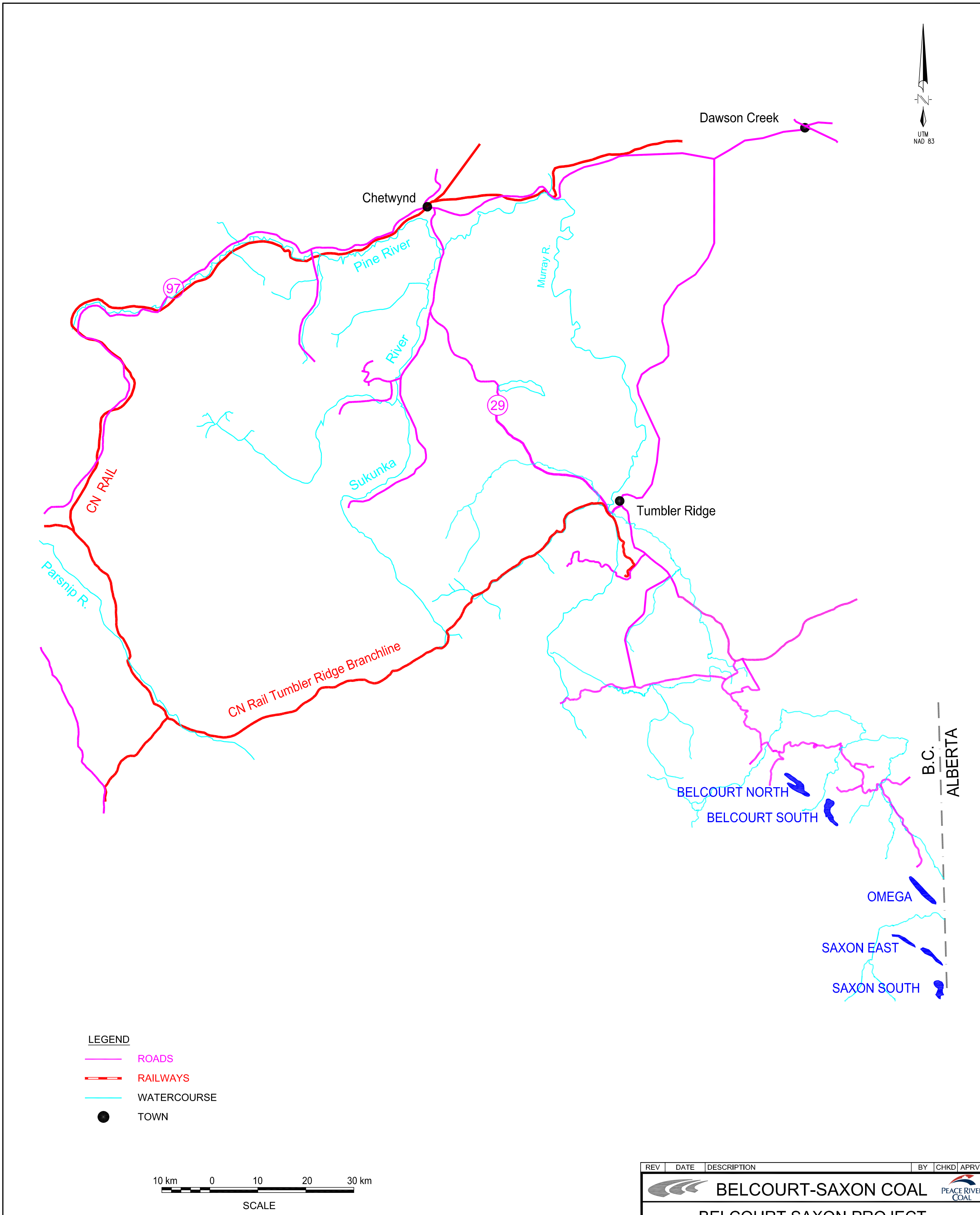
26 ILLUSTRATIONS

REV	DATE	DESCRIPTION	BY	CHKD	APRVD

BELCOURT-SAXON COAL — PEACE RIVER COAL

BELCOURT SAXON PROJECT

Drawn by:	CS	LOCATION MAP
Checked by:	BP	
Approved by:	CP	
Revision No.		
Dwg No.		
JUNE 22, 2005	Document: FIG_02_01.DWG	Figure No. 6.1



REV	DATE	DESCRIPTION	BY	CHKD	APRVD

BELCOURT-SAXON COAL

PEACE RIVER COAL

BELCOURT SAXON PROJECT

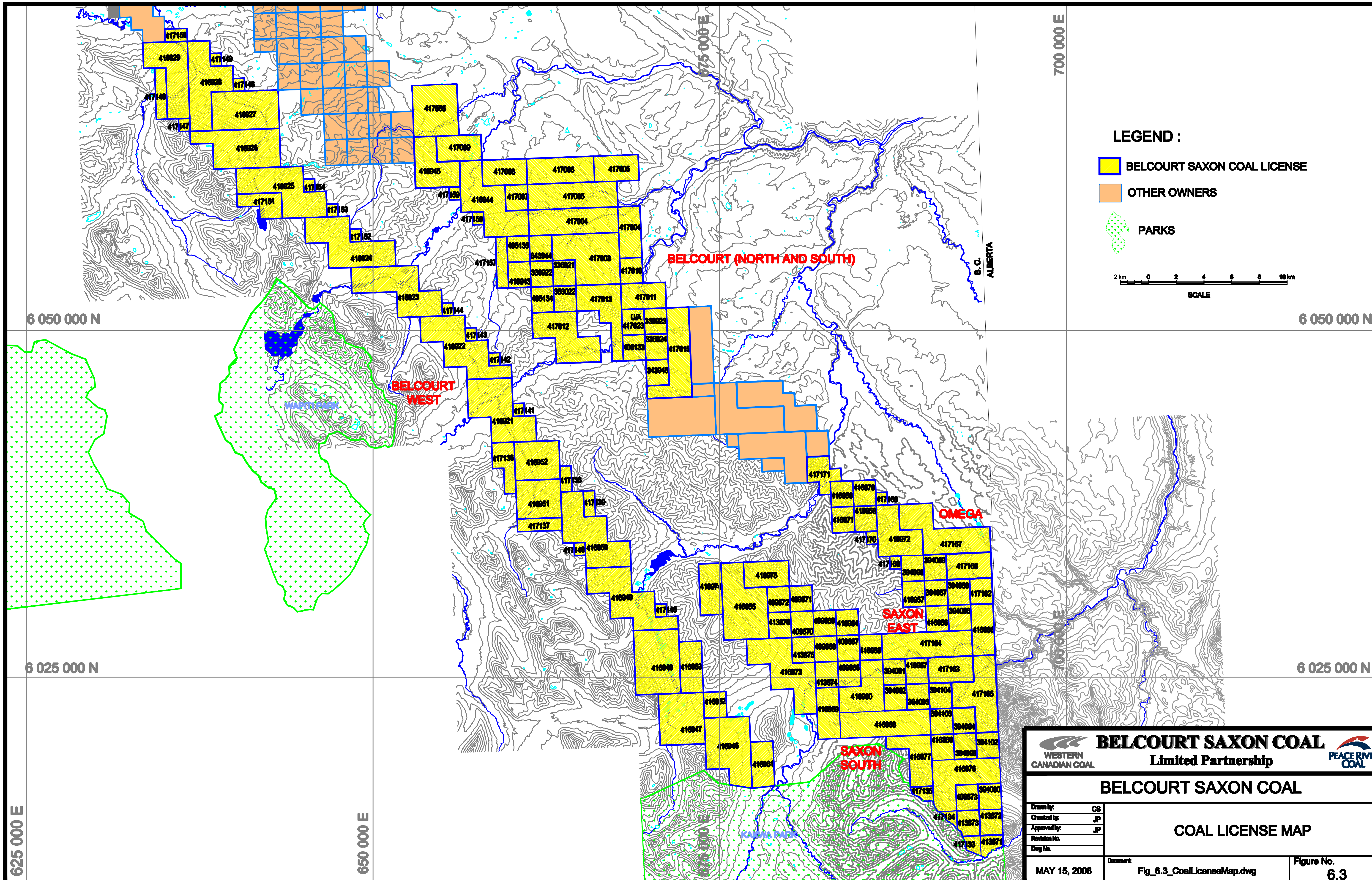
Drawn by:	CS
Checked by:	BP
Approved by:	CP
Revision No.	
Dwg No.	

