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BC Geological Survey Coal Assessment Report 946

ONION COAL ASSESSMENT REPORT PEACE RIVER DISTRICT

LOCATED AT UTM: 6070000 N, 635000 E

LICENSES: 416926, 416927, 416928, 416929, 417146, 417147, 417148, 417149, 417150

Belcourt Saxon Coal LP 800 – 700 West Pender Street Vancouver, British Columbia V6C 1G8

Author: David Lortie P.Geo. September 8, 2014



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1 Introduction

This report is based on an internal report titled "Interim Report, 2009 Onion Exploration Program" authored by Bert Schalekamp, Torin Olver and Stephanie McRae. This report has been reviewed and revised to conform to the requirement of the Coal Act regarding the submission of Coal Assessment Reports.

From January to April 2009, Peace River Coal Inc. conducted a reconnaissance program of open-hole percussion drilling on the Onion Syncline coal deposit, located approximately 50km south of the town of Tumbler Ridge, BC. (Figure 1.1)

This area was identified as a potential target due to its proximity to the current mining operation and its position along the same northwest trending syncline as the Five Cabin area.

Exploration access was established via existing dormant roads and trails, which were extended to new areas. Five new boreholes were drilled totaling 1051m of open-hole percussion drilling. One of the boreholes was not logged to total depth. The borehole was initially geophysically logged through the rods to determine stratigraphic position. It was determined to be in the Hulcross Fm. The borehole was continued, but rods were lost 8m from surface. The borehole was abandoned without further geophysical logging. All of the drilling was completed under the supervision of the authors.



Figure 1.1 Location Plan





2 **Property and Location**

2.1 Ownership

The Onion property is composed of several coal tenures within the Peace River Coalfield and is controlled by Belcourt Saxon Coal LP of which Peace River Coal Inc. and Western Coal Corp. own 50% each.

2.2 Property Description

The Onion coal deposit is located on Coal Licenses: 416926, 416927, 416928, 416929, 417146, 417147, 417148, 417149 and 417150.

All of the exploration work in 2008 took place on the following licenses.

| Coal Lease | PNG Description | | | | | | | | |
|------------|-----------------|------------|-----------|-------|-------------------------|---------------------|--|--|--|
| No. | Anniversary | MAP Sheet | Area (Ha) | BLOCK | UNITS | | | | |
| 446000 | 00/00/0005 | 00/00/0005 | 0001070 | 1105 | D | 1,2,3,4,11,12,13,14 | | | |
| 416929 | 06/22/2005 | 0931076 | 1195 | L | 61,62,71,72,81,82,91,92 | | | | |
| 417150 | 12/14/2005 | 0931076 | 150 | D | 21, 22 | | | | |

| Table 2.2.1 | License Summary |
|-------------|-----------------|
|-------------|-----------------|

2.3 Location

This property is located in the Peace River Coalfield of British Columbia approximately 50km southsoutheast of the town of Tumbler Ridge. Tumbler Ridge is about 400 km northeast of Prince George, British Columbia by Highways 97 and 29. Dawson Creek is 115 km to the northeast via Highways 97 and 52. The Onion property is accessed via the Heritage Highway and the Old Kinuseo Creek Road. The centre of the property is in UTM Zone 10, NAD 83 at coordinates 6070000 Northing, 635000 Easting. (Figure1.1)



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3 Geology

3.1 Regional Setting

The Onion stratigraphy is confined mainly to the Lower Cretaceous (<u>FIGURE 3.1.1</u> – Regional Stratigraphic Section). Significant units, in ascending stratigraphic order are:

• **Nikanassin Formation (Minnes Group)**: Mainly argillaceous with occasional siltstones, fine sandstones and minor coal seams. This unit straddles the Jurassic-Cretaceous boundary at the top of the Minnes Group.

• Cadomin Formation (Bullhead Group): Mainly coarse grained, well cemented

Conglomerates, it's thickness ranges from 15 to 45 metres. The Cadomin is highly resistant to weathering and consequently forms a persistent and visible regional stratigraphic marker. This unit sits disconformably on the Minnes Group and forms the base of the Bullhead Group.

