

# PEACE RIVER COAL INC.



**ASSESSMENT REPORT**  
for the  
**2006 Turning Mountain Exploration Program**

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## **ASSESSMENT REPORT**

**2006 Turning Mountain Exploration Program**

**British Columbia Coal License No.'s 416844, 416845, 416981,  
416982 & 416983**

**Owner and Operator: Peace River Coal Inc.**

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**February, 2007**

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To: Ministry of Mines Energy and Petroleum Resources  
Subject: Turning Mountain Property, Tumbler Ridge, BC  
Date: February 2007

## 1. INTRODUCTION

From late June to September 2006, Peace River Coal Inc. conducted a program of geological mapping on the Turning Mountain property.

## 2. PROPERTY

### *2.1 Location*

The Turning Mountain property lies in the Peace River Coalfield, within the Foothills of the Rocky Mountains, in northeastern British Columbia. The project area is located approximately 30.5 km southwest of Tumbler Ridge (Figure 1). It is located southeast of the Murray River and northeast of the Kinuseo Creek.

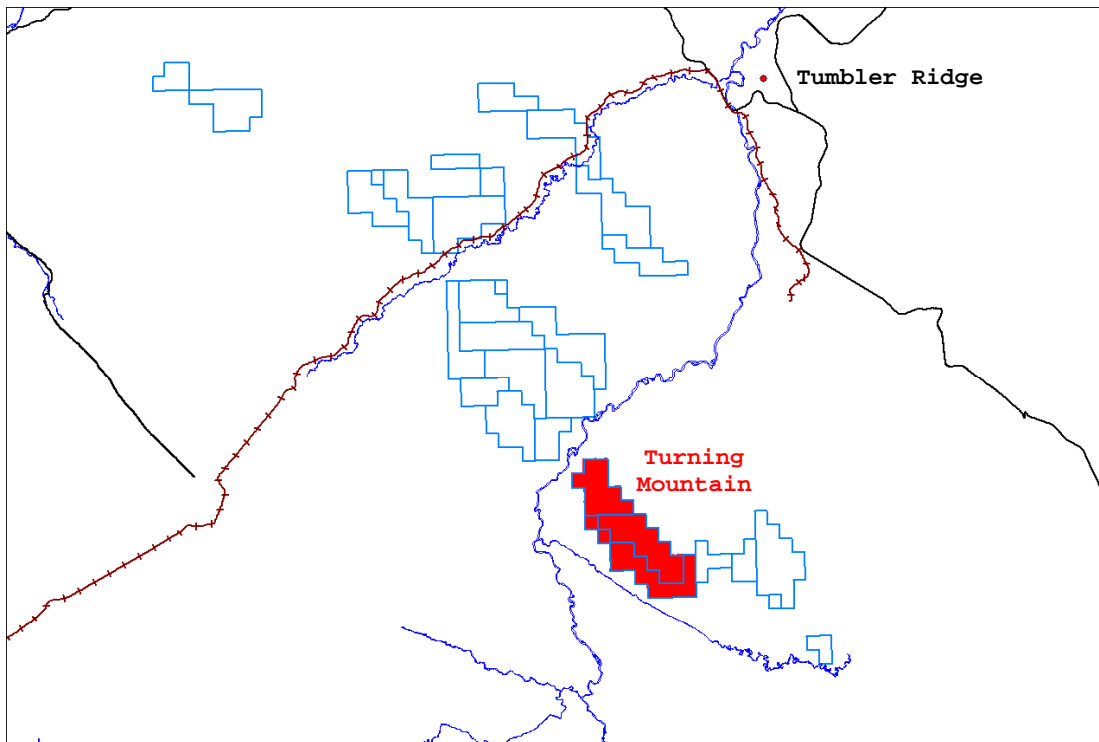
### *2.2 Tenure*

Anglo Coal Canada Incorporated acquired the Turning Mountain property (British Columbia Coal License No.'s 416844, 416845, 416981, 416982 & 416983) when the Murray River Group joint venture agreement with Hillsborough Resources Limited was signed. Subsequent to the signing of the joint venture, these licenses were assigned to Anglo Coal Licenses Inc. It is important to note that in November, 2006, Anglo Coal Canada entered a limited partnership agreement with Hillsborough Resources Limited, and Northern Energy and Mining Incorporated to form Peace River Coal Incorporated.

The area covers a total of 3,205 hectares, and was named after the mountain which occurs on the license area.