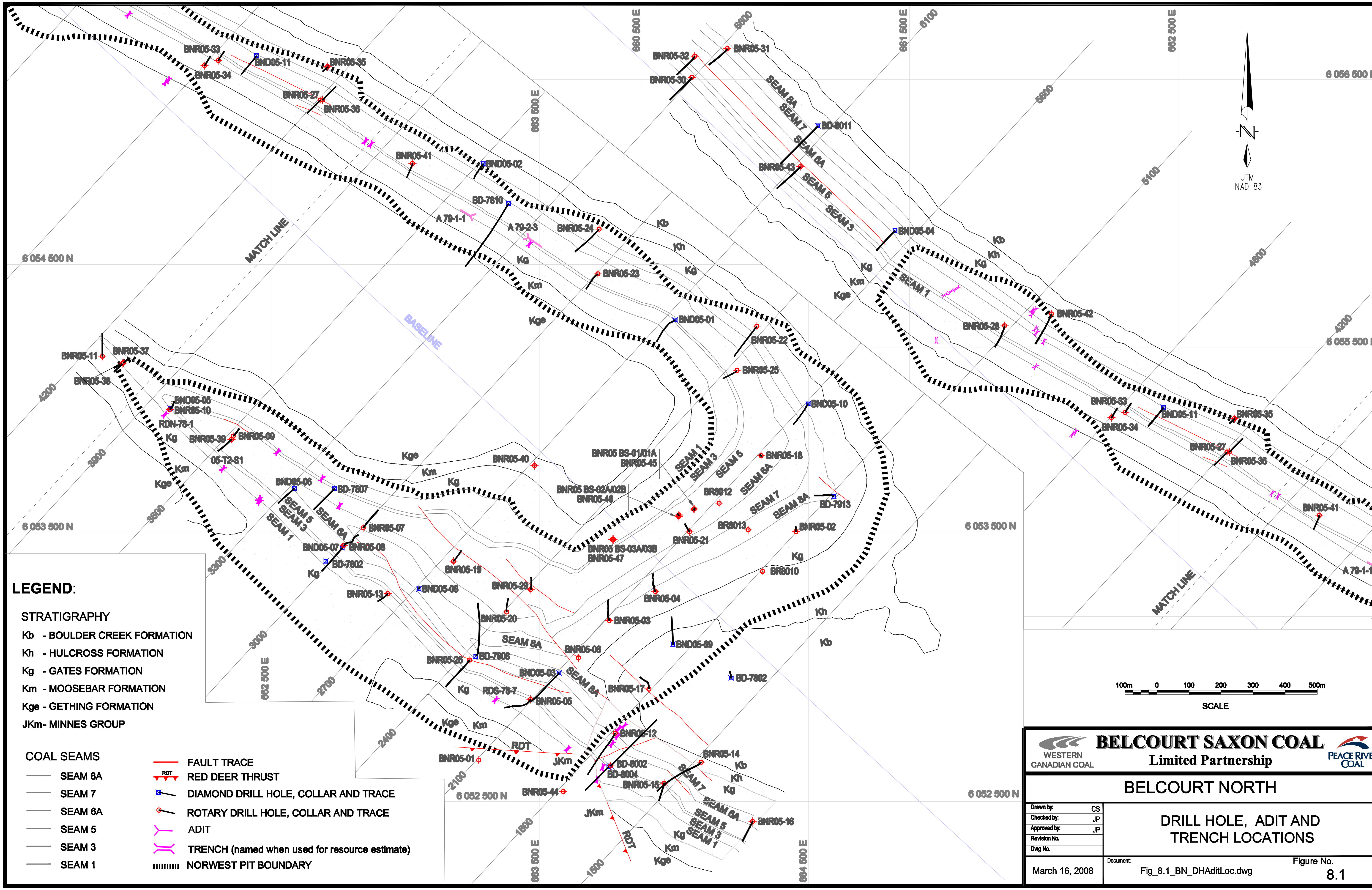
PROPERTY ACCESS MAP

JUNE 22, 2005

Document: FIG_02_02.DWG

Figure No. 6.2


LEGEND :
BELCOURT SAXON COAL LICENSE
OTHER OWNERS
PARKS
SCALE
BELCOURT (NORTH AND SOUTH)
BELCOURT WEST
OMEGA
SAXON EAST
SAXON SOUTH
B.C.
ALBERTA
6 050 000 N
6 025 000 N
625 000 E
650 000 E
675 000 E
700 000 E
BELCOURT SAXON COAL
Limited Partnership
WESTERN CANADIAN COAL
PEACE RIVER COAL
BELCOURT SAXON COAL
COAL LICENSE MAP
MAY 15, 2008
Fig_6.3_CoalLicenseMap.dwg
Figure No.
6.3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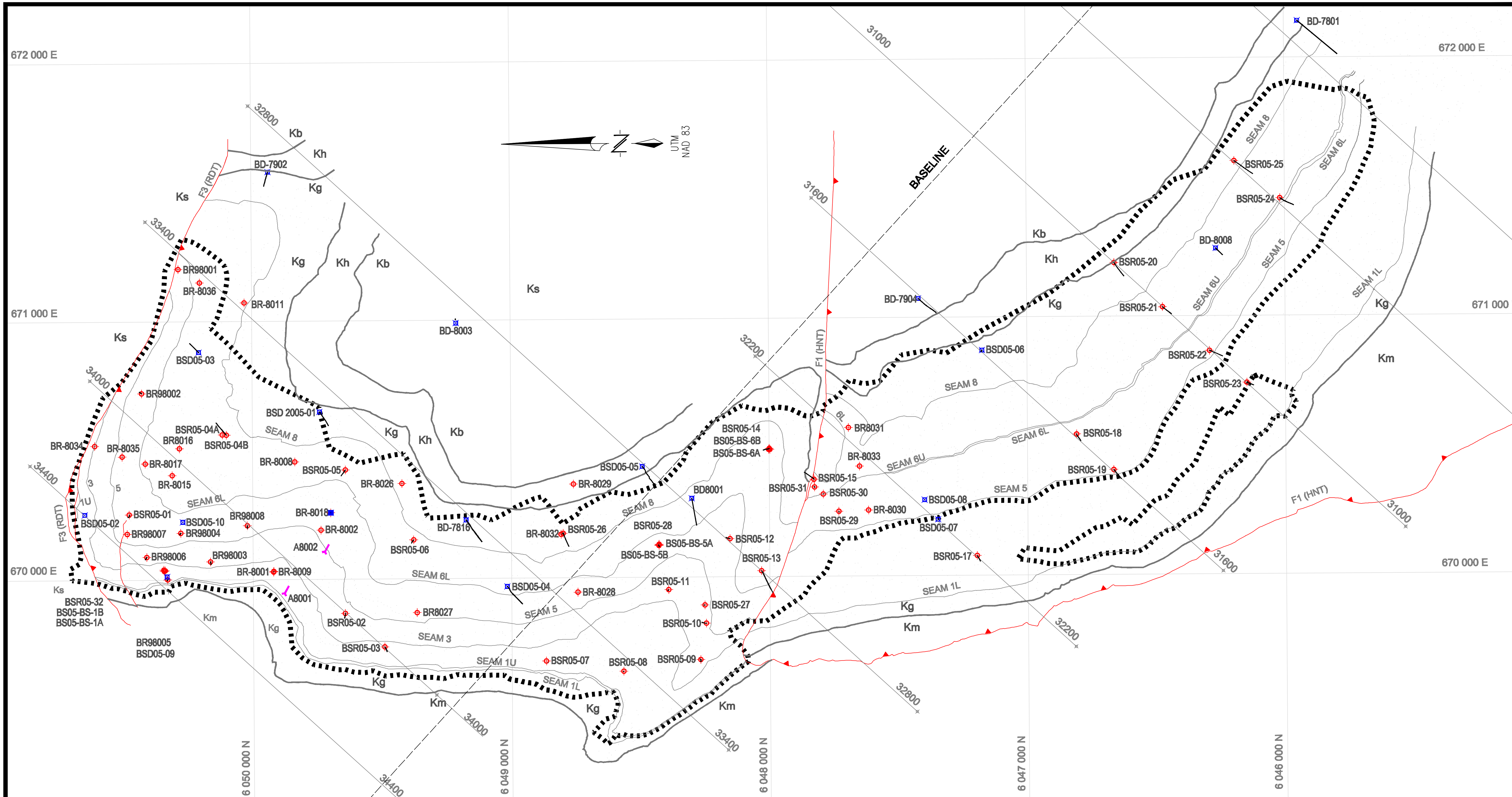
STRATIGRAPHY
Kb - BOULDER CREEK FORMATION
Kh - HULCROSS FORMATION
Kg - GATES FORMATION
Km - MOOSEBAR FORMATION
Kge - GETHING FORMATION
JKm - MINNES GROUP
COAL SEAMS
SEAM 8A
SEAM 7
SEAM 6A
SEAM 5
SEAM 3
SEAM 1
FAULT TRACE
RDT RED DEER THRUST
DIAMOND DRILL HOLE, COLLAR AND TRACE
ROTARY DRILL HOLE, COLLAR AND TRACE
ADIT
TRENCH (named when used for resource estimate)
NORWEST PIT BOUNDARY
UTM NAD 83
100m 0 100 200 300 400 500m
SCALE
BELCOURT SAXON COAL
Limited Partnership
WESTERN CANADIAN COAL
PEACE RIVER COAL
BELCOURT NORTH
Drawn by: CS
Checked by: JP
Approved by: JP
Revision No.
Dwg No.
DRILL HOLE, ADIT AND TRENCH LOCATIONS
March 16, 2008
Document: Fig_8.1_BN_DHAditLoc.dwg
Figure No. 8.1
MATCH LINE
BASELINE
6 054 500 N
6 053 500 N
6 052 500 N
6 056 500 N
6 055 500 N
660 500 E
661 500 E
662 500 E
663 500 E
664 500 E
BNR05-33
BNR05-34
BND05-11
BNR05-35
BNR05-27
BNR05-36
BNR05-41
BND05-02
BD-7810
A 79-1-1
A 79-2-3
BNR05-24
BNR05-23
BND05-01
BNR05-22
BNR05-25
BND05-10
BNR05-32
BNR05-31
BNR05-30
BD-8011
BNR05-43
BND05-04
BNR05-28
BNR05-42
BNR05-11
BNR05-37
BNR05-38
BND05-05
BNR05-10
RDN-78-1
BNR05-39
BNR05-09
05-T2-S1
BND05-06
BD-7807
BNR05-07
BND05-07
BNR05-08
BD-7802
BNR05-13
BND05-08
BNR05-19
BNR05-29
BNR05-20
BNR05-40
BNR05 BS-01/01A
BNR05-45
BNR05 BS-02A/02B
BNR05-46
BR8012
BNR05-18
BD-7913
BR8013
BNR05-21
BNR05-02
BNR05 BS-03A/03B
BNR05-47
BR8010
BNR05-04
BNR05-03
BND05-09
BD-7802
BNR05-26
BD-7908
BNR05-06
BND05-03
RDS-78-7
BNR05-05
BNR05-17
BNR05-12
BNR05-14
BD-8002
BD-8004
BNR05-15
BNR05-01
BNR05-44
BNR05-16
SEAM 8A
SEAM 7
SEAM 6A
SEAM 5
SEAM 3
SEAM 1
RDT
Kb
Kh
Kg
Km
Kge
JKm