• Gething Formation (Bullhead Group): Comprises alternating units of fine to coarse grained sandstone, carbonaceous shale, coal, siltstone and conglomerate. Three to four significant coal seams occur in the upper part of this formation and form part of the Trend Project reserves. The Gething Formation coal seams have not been mined in this area. The upper contact is of the Gething Formation is a thin pebble conglomerate overlain by distinctive glauconitic, marine sandstones that form the base of the overlying Moosebar Formation. Its thickness ranges from 120 – 200 metres.

• Moosebar Formation (Fort St. John Group): Homogeneous dark grey

shales and siltstones, often sideritic. This marine unit grades upward into similar, continental shales, forming the base of the overlying Gates Formation. The lower half of this unit is the most recessive-weathering rock in the area and commonly forms linear gullies and stream channels. Its thickness ranges from 120 – 215 metres.

• Gates Formation (Fort St. John Group): This is the major coal-bearing unit of the study area and comprises siltstone, shale, sandstone, and conglomerate in several cycles of deposition, each culminating in a major coal seam. It is generally subdivided into the Lower, Middle and Upper units.

The Lower Gates comprises the Quintette Member, an 80 - 90 metre thick sequence of primarily massive, fine grained siltstones and sandstones. The Middle Gates, 90 - 100 metres thick, consists of a series of fining-upward sequences that culminate in the economic coal seams of the Gates Formation. The Upper Gates comprises the Babcock Member which is a sequence of massive fluvial channel,



conglomeratic sandstones and averages 20 - 30 metres thick. Contained within the Upper Gates and overlying the Babcock Member is a 30 - 40 metre sequence of shales and sandy shales with several thin, discontinuous coal seams. A thin bed of ferruginous chert pebbles marks the top of the unit.

The overall thickness of the Gates Formation is 270 – 300 metres.

• Hulcross Formation (Fort St. John Group): A marine unit consisting of medium-dark grey shales with thin interbeds of siltstone and very fine sandstone. Its thickness ranges from 75-105m.

• Boulder Creek Formation (Fort St. John Group): An alternating sequence of shale and medium- to fine-grained greywacke, overlain by conglomeratic sandstone. Some thin, discontinuous coal seams exist. Its thickness averages ~130 metres.

• Shaftesbury Formation (Fort St. John Group): The uppermost unit found in the area, consisting of dark grey-black marine shales with minor siltstone, with a thickness in excess of 80 metres.



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Figure 3.1.1 Regional Stratigraphic Section





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3.2 Geological Overview

The Belsax properties consist of two subareas: Belcourt and Saxon. The Belcourt properties are Belcourt North, Belcourt South, Belcourt West and Onion. The Saxon properties are Omega, Saxon North, Saxon South and Saxon East. Onion is bounded by Kinuseo Creek to the north, the Wapiti Dip Slope to the southwest.

The foothills strata were deposited during the Jurassic and Cretaceous. At this time a shallow sea existed between the eastern stable shelf and the actively uplifting areas of central British Columbia. Clastic sediments from erosion of this highland were transported and deposited on older marine sediments. The large accumulations of plant debris deposited between the deposition of the clastic sediments indicate a probable deltaic facies. Transgressions were periodic when subsidence occurred. This has resulted in stratigraphy that is composed of marine and non marine to near marine units being interlayered.

3.3 Stratigraphy and Coal Seams

Six major coal seams, are identified in Onion. These are 1, 2, 3, 5, 6, and 7. 7 is the uppermost seam in the area. The 4 seam is represented by a carbonaceous shale coaly zone. The seams of interest at this time are 6.1, 5.0, 3.1, 3.2 and to a lesser degree 1.1 and 1.2. The 7 and 2 seams can be over a metre in true thickness, but have not been identified as targets. The 1 seam plys are often high in ash, and have also not been identified as targets. There is variability in seam continuity and additional work will be required to increase the confidence in the seam correlation.

3.4 Structure

The Peace River Coalfield structure, which is a part of the Rocky Mountain chain, is characterized by the Upper Cretaceous regional thrusting and associated folding along a northwest – southeast trend. The primary stress direction was from the southwest. The region is dominated by sequences of syncline/anticline pairs with southwest dipping axial planes, often truncated by high-angle thrust faults, which can splay, transecting the belt longitudinally. This has led to the repetition of coal-bearing sections along strike. The structure within syncline/anticlines can vary from simple, with gentle dips, to complex with steep dips. The fold axes vary in plunge from the northwest to the southeast.