*Table 2.1: Turning Mountain property coal tenure licenses*

TENURE NO.	MAP SHEET	AREA (ha)
416844	093I085	1192
416845	093I084	894
416981	093I084	75
416982	093I085	75
416983	093I085	969



*Figure 1: General locality plan of the region, showing Peace River Coal's license areas.*

### 3. THE 2006 EXPLORATION PROGRAM OVERVIEW

#### *3.1. Scope and Objectives*

Previous mapping in the project area indicated that the tenure was underlain by Minnes Formation, which does not contain economic coal seams. The 2006 Turning Mountain exploration program's goal was to determine if previous mapping was correct or whether any portion of the property was underlain by Gething or Gates Formations containing economic coal seams. The program was divided into two phases, the first phase being surface mapping. Phase 2 drilling was planned but was intended to take place only if surface mapping was inconclusive.

#### *3.2. History*

The license areas had not been previously drilled or mapped, apart from 1:50000 scale mapping done by the Geological Survey of Canada. Other than these activities, Peace River Coal's program was the first look at coal resources in this area.

#### *3.3. Access & Physiography*

The Turning Mountain property is first accessed by the Murray River forest service road, which runs parallel to the Murray River. On kilometer 13 of the Murray River road, there is the intersection of the Barbour Creek service road. The Barbour creek is taken another 13 kilometers southeast. The area is covered by spruce forest at the lower elevations and by alpine vegetation at the higher altitudes.

## 4. 2006 / 2007 EXPLORATION WORK

### *4.1 Geological Mapping*

Peace River Coal utilized two person mapping teams to map the Turning Mountain area between June and September 2006. A series of traverses were completed, recording strikes and dips of outcropping strata, and making initial interpretations of stratigraphy.

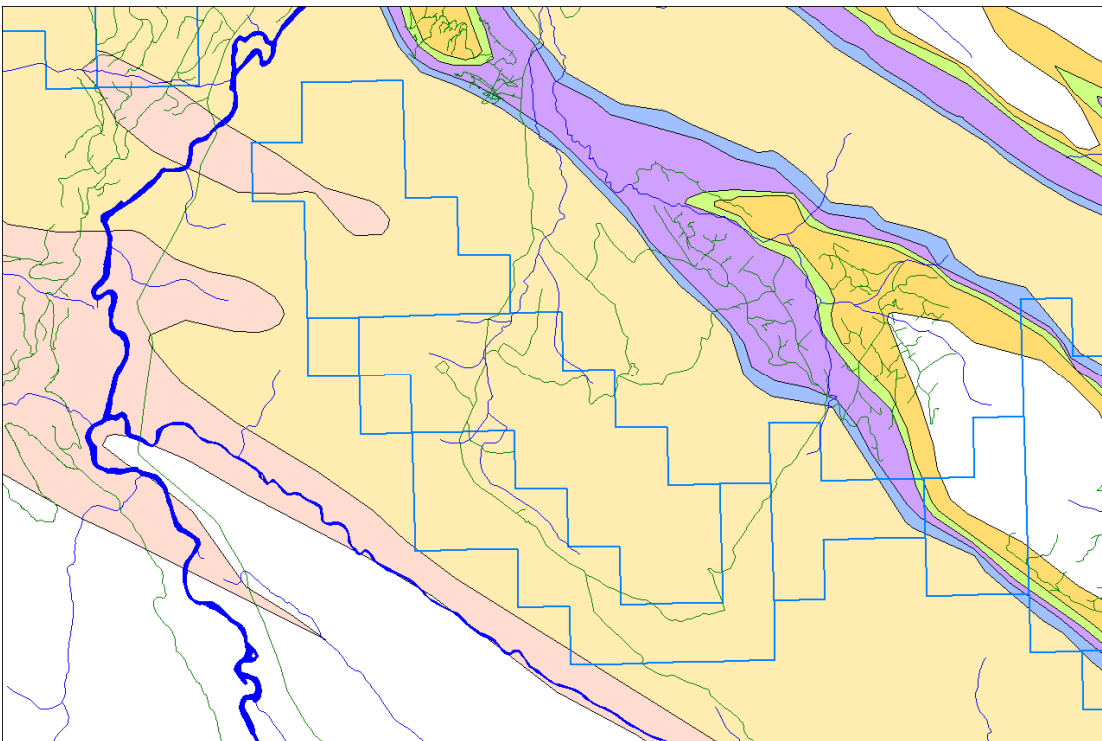
### *4.2 Sampling and Analysis*

A total of five rock samples from the Turning Mountain area were sent for palynological analysis, to verify the interpreted of the mapping team. The analysis was carried out by Branta Biostratigraphy Ltd. Results were inconclusive as the samples were impoverished and almost barren of palynomorphs (Branta, Davies 2006 pg.3). See Appendix A for full report.