LEGEND:

STRATIGRAPHY

- Ks - SHAFTESBURY FORMATION
- Kb - BOULDER CREEK FORMATION
- Kh - HULCROSS FORMATION
- Kg - GATES FORMATION
- Km - MOOSEBAR FORMATION

- FAULT TRACE
- HNT HOLTSLANDER NORTH THRUST
- RDT RED DEER THRUST
- DIAMOND DRILL HOLE COLLAR AND HOLE TRACE
- ROTARY DRILL HOLE COLLAR AND HOLE TRACE
- ADIT
- NORWEST PIT BOUNDARY

200m. 0 200 400 600 800 1000m.

SCALE

WESTERN CANADIAN COAL

BELCOURT SAXON COAL
Limited Partnership

PEACE RIVER COAL

BELCOURT SOUTH

Drawn by:	CS	DRILL HOLE AND ADIT LOCATIONS
Checked by:	JP	
Approved by:	JP	
Revision No.		
Dwg No.		
March 15, 2008	Document: FIG_8.2_BSDHAditLoc.dwg	Figure No. 8.2

SERIES	GROUP	FORMATION		LITHOLOGY	UNIT THICKNESS (METERS)
LOWER CRETACEOUS	FORT ST JOHN	SHAFTESBURY		Dark grey marine shales, sideritic concretions, some sandstone grading to silty, dark grey marine shale, siltstone and sandstone in lower part, minor conglomerate.	450+
		COMMOTION	BOULDER CREEK	Fine-grained, well sorted, non-marine sandstone, mudstone and carbonaceous shale, conglomerate, few thin coal seams.	85
			HULLCROSS	Dark grey marine shale in the north grading to extremely fossiliferous shaly beds interlayered with sandstone and thin coal seams in the south.	53
			GATES	Fine-grained marine and non-marine sandstones; conglomerate, coal, shale and mudstone.	310
		MOOSEBAR		Dark grey marine shale with sideritic concretions, glauconitic sandstones and pebbles at base. Interbedded shale/siltstone and sandstone transitional sequence at top.	70
	BULLHEAD	GETHING		Fine to coarse brown calcareous sandstone, coal, carbonaceous shale, and conglomerate.	60-90
		CADOMIN		Massive conglomerate containing chert and quartzite pebbles.	10-40
	MINNES GROUP	NIKANASSIN		Thin-bedded grey and brown shales and brown sandstones, containing numerous thin coal seams.	

BELCOURT SAXON COAL
Limited Partnership

PEACE RIVER COAL

BELCOURT PROJECT

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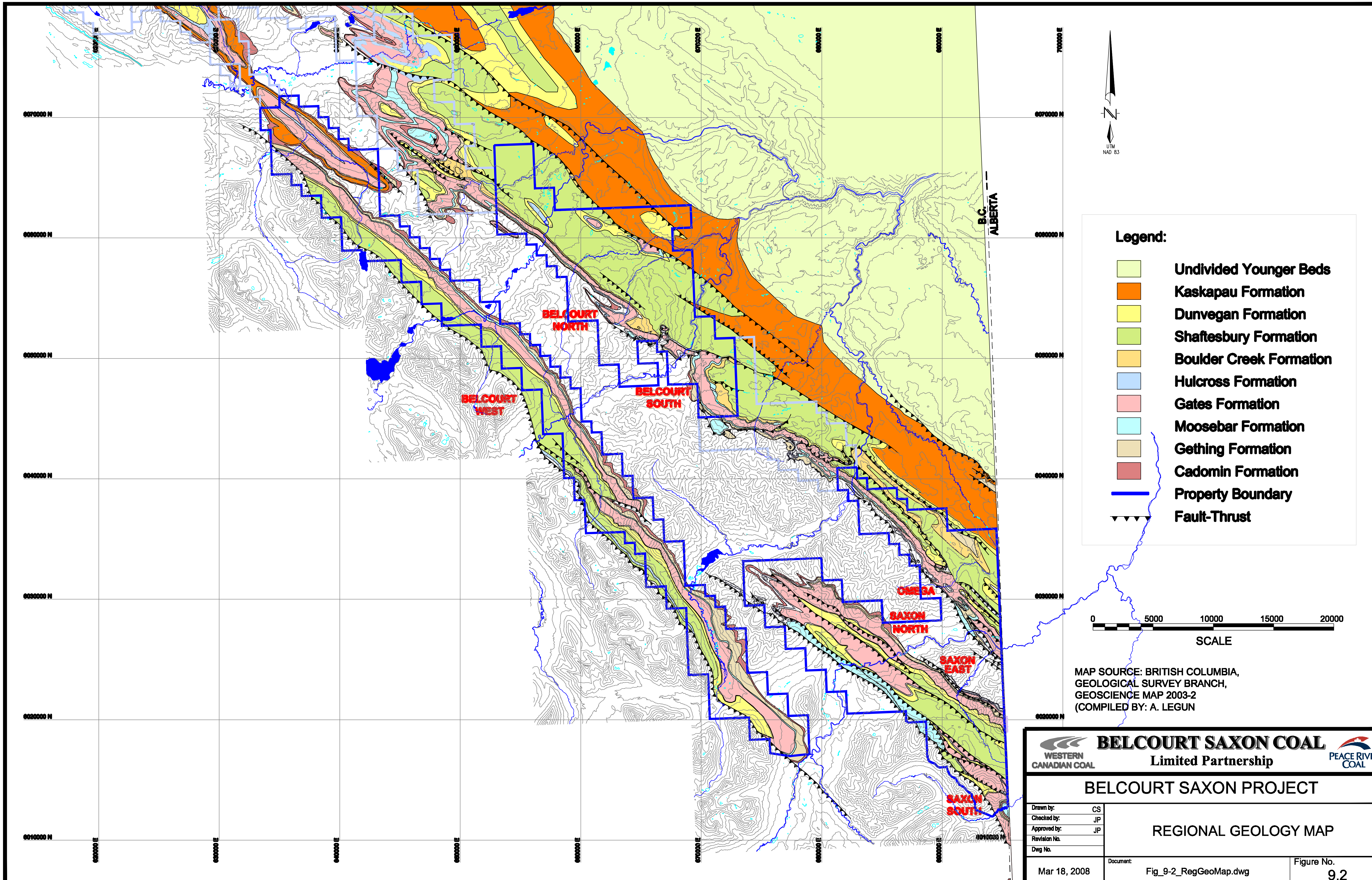
Checked by: JP
Approved by: JP
Revision No.
Dwg No.