The Wapiti Dip Slope is a continuous feature that trends in a southeasterly direction. As previously mentioned, the Wapiti Dip Slope is interpreted to be an extensive syncline that was truncated on the western edge by a major thrust fault. The eastern limb composes the Wapiti Dip Slope. This fault places



Paleozoic sediments over Cretaceous and Jurassic strata. The syncline is intact at the northern and southern extremities.

The northern end is made of the Five Cabin syncline, which is asymmetrical. The western limb of the Five Cabin Syncline dips at a high angle to the east, while the eastern limb dips shallowly to the west. The Five Cabin Syncline plunges to the north at a shallow angle. The southern termination of the Five Cabin Syncline is masked by thick overburden made of Cretaceous strata and appears to be at the Old Kinuseo Creek Road.

The Onion Syncline occurs to the south of the Old Kinuseo Creek Road. The northern portion of the syncline is masked by thick overburden. The syncline is symmetrical with both limbs dipping around 50°. The plunge is obscured in the north, but the southern portion of the syncline shows a plunge of approximately 20° to the north. The Onion Syncline and Five Cabin Syncline fold axes show displacement along the southeastern trend, further supporting *en echelon* development.

The Saxon North property is made of a syncline that is the southern continuation of the Wapiti Dip Slope. The syncline has been displaced by the Saxon Fault, separating it from the Wapiti Dip Slope.







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Figure 3.4.2 Onion Syncline





4 **Program Overview**

4.1 Goals and Parameters

The 2009 exploration program was intended as a broad look to confirm the existing borehole information and gather additional geological data to decide on the potential of any further exploration work. Primary targets included the 1, 3, 5 and 6 coal zones of the Gates Formation. There was no intention to explore the coal zones of the Gething Formation.

This deposit is considered Moderate under the guidelines of GSC Paper 88-21, which suggests that a spacing of 900m-2400m between data points is needed to satisfy the requirements of a structurally Inferred classification. The 2009 drill program focused on increasing the structural data point density in the Gates Formation to increase confidence in coal zone correlations across a portion of the deposit and create a basic geological model.

4.2 History

1968 Regional Mapping by GSC

1970 Property acquired by McIntyre Mines, Ltd.

1971 Generalized mapping of Belcourt-Duke area with limited trenching and sampling by McIntyre Mines, Ltd.

1973 Continuation of 1971 program, with more extensive mapping, trenching and sampling by McIntyre Mines, Ltd.

1975 Canadian Superior Oil, Ltd. enters a partnership with McIntyre Mines, Ltd. with a 66 2/3 % share, the project is named Monkman-Belcourt Project

1975 More extensive field mapping of area, including the Five Cabin, Onion, Wapiti, Duke, Duchess, Belcourt, Dokken, Secus, and Nekik properties; three test holes are drilled to test coking properties, however none in the Belcourt West property; the work was completed by Canadian Superior Oil, Ltd.

1975 Pacific Petroleums, Ltd. enters Monkman Coal partnership

1976 Four test holes were drilled in the Belcourt West property as a part of the more extensive drilling of the Monkman Coal project completed by Pacific Petroleums, Ltd.

1978 Pacific Petroleums, Ltd. increases partnership share to 50%

1979 Detailed mapping of Monkman area by Pacific Petroleums, Ltd.

1980 Petro-Canada Inc. becomes operator of Monkman Coal Project



1981 Petro-Canada Inc. continues Monkman Coal Project, this includes infill mapping completed at Belcourt West

1988 Property is owned by Petro-Canada Inc, Smoky River Holdings Ltd., Mobil Oil Ltd., and Sumitomo Canada Ltd. and Petro-Canada Inc. continues as operator; Petro-Canada Inc. completes a review of the mining and development potential of the North Wapiti Dip Slope using data from previous exploration

2003 NEMI acquires Belcourt and Saxon coal licenses; NEMI previously operated as Consolidated Goldbank Ventures Ltd.

2004 Beclourt Saxon Coal Limited Partnership is created with NEMI and Western Canadian Coal Corp. having equal shares

2005 Belcourt Saxon Coal Limited Partnership does extensive exploration work, however no work is done on Belcourt West

2006 NEMI, Hillsborough Resources Ltd, and Anglo Coal Canada Inc. create new company Peace River Coal Ltd; this company acquires the 50% ownership of Belcourt Saxon Coal Limited Partnership

2009 Western Canadian Coal Corp. acquires Cambrian Mining Plc and becomes Western Coal Corp.

2009 The Vitol Group acquires Hillsborough Resources Ltd, including the share of Peace River Coal Ltd and consequently a portion of the Belcourt Saxon Coal Limited Partnership.