## 5. GEOLOGY

### *5.1 Regional Geology*

The license area lies within a belt of Mesozoic strata that forms part of the Rocky Mountain Foothills of northeast British Columbia. The area is underlain by Upper Jurassic Fernie Formation and Lower Cretaceous sediments of the Minnes Group through to the Boulder Creek Formation (Figure 2 and 3). Coal seams of economic interest are found within the Gething Formation of the Bullhead Group and the Gates Formation of the Fort St. John Group. The internal stratigraphy of this Bullhead to Fort St. John Group succession can be generalized as an alternating sequence of marine shales and clastic lithologies (marine to non-marine), reflecting deposition in a series of transgressive / regressive cycles.



*Figure 2: Turning Mountain Geology*



Small, uneconomic coal seams have also been noted within the Minnes Group at the base of the succession, and in the Boulder Creek Formation above the Gates Formation. The Turning Mountain license area is underlain by Minnes Formation strata.

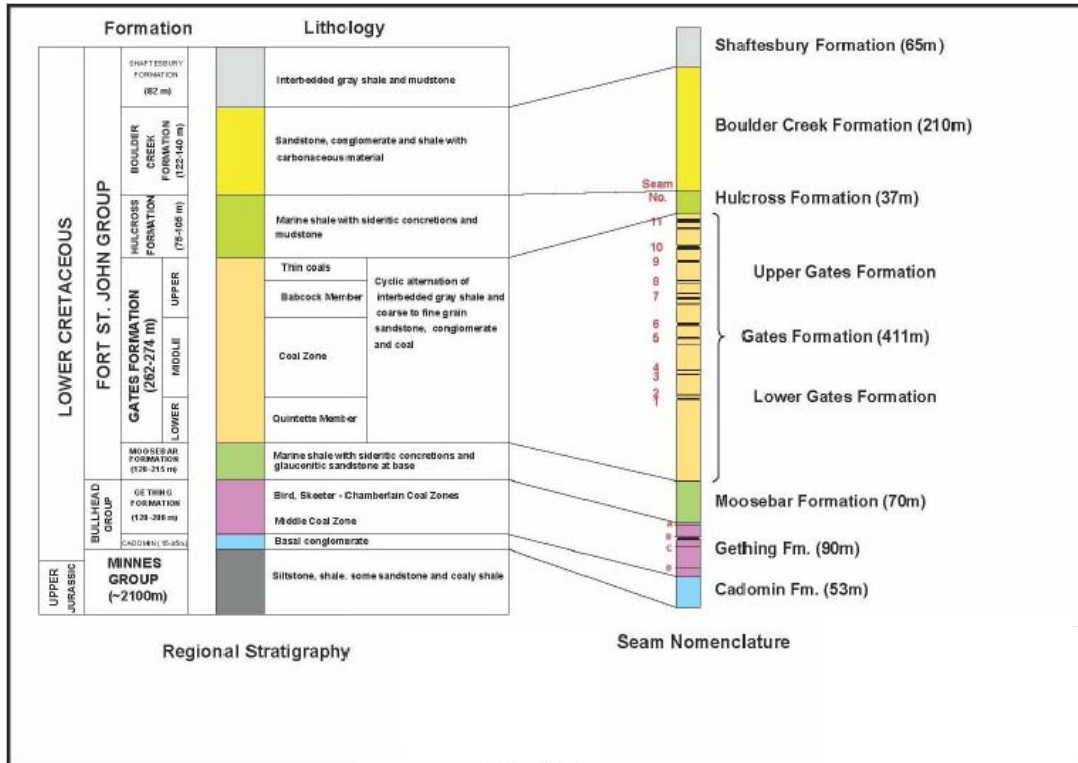


Figure 3: Typical stratigraphic section of the regional area.

The Cadomin Formation, which unconformably overlies the Minnes Group strata, consists mainly of quartz pebble conglomerate. The Gething Formation conformably overlies the Cadomin Formation and is predominately non-marine sediments, although at least one marine horizon of dark gray shale has been identified through past mapping in the surrounding area. The Gething Formation is recognizable, not so much by its appearance in outcrop, but by its position between the Cadomin Formation below and the recessive Moosebar Formation above.

The Moosebar Formation overlies the Gething Formation and consists of a thick sequence of dark grey marine mudstones and siltstones. The Gates Formation conformably overlies the Moosebar Formation.