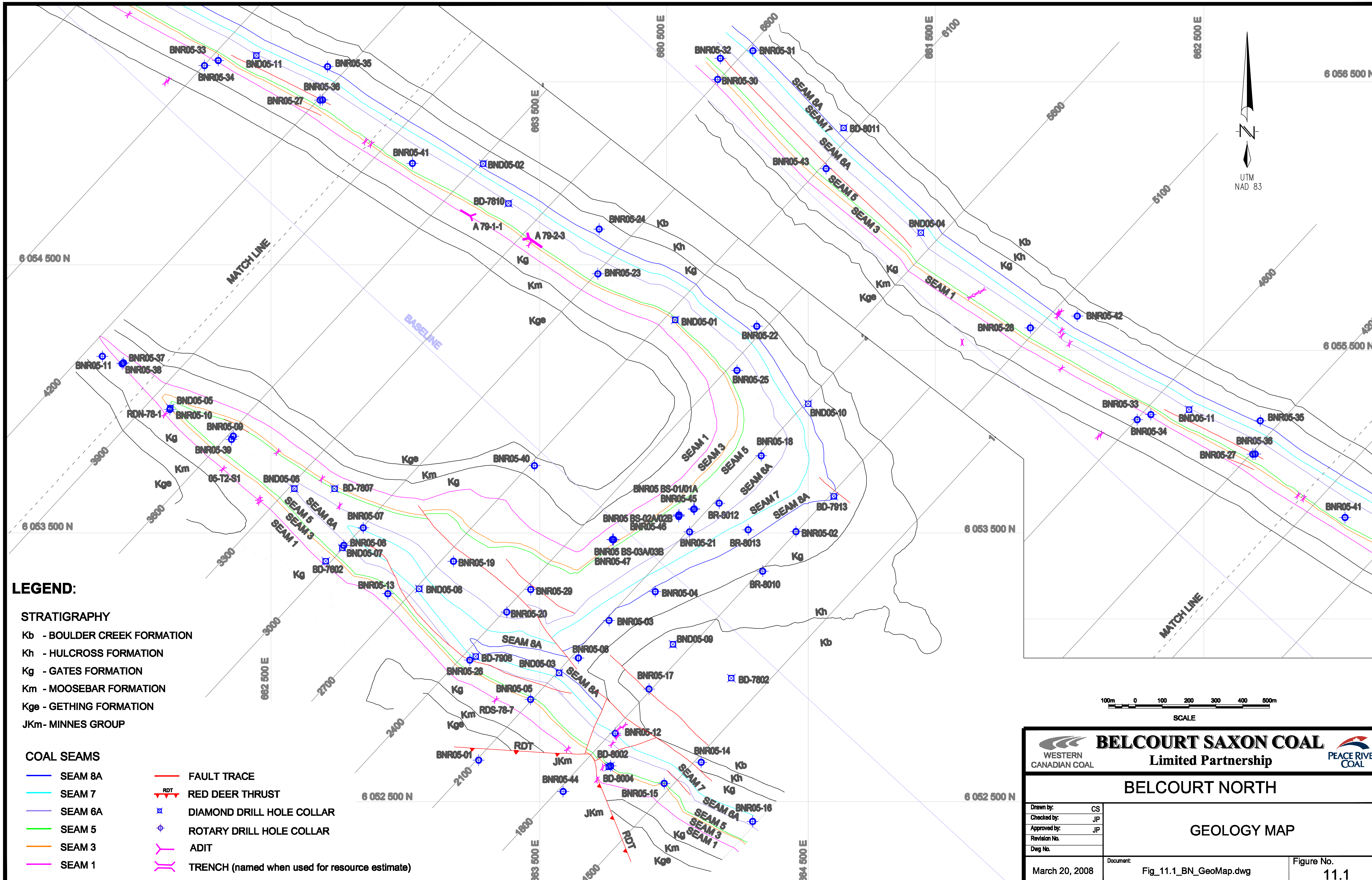
TABLE OF FORMATIONS

APR 20, 2008

Document: Fig_9-3_TabFormations.dwg

Figure No. 9.1


BELCOURT NORTH
BELCOURT WEST
BELCOURT SOUTH
OMEGA
SAXON NORTH
SAXON EAST
SAXON SOUTH
B.C.
ALBERTA
N
UTM
NAD 83
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
Fault-Thrust
0
5000
10000
15000
20000
SCALE
MAP SOURCE: BRITISH COLUMBIA,
GEOLOGICAL SURVEY BRANCH,
GEOSCIENCE MAP 2003-2
(COMPILED BY: A. LEGUN)
WESTERN CANADIAN COAL
BELCOURT SAXON COAL
Limited Partnership
PEACE RIVER COAL
BELCOURT SAXON PROJECT
Drawn by: CS
Checked by: JP
Approved by: JP
Revision No.
Dwg No.
REGIONAL GEOLOGY MAP
Mar 18, 2008
Document: Fig_9-2_RegGeoMap.dwg
Figure No.
9.2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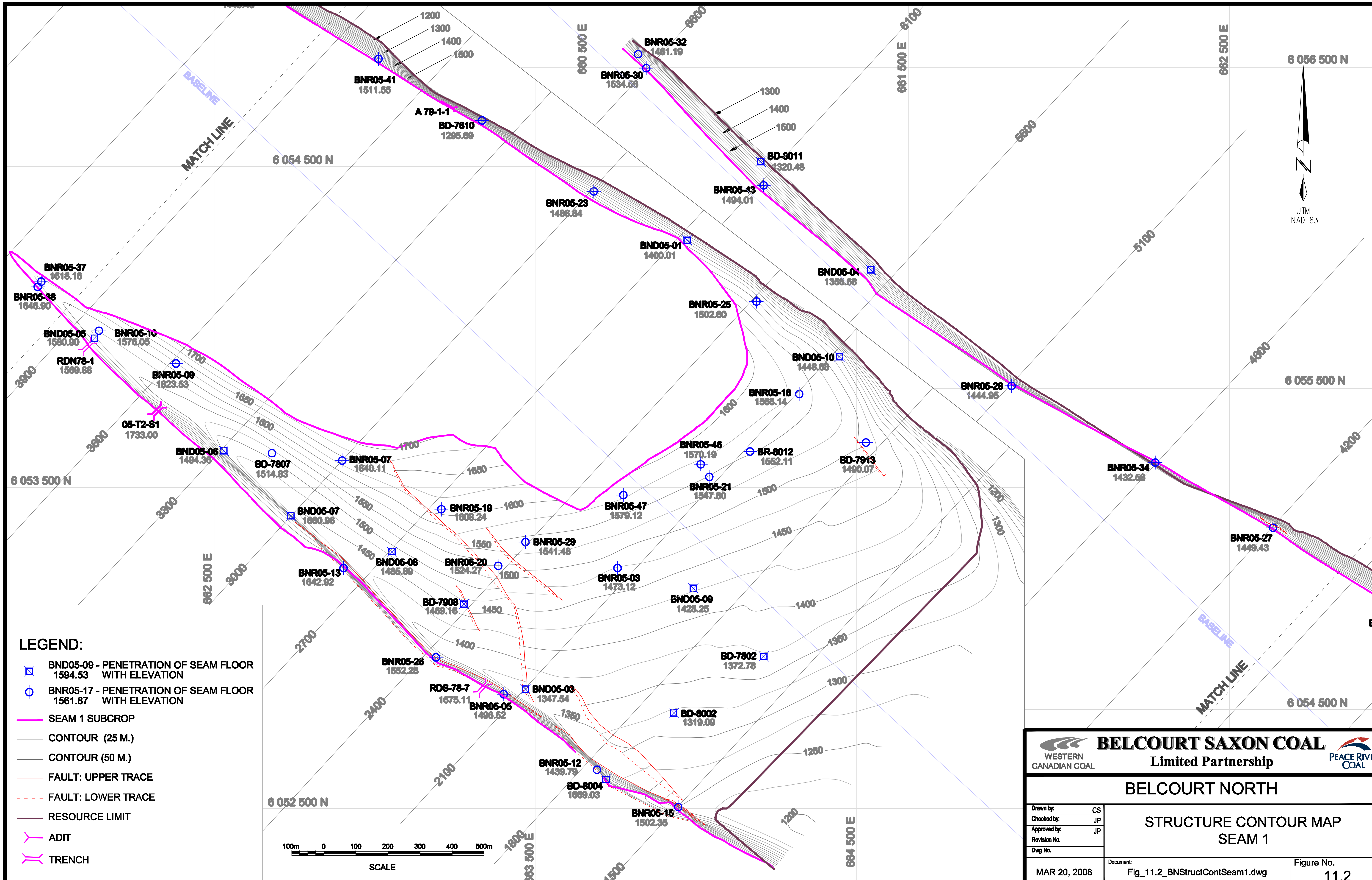
STRATIGRAPHY
Kb - BOULDER CREEK FORMATION
Kh - HULCROSS FORMATION
Kg - GATES FORMATION
Km - MOOSEBAR FORMATION
Kge - GETHING FORMATION
JKm - MINNES GROUP
COAL SEAMS
SEAM 8A
SEAM 7
SEAM 6A
SEAM 5
SEAM 3
SEAM 1
FAULT TRACE
RED DEER THRUST
DIAMOND DRILL HOLE COLLAR
ROTARY DRILL HOLE COLLAR
ADIT
TRENCH (named when used for resource estimate)
UTM
NAD 83
SCALE
MATCH LINE
BASELINE
WESTERN CANADIAN COAL
BELCOURT SAXON COAL
Limited Partnership
PEACE RIVER COAL
BELCOURT NORTH
GEOLOGY MAP
Drawn by: CS
Checked by: JP
Approved by: JP
Revision No.
Dwg No.
March 20, 2008
Document: Fig_11.1_BN_GeoMap.dwg
Figure No. 11.1