2011 Walter Energy buys Western Coal Corp.

2011 Anglo American plc. acquires 100% of Peace River Coal.

4.3 2009 Drilling

In 2009, five boreholes were completed at the Onion property. The drilling consisted of 1131 metres of open-hole percussion drilling. (Figure 4.3.1). The work was down under the Notice of Work Permit CX-09-037.

All five holes were geophysically logged by Century Wireline Services and surveyed using a Trimble GPS Pathfinder ProXT with submeter accuracy.



Figure 4.3.1 2009 Onion Exploration Plan





4.4 Access

Access to the Onion Syncline work area was obtained using existing highways, forest service roads and trails. Highway 97 south from Tumbler Ridge is the main highway access which leads to the Old Kinuseo Creek Road, also known as the South Grizzly Road. It was necessary to re-open 21 km of the Old Kinuseo Creek Road and install two temporary total span steel bridges. The second bridge crossed the Kinuseo Creek from where an existing cutline was used to access the borehole sites

Four of the five boreholes drilled were placed on the existing cutline with only borehole BOR09-003 requiring a short new trail to be constructed.

5 2009 Exploration Work

5.1 Drilling

A total of 1131 m of open-hole percussion drilling was completed with a total of five boreholes. One of the boreholes was not logged to total depth. The borehole was initially geophysically logged through the rods to determine stratigraphic position. It was determined to be in the Hulcross Formation. The hole was continued, but rods were broken off at 8 m. The hole was the abandoned without further geophysical logging. The holes were all completed by G&R Drilling.

| Borehole | <u>Azimuth</u> | Inclination | <u>Total Depth (m)</u> |
|-----------|----------------|-------------|------------------------|
| BOR09-001 | 45° | -65° | 270 |
| BOR09-002 | 230° | -65° | 176 |
| BOR09-003 | 45° | -65° | 83 |
| BOR09-009 | 45° | -60° | 247 |
| BOR08-010 | 220° | -60° | 253 |

Table 5.1.1 2009 Borehole Summary

Table 5.1.2 lists seam intervals intersected in five boreholes drilled at the Onion Syncline. Seam intersection thicknesses in these five boreholes are substantially less than similar seam intersections from borehole MOD-7606. Seam 3.2, intersected in boreholes BOR09-001, BOR09-009 and BOR09-010 ranges in thickness from 1.17m to 2.35m. An average of 1.89m compared to an intersected thickness of 5.30m for borehole MOD-7606. Seam 5.0 in borehole MOD-7606 has a thickness of 6.60m but no intersections of seam 5.0 were found in the 2009 borehole



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Table 5.1.2 2009 Borehole Seam Interval Summary