The Gates Formation ranges in thickness from 250 m to 300 m. The lower portion of the Gates Formation consists of massive, light-grey, medium-grained sandstone with minor carbonaceous and conglomeratic horizons. It is sometimes referred to as the Torrens Member. Historically, the majority of the coal is confined to the middle and lower Gates Formation, over an interval of approximately 90 m. Some thin seams occur in the upper Gates Formation, just below the Hulcross Formation. These Gates cycles generally represent fining-upward sequences that culminate in coal deposition. Cycles normally begin with laminated, medium to fine-grained sandstone at the base that gives way to carbonaceous shale and then coal.

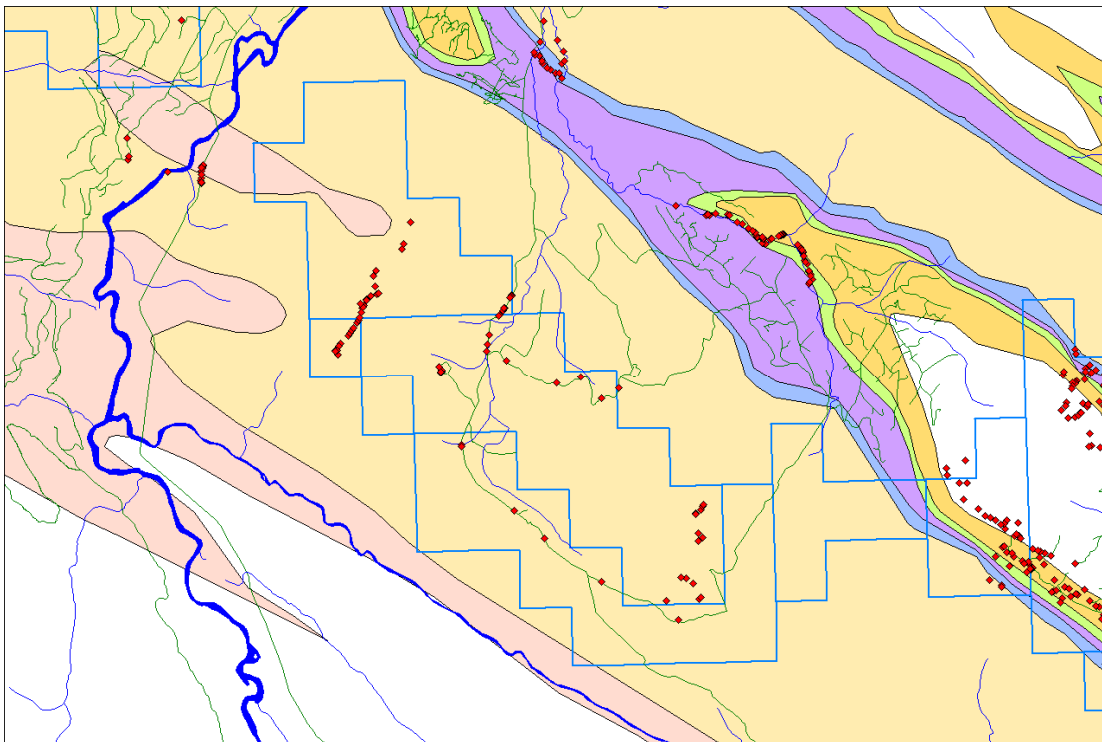
The Hulcross Formation overlies the Gates Formation and consists of a thick sequence of dark marine mudstones. The Boulder Creek Formation overlies the Hulcross Formation and consists of resistant conglomerate and sandstone strata.

### *5.1 Mapping*

Several traverses were completed by Anglo Coal Canada, utilizing existing trails and helicopter access. The area covered on foot is outlined in Figure 4. LIDAR data,

previously purchased by Hillsborough Resources was also used (Figure 5) to aid extrapolation of data points along strike.

During the 2006 mapping program, measurements were taken on a total of 95 outcrops (Figure 4). Outcrop within the licenses is poor; outcrop is common on ridges but much of the licenses are heavily forested and partially swampy, which made mapping difficult.