BELCOURT SAXON COAL
Limited Partnership
WESTERN CANADIAN COAL
PEACE RIVER COAL
BELCOURT NORTH
STRUCTURE CONTOUR MAP
SEAM 1
Drawn by: CS
Checked by: JP
Approved by: JP
Revision No.
Dwg No.
MAR 20, 2008
Document: Fig_11.2_BNStructContSeam1.dwg
Figure No. 11.2
LEGEND:
BND05-09 - PENETRATION OF SEAM FLOOR
1594.53 WITH ELEVATION
BNR05-17 - PENETRATION OF SEAM FLOOR
1561.87 WITH ELEVATION
SEAM 1 SUBCROP
CONTOUR (25 M.)
CONTOUR (50 M.)
FAULT: UPPER TRACE
FAULT: LOWER TRACE
RESOURCE LIMIT
ADIT
TRENCH
SCALE
100m 0 100 200 300 400 500m
UTM
NAD 83
6 056 500 N
6 055 500 N
6 054 500 N
6 053 500 N
6 052 500 N
660 500 E
661 500 E
662 500 E
663 500 E
664 500 E
MATCH LINE
BASELINE
BNR05-41
1511.55
A 79-1-1
BD-7810
1295.69
BNR05-32
1461.19
BNR05-30
1534.56
BD-8011
1320.48
BNR05-43
1494.01
BNR05-23
1486.84
BND05-01
1400.01
BND05-04
1356.68
BNR05-25
1502.60
BND05-10
1448.68
BNR05-18
1568.14
BNR05-28
1444.95
BNR05-37
1618.16
BNR05-38
1646.90
BND05-05
1580.90
BNR05-10
1576.05
RDN78-1
1569.88
BNR05-09
1623.53
05-T2-S1
1733.00
BND05-06
1494.36
BD-7807
1514.83
BNR05-07
1640.11
BNR05-46
1570.19
BR-8012
1552.11
BD-7913
1490.07
BNR05-34
1432.56
BNR05-21
1547.80
BNR05-47
1579.12
BNR05-19
1608.24
BND05-07
1660.96
BNR05-29
1541.48
BNR05-27
1449.43
BNR05-20
1524.27
BND05-08
1485.89
BNR05-13
1642.92
BNR05-03
1473.12
BND05-09
1428.25
BD-7908
1469.16
BNR05-26
1552.28
BD-7802
1372.78
RDS-78-7
1675.11
BND05-03
1347.54
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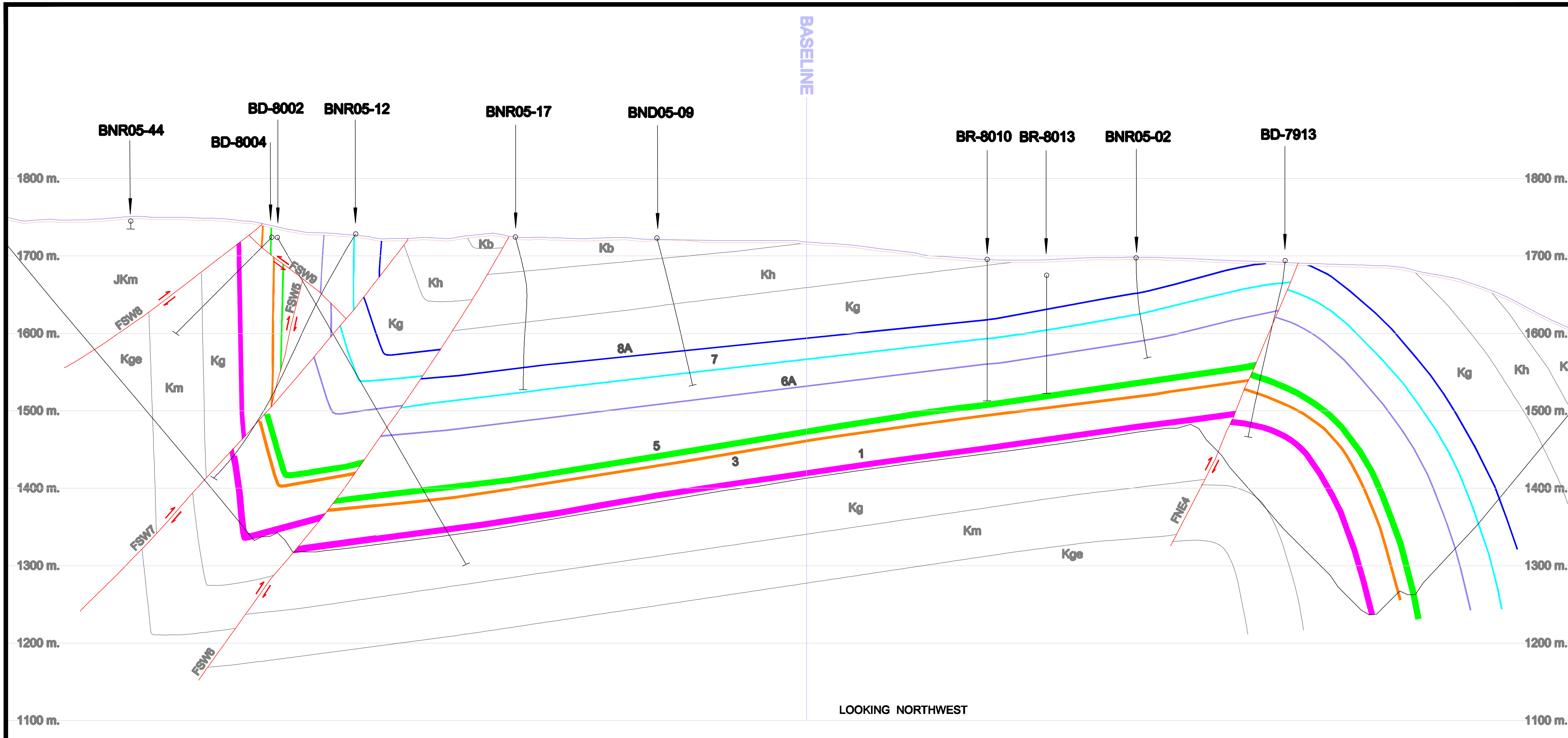

LEGEND:

100 m.	0	100	200	300 m.

SCALE

STRATIGRAPHY

- Kb - BOULDER CREEK FORMATION
- Kh - HULCROSS FORMATION
- Kg - GATES FORMATION
- Km - MOOSEBAR FORMATION
- Kge - GETHING FORMATION
- JKm - MINNES GROUP

COAL SEAMS

- SEAM 8A
- SEAM 7
- SEAM 6A
- SEAM 5
- SEAM 3
- SEAM 1

- TOPO PROFILE
- BEDROCK
- FORMATION BOUNDARY
- FAULT (with relative displacement)

SYMBOLS

- DRILL HOLE
- BD / BND - DIAMOND DRILL HOLE
- BR / BNR - ROTARY DRILL HOLE
- RESOURCE LIMIT

WESTERN CANADIAN COAL | **BELCOURT SAXON COAL** Limited Partnership | PEACE RIVER COAL

BELCOURT NORTH

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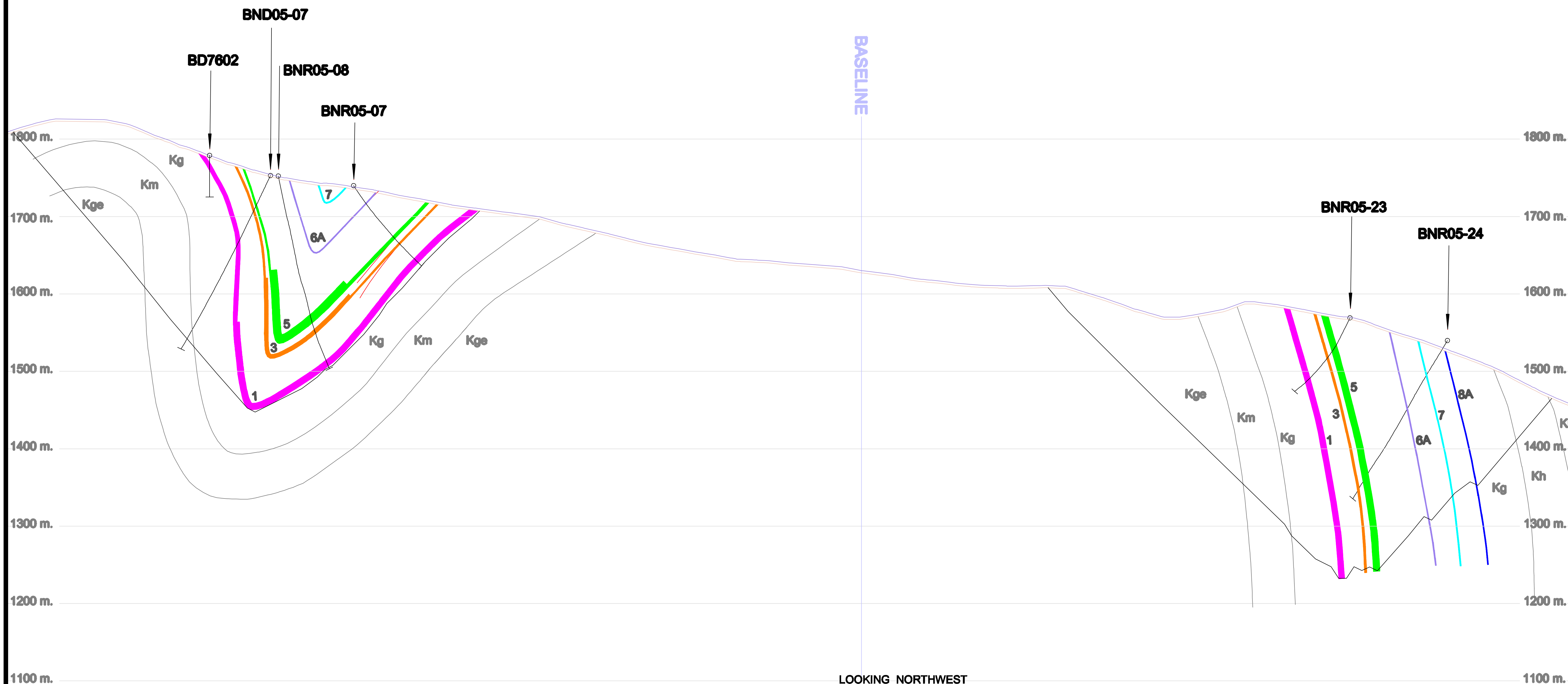
Approved by:	JP
Revision No.	
Dwg No.	

CROSS SECTION 1800

Mar 17, 2008	Document: Fig_11.3_BN_Sec1800.dwg	Figure No. 11.3



100 m. 0 100 200 300 m.