| B | OR09-001 | BC | DR09-002 | B | OR09-003 | BC | DR09-009 | B | OR09-010 |
|------|---------------|------|---------------|------|---------------|------|---------------|------|---------------|
| Seam | Thickness (m) |
| 7.4 | - | 7.4 | - | 7.4 | - | 7.4 | - | 7.4 | - |
| 7.3 | - | 7.3 | - | 7.3 | - | 7.3 | - | 7.3 | - |
| 7.2 | - | 7.2 | - | 7.2 | - | 7.2 | - | 7.2 | - |
| 7.1 | - | 7.1 | - | 7.1 | - | 7.1 | 1.89 | 7.1 | - |
| 6.3 | - | 6.3 | - | 6.3 | - | 6.3 | - | 6.3 | - |
| 6.2 | - | 6.2 | - | 6.2 | - | 6.2 | - | 6.2 | - |
| 6.1 | - | 6.1 | - | 6.1 | 0.99 | 6.1 | 0.82 | 6.1 | - |
| 5.3 | - | 5.3 | - | 5.3 | - | 5.3 | 1.09 | 5.3 | - |
| 5.2 | - | 5.2 | - | 5.2 | - | 5.2 | 0.74 | 5.2 | - |
| 5.1 | - | 5.1 | - | 5.1 | - | 5.1 | 1.86 | 5.1 | 1.42 |
| 5.0 | - | 5.0 | - | 5.0 | - | 5.0 | - | 5.0 | - |
| 4.2 | - | 4.2 | - | 4.2 | - | 4.2 | - | 4.2 | - |
| 4.1 | - | 4.1 | - | 4.1 | - | 4.1 | 0.84 | 4.1 | - |
| 4.0 | - | 4.0 | - | 4.0 | - | 4.0 | - | 4.0 | - |
| 3.4 | - | 3.4 | - | 3.4 | - | 3.4 | - | 3.4 | 0.94 |
| 3.3 | - | 3.3 | - | 3.3 | - | 3.3 | - | 3.3 | 1.02 |
| 3.2 | 2.35 | 3.2 | - | 3.2 | - | 3.2 | 2.14 | 3.2 | 1.17 |
| 3.1 | 3.00 | 3.1 | - | 3.1 | - | 3.1 | 1.12 | 3.1 | 3.14 |
| 3.0 | - | 3.0 | - | 3.0 | - | 3.0 | 1.23 | 3.0 | 0.39 |
| 2.4 | - | 2.4 | - | 2.4 | - | 2.4 | - | 2.4 | - |
| 2.3 | 0.42 | 2.3 | - | 2.3 | - | 2.3 | 0.32 | 2.3 | 0.57 |
| 2.2 | 0.96 | 2.2 | - | 2.2 | - | 2.2 | 0.80 | 2.2 | - |
| 2.1 | 0.57 | 2.1 | - | 2.1 | - | 2.1 | 0.59 | 2.1 | - |
| 2.0 | 1.20 | 2.0 | - | 2.0 | - | 2.0 | 1.02 | 2.0 | - |
| 1.2 | 1.14 | 1.2 | - | 1.2 | - | 1.2 | 0.98 | 1.2 | 0.74 |
| 1.1 | 0.53 | 1.1 | - | 1.1 | - | 1.1 | 0.22 | 1.1 | - |
| - | - | - | - | - | - | - | 0.43 | - | - |



5.1.1 Rotary Percussion Boreholes

The rotary drilling holes were completed by G&R Drilling. Three boreholes reached the proposed total depth. Borehole BOR09-002 was drilled to a depth of 277m. At that depth the rods broke 8m from the surface and the borehole was lost. Borehole BOR09-003 did not reach the proposed total depth. Circulation was lost at 84m. Due to poor borehole conditions and the loss of drilling rods on borehole BOR09-003 drilling did not continue

5.1.2 HQ Diamond Drill Boreholes

No diamond drilling was completed in the 2009 exploration program. Further delineation of the resource is suggested before diamond drill coring is planned.

5.2 Geophysical Logging

All drill holes were geophysically logged by Century Corporation of Canada. The following tools were used:

- gamma/neutron/deviation tool, either tool #9055, #9056, #9057 or #9067
- gamma/density/resistivity/caliper tool, #9239
- dipmeter/deviation tool, #9411
- Through-rod logs used a gamma-gamma tool, #9068

Century has provided digital .las and .tif files and paper copies of all geophysical logs (Appendix 13.1)

5.3 Surveying

All five holes were surveyed using a Trimble GPS Pathfinder ProXT with submeter accuracy. Survey locations were not verified with existing control points and no post processing was completed.

| Table 5.3.1 | 2009 Borehole | Locations |
|-------------|---------------|-----------|
|-------------|---------------|-----------|

| Borehole | Easting | Northing | Elevation (m) |
|-----------|---------|----------|---------------|
| BOR09-001 | 635006 | 6071141 | 1035 |
| BOR09-002 | 635818 | 6069795 | 1094 |
| BOR09-003 | 636233 | 6070109 | 1055 |
| BOR09-009 | 635021 | 6070933 | 1044 |
| BOR09-010 | 636079 | 6069401 | 1153 |



5.4 Sampling and