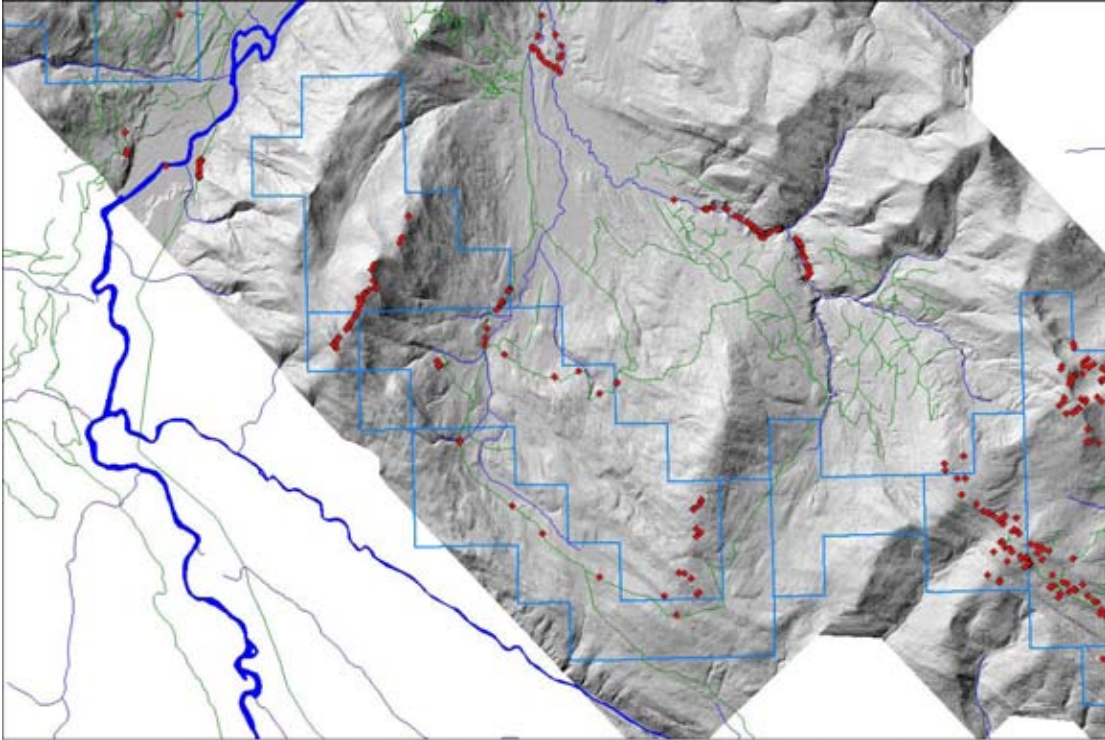
*Figure 4: Turning Mountain Geology with 2006 Mapping Coverage*

On ridges, the outcrops were dominated by finely bedded sandstones with no silts, muds or coals typical of the Minnes Formation. However, the cliff face on the north slope of Turning Mountain clearly shows typical Minnes Formation lithologies, with very thinly interbedded lithologies. These rocks can be clearly seen with binoculars, looking south from the Murray River FSR or from a helicopter. In contrast, walking on the Turning

Mountain ridge, only hard sandstone outcrops can be seen. This leads the conclusion that although the lithologies on the ridges are rather more sandstone-dominated than would be expected, this is due simply to recessive weathering of the softer silts, muds and coals.

The Minnes Formation is typically chevron folded and structurally complex. The dips observed in outcrop were consistent with moderate amounts of chevron folding, although not so complex as seen north of Horizon and Barbour in stream sections. This is mainly due to lack of outcrop as much of the complexity was not exposed.

The Cadomin Formation, overlying the Minnes Formation, is one of the most resistive units in the region and it is not seen in the Turning Mountain licenses. One of the primary objectives of the mapping was to locate any outcropping Cadomin Formation and from there attempt to locate Gething or Gates Formation overlying. No cadomin Formation was located.



*Figure 5: Turning Mountain LIDAR Image*

## **6. RECLAMATION**

Peace River Coal has an environmental policy to keep disturbance related to exploration activities, contained to the smallest practical area. Only existing roads and trails were used to gain ATV access to the property. Where trails did not exist, helicopter access and walking traverses were used to complete mapping and sampling.

As a result, no rehabilitation is required on the Turning Mountain property.

## **7. CONCLUSIONS**

The 2006 exploration program of geological mapping found no evidence of coal bearing strata, from either the Gates or Gething formations.

The Minnes Formation was interpreted to underlie all areas, based on three lines of evidence;

1. Although ridge-top exposures appear to be sandstone-dominated, the cliff on the north side of Turning Mountain exposes typical Minnes Formation lithologies. The sandstone-dominated ridges are a function of recessive weathering of finer-grained interbeds.
2. The Minnes Formation is typically chevron folded and structurally complex. The dips observed in outcrop were consistent with moderate amounts of chevron folding.
3. The Cadomin Formation, overlying the Minnes Formation, is one of the most resistive units in the region and it is not seen in the Turning Mountain licenses. As the Cadomin Formation is absent, the overlying coal-bearing Gething and Gates Formation must also be absent.

The Turning Mountain coal licenses were relinquished in November 2006.

## **8. Expenditure**

The expenditure for the 2006 mapping program on the Turning Mountain property was \$84,398, which includes staff, helicopter access and sample analysis.

## **APPENDIX A**

## **APPENDIX B**