SCALE

LEGEND:

STRATIGRAPHY

Kb - BOULDER CREEK FORMATION
Kh - HULCROSS FORMATION
Kg - GATES FORMATION
Km - MOOSEBAR FORMATION
Kge - GETHING FORMATION
JKm - MINNES GROUP

COAL SEAMS

SEAM 8A
SEAM 7
SEAM 6A
SEAM 5
SEAM 3
SEAM 1

TOPO PROFILE
BEDROCK
FORMATION BOUNDARY
FAULT (with relative displacement)

SYMBOLS

DRILL HOLE
BD / BND - DIAMOND DRILL HOLE
BR / BNR - ROTARY DRILL HOLE
RESOURCE LIMIT

WESTERN CANADIAN COAL

BELCOURT SAXON COAL
Limited Partnership

PEACE RIVER COAL

BELCOURT NORTH

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Approved by:	JP
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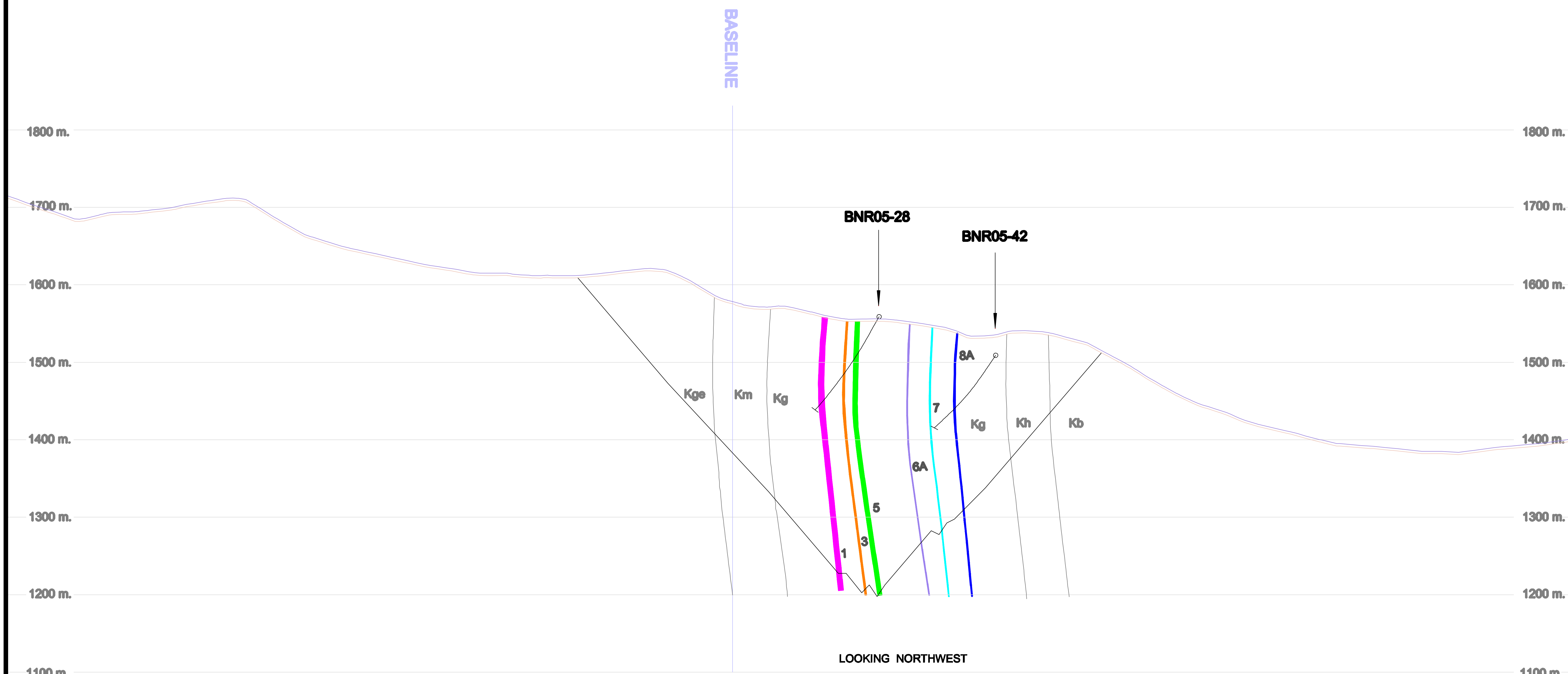
Dwg No.	

CROSS SECTION 3000

March 17, 2008

Document: Fig_11.4_BN_Sec3000.dwg

Figure No. 11.4



LEGEND:

STRATIGRAPHY

Kb - BOULDER CREEK FORMATION
Kh - HULCROSS FORMATION
Kg - GATES FORMATION
Km - MOOSEBAR FORMATION
Kge - GETHING FORMATION
JKm - MINNES GROUP

COAL SEAMS

SEAM 8A
SEAM 7
SEAM 6A
SEAM 5
SEAM 3
SEAM 1

TOPO PROFILE
BEDROCK
FORMATION BOUNDARY
FAULT (with relative displacement)

SYMBOLS

DRILL HOLE
BD / BND - DIAMOND DRILL HOLE
BR / BNR - ROTARY DRILL HOLE
RESOURCE LIMIT

100 m. 0 100 200 300 m.
SCALE

WESTERN CANADIAN COAL
BELCOURT SAXON COAL
Limited Partnership
PEACE RIVER COAL

BELCOURT NORTH

Drawn by:	CS
Checked by:	JP
Approved by:	JP
Revision No.	
Dwg No.	

CROSS SECTION 5100

Mar 17, 2008
Document: Fig_11.5_BN_Sec5100.dwg
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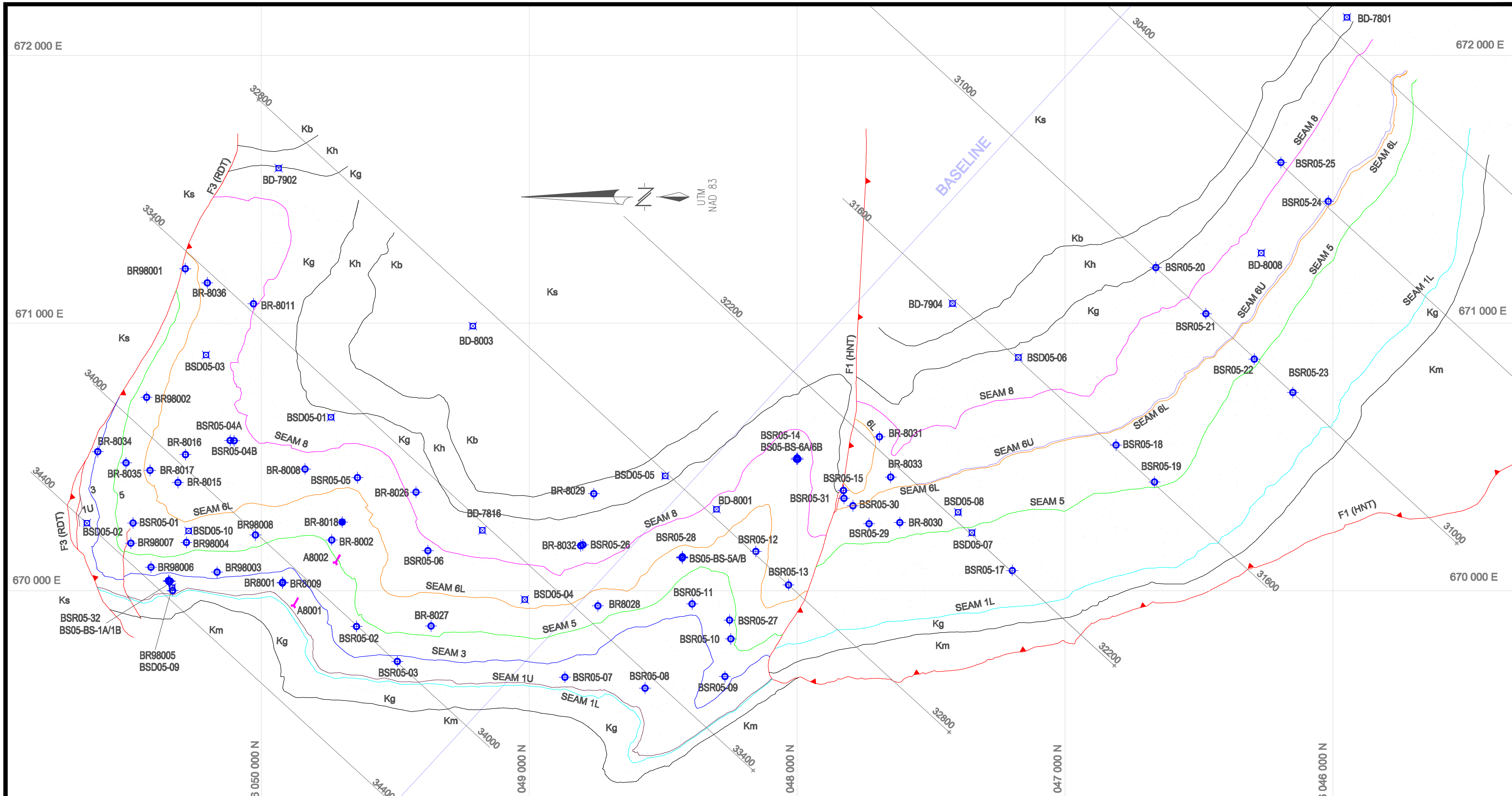

LEGEND:

STRATIGRAPHY

- Ks - SHAFTESBURY FORMATION
- Kb - BOULDER CREEK FORMATION
- Kh - HULCROSS FORMATION
- Kg - GATES FORMATION
- Km - MOOSEBAR FORMATION

COAL SEAMS

- SEAM 8
- SEAM 6U
- SEAM 6L
- SEAM 5
- SEAM 3
- SEAM 1U
- SEAM 1L

- FAULT TRACE
- HNT HOLTSLANDER NORTH THRUST
- RDT RED DEER THRUST
- DIAMOND DRILL HOLE COLLAR
- ROTARY DRILL HOLE COLLAR
- ADIT

0 200 400 600 800 1000m.

