EXPLORATION AND MINING OVERVIEW FOR NORTHEAST AREA, BRITISH COLUMBIA

By David V. Lefebure, PhD, PGeo

Chief Geologist, Victoria

SUMMARY

The Peace River coalfield in the northeastern part of British Columbia continues to attract significant investment in exploration, mining and mine development. Exploration expenditures are expected to be similar to those in 2009, while mine capital expenditures will be up at as all four operations in the area are making significant investments to increase their capacity and make their operations more cost effective. Coal production is expected to be between 4 and 5 Mt for the region in 2010.

This is an abbreviated description of the mineral industry activity that took place in northeastern British Columbia as there was no regional geologist for this region in 2010.

COAL MINES

The Willow Creek mine reopened in early June, 2010. It is located 45 km west of Chetwynd. Now owned by Western Coal Corp, the mine hopes in 2010 to produce approximately 0.5 Mt of primarily pulverized coal injection (PCI) product with some metallurgical coal (Figures 1 and 2). In September, 2010 the mine made amendment applications to expand the mine and increase production to 1.7 Mt of coal per year. The Willow Creek mine currently employs approximately 140 people with this number expected to increase to 300. There was exploration drilling south of the mine in 2010.



Figure 1. Metallurgical coal awaiting shipment at the Willow Creek mine near the rail loadout. Willow Creek reopened in June 2010.



Figure 2. John Stokmans, mine geologist, proudly showing off a coal seam at the Willow Creek mine.

At Western Coal's Brule mine, located 45 km south of Chetwynd, PCI coal production is anticipated to be approximately 1.2 Mt in 2010. The company is investing significant capital over the next year to upgrade their haul trucks and other equipment on site. The Brule mine employs approximately 180 people. The PCI coal produced at Brule is exported primarily to Korea.

Work is underway on the Falling Creek Connector gravel haul route that will connect the Brule mine to the Willow Creek mine. This will be a shorter haul route that does not use local highways and will eliminate the need to use the Bullmoose coal loadout facility. The Willow Creek mine is on the CN rail line and has coal loading facilities. The Falling Creek Connector Coal is expected to be completed by the end of 2010, at which time, facilities for washing some of the Brule coal are expected to be operational at Willow Creek.

The Wolverine mine of Western Coal Corp is located just west of the town of Tumbler Ridge. It employs approximately 300 people. The mine is involved in a

recapitalization project this year. The mine has a life expectancy of 15-20 years and, this year, Wolverine operations are expected to produce approximately 1.7 Mt of hard coking coal. The company is considering doing some underground mining in the Perry Creek area. Western Coal Corp has the EB and Hermann properties with a total of 40 Mt of proven coal reserves near the Wolverine mine. The EB pit was included in the original Environmental Assessment (EA) Certificate approval, while the Hermann property is subject to further approvals.

Late in 2010, Western Coal Corp agreed to a merger proposal whereby Walter Energy acquires all of the outstanding common shares of Western Coal. The transaction represents a total enterprise value of \$3.3 billion, net of cash on the balance sheet for Western Coal, and is expected to be completed by the second quarter of 2011.

Peace River Coal's Trend mine is located about 25 km south of Tumbler Ridge. Metallurgical coal is being mined from the Gates Formation with a cumulative coal thickness of approximately 15 metres from a narrow pit that exploits a steep limb of a fold (Figure 3). Production in 2010 is targeted at approximately 1 Mt of mostly metallurgical coal with a small amount of thermal coal. Coking tests performed on the coal extracted from seams in the associated Gething Formation yielded positive results and the company is considering options to extend the pit to mine them. Peace River Coal's work force increased from 80 to about 330 in 2009 as the company moved from contractor mining to owner-operated mining. The company has been investing in the mill infrastructure in 2010 with upgrades to mill and maintenance workshop. The nearby Roman Mountain project is in the provincial Environmental Assessment Review process and Peace River Coal is planning to complete a feasibility study on the deposit.

Teck Coal Ltd has committed to completing a feasibility study by late 2011 regarding the possible reopening of their Quintette mine in 2000 (Figure 4). They are also reviewing the status of the infrastructure on site, including their wash plant, investigating the status of site permits and completing some baseline environmental work. Current plans are to focus on evaluating the 28 Mt coal resource on Mount Babcock as the source of the metallurgical coal to re-start the mine.

COAL EXPLORATION PROJECTS

There are a number of other coal exploration programs by other companies in the Peace River Coalfield. For example, Canadian Dehua International Mines Group Inc is completing one of the larger programs with more than 20 holes planned on their Murray River property (Figure 5). Should an economic resource be discovered, these metallurgical coal seams would only be accessible by underground mining techniques.



Figure 3. Trend mine - looking southeast from approximately the centre point of the pit towards the Horizon deposit in the background.



Figure 4. Quintette plant site in the fall of 2010. Teck Coal Ltd is working on a feasibility study regarding a possible reopening of their Quintette mine.



Figure 5. Drill on the Murray River property of Canadian Dehua International Mines Group Inc.

56 British Columbia

ACKNOWLEDGMENTS

The author appreciates the support provided by the coal companies, particularly Peace River Coal and Western Coal, in the northeast during his short fall visit. Any errors or omissions are the responsibility of the writer.