SCALE

WESTERN CANADIAN COAL	**BELCOURT SAXON COAL** Limited Partnership — PEACE RIVER COAL
	BELCOURT SOUTH
Drawn by: CS Checked by: JP Approved by: JP Revision No. Dwg No.	GEOLOGY MAP
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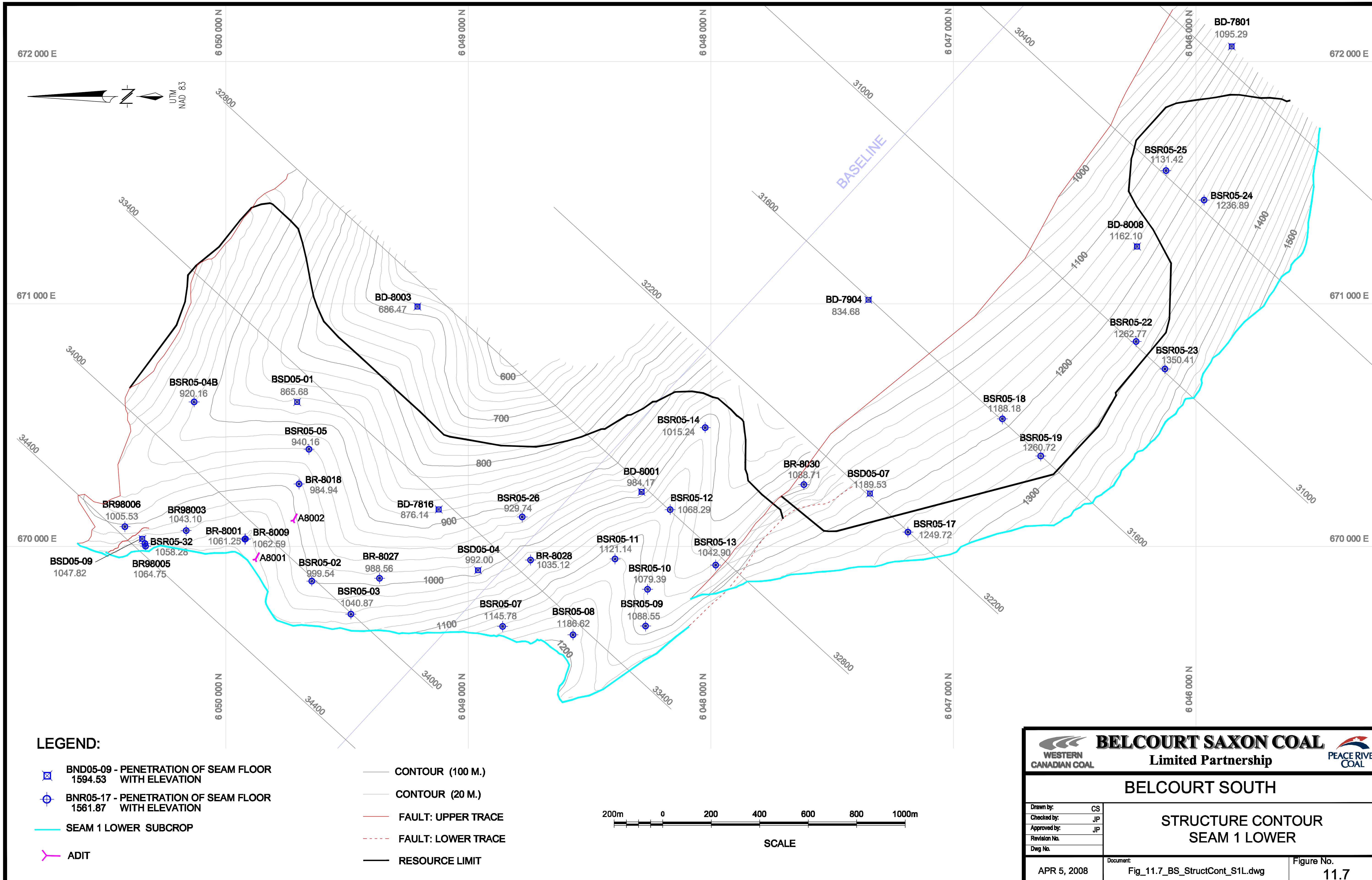

672 000 E
671 000 E
670 000 E
6 050 000 N
6 049 000 N
6 048 000 N
6 047 000 N
6 046 000 N
UTM
NAD 83
N
BASELINE
BD-7801
1095.29
BSR05-25
1131.42
BSR05-24
1236.89
BD-8008
1162.10
BD-7904
834.68
BSR05-22
1262.77
BSR05-23
1350.41
BSR05-18
1188.18
BSR05-19
1260.72
BD-8003
686.47
BSD05-01
865.68
BSR05-04B
920.16
BSR05-05
940.16
BSR05-14
1015.24
BR-8018
984.94
BD-8001
984.17
BR-8030
1088.71
BSD05-07
1189.53
BSR05-12
1068.29
BSR05-26
929.74
BD-7816
876.14
BR98006
1005.53
BR98003
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BSR05-32
1058.28
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A8001
BSD05-09
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BR98005
1064.75
BSR05-02
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BR-8027
988.56
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992.00
BR-8028
1035.12
BSR05-11
1121.14
BSR05-13
1042.90
BSR05-17
1249.72
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BSR05-03
1040.87
BSR05-07
1145.78
BSR05-08
1186.62
BSR05-09
1088.55
LEGEND:
BND05-09 - PENETRATION OF SEAM FLOOR
1594.53 WITH ELEVATION
BNR05-17 - PENETRATION OF SEAM FLOOR
1561.87 WITH ELEVATION
SEAM 1 LOWER SUBCROP
ADIT
CONTOUR (100 M.)
CONTOUR (20 M.)
FAULT: UPPER TRACE
FAULT: LOWER TRACE
RESOURCE LIMIT
200m 0 200 400 600 800 1000m
SCALE
WESTERN CANADIAN COAL
BELCOURT SAXON COAL
Limited Partnership
PEACE RIVER COAL
BELCOURT SOUTH
Drawn by: CS
Checked by: JP
Approved by: JP
Revision No.
Dwg No.
STRUCTURE CONTOUR
SEAM 1 LOWER
APR 5, 2008
Document: Fig_11.7_BS_StructCont_S1L.dwg
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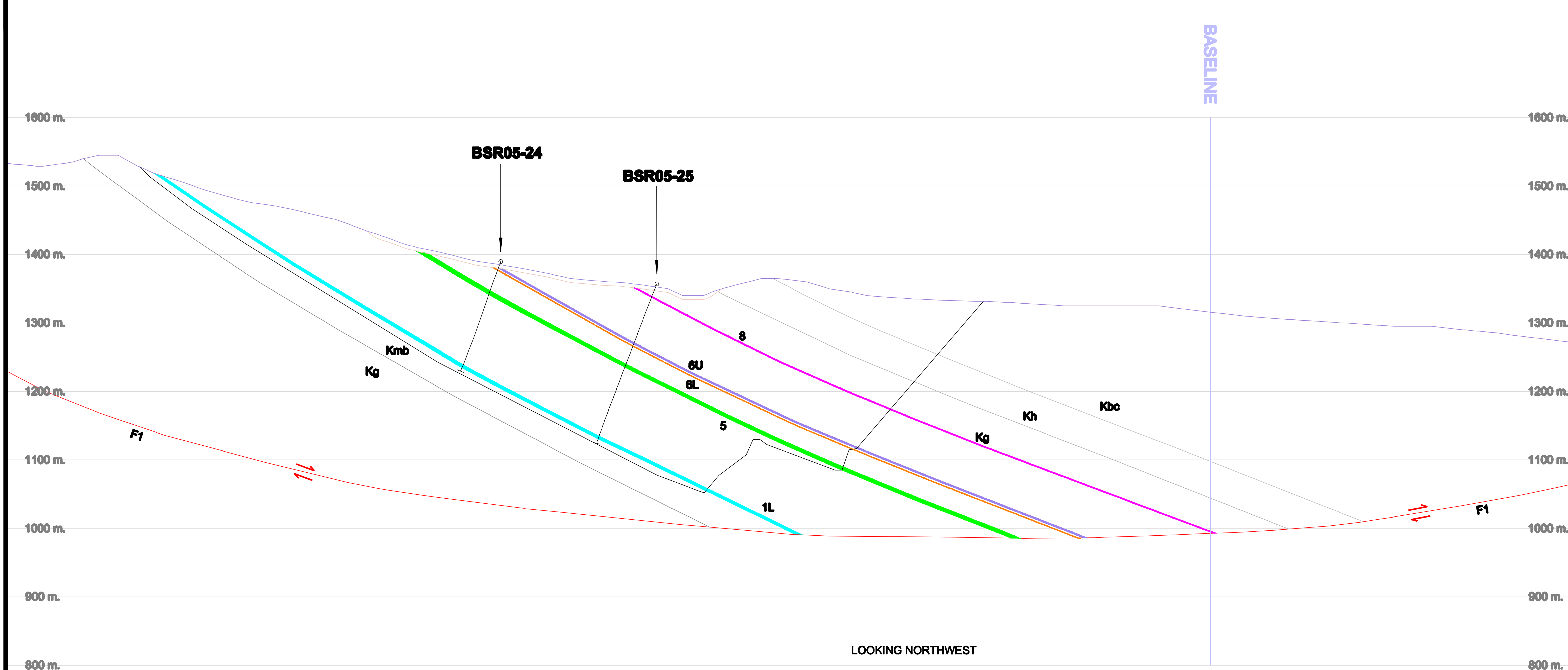


LEGEND:

STRATIGRAPHY

- Ks - SHAFTESBURY FORMATION
- Kb - BOULDER CREEK FORMATION
- Kh - HULCROSS FORMATION
- Kg - GATES FORMATION
- Km - MOOSEBAR FORMATION

COAL SEAMS

- SEAM 8
- SEAM 6U
- SEAM 6L
- SEAM 5
- SEAM 3
- SEAM 1U
- SEAM 1L

- TOPO PROFILE
- BEDROCK
- FORMATION BOUNDARY
- FAULT (with relative displacement)

SYMBOLS

- DRILL HOLE
- BD / BND - DIAMOND DRILL HOLE
- BR / BNR - ROTARY DRILL HOLE
- RESOURCE LIMIT

100 m. 0 100 200 300 m.

SCALE

WESTERN CANADIAN COAL

BELCOURT SAXON COAL
Limited Partnership

PEACE RIVER COAL

BELCOURT SOUTH

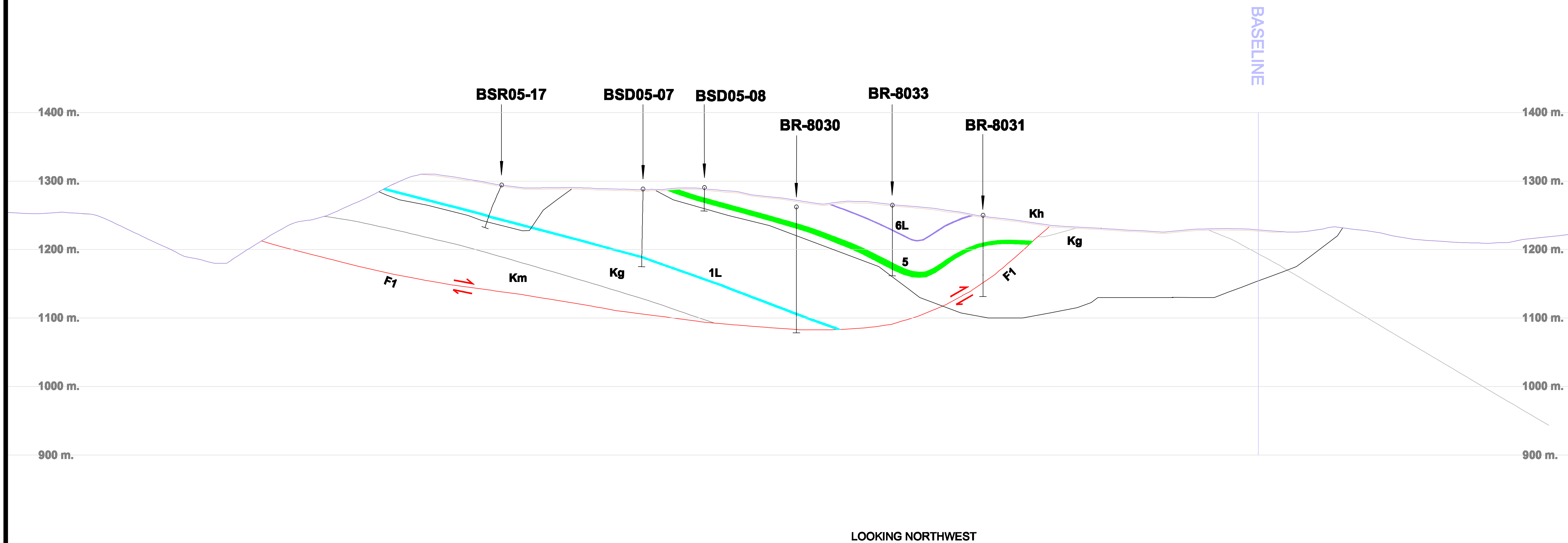
Drawn by:	CS
Checked by:	JP
Approved by:	JP
Revision No.	
Dwg No.	

CROSS SECTION 30400

Mar 17, 2008

Document: Fig_11.8_BS_Sec30400.dwg

Figure No. 11.8



LEGEND:

STRATIGRAPHY

Ks - SHAFTESBURY FORMATION
Kb - BOULDER CREEK FORMATION
Kh - HULCROSS FORMATION
Kg - GATES FORMATION
Km - MOOSEBAR FORMATION

COAL SEAMS

SEAM 8
SEAM 6U
SEAM 6L
SEAM 5
SEAM 3
SEAM 1U
SEAM 1L

TOPO PROFILE
BEDROCK
FORMATION BOUNDARY
FAULT (with relative displacement)

SYMBOLS

DRILL HOLE
BD / BND - DIAMOND DRILL HOLE
BR / BNR - ROTARY DRILL HOLE
RESOURCE LIMIT

100 m. 0 100 200 300 m.
SCALE

WESTERN CANADIAN COAL
BELCOURT SAXON COAL
Limited Partnership
PEACE RIVER COAL

BELCOURT SOUTH

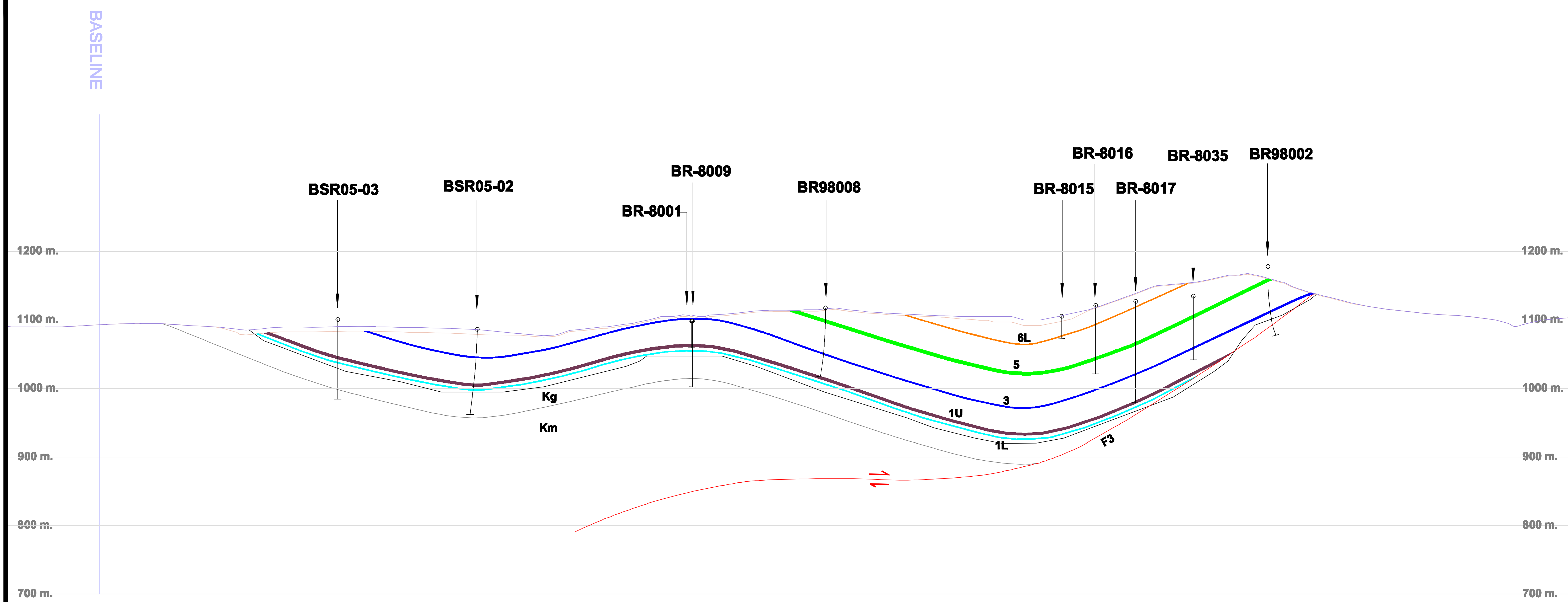
Drawn by:	CS
Checked by:	JP
Approved by:	JP
Revision No.	
Dwg No.	

CROSS SECTION 32200

Mar 20, 2008

Document: Fig_11.9_BS_Sec32200.dwg

Figure No. 11.9



LOOKING NORTHWEST

LEGEND:

STRATIGRAPHY

Ks - SHAFTESBURY FORMATION

Kb - BOULDER CREEK FORMATION

Kh - HULCROSS FORMATION

Kg - GATES FORMATION

Km - MOOSEBAR FORMATION

COAL SEAMS

SEAM 8

SEAM 6U

SEAM 6L

SEAM 5

SEAM 3

SEAM 1U

SEAM 1L

TOPO PROFILE

BEDROCK

FORMATION BOUNDARY

FAULT (with relative displacement)

SYMBOLS

DRILL HOLE

BD / BND - DIAMOND DRILL HOLE

BR / BNR - ROTARY DRILL HOLE

RESOURCE LIMIT

100 m. 0 100 200 300 m.

SCALE

WESTERN CANADIAN COAL

BELCOURT SAXON COAL
Limited Partnership

PEACE RIVER COAL

BELCOURT SOUTH

Drawn by:	CS
Checked by:	JP
Approved by:	JP
Revision No.	
Dwg No.	

CROSS SECTION 34000

Date	Document	Figure No.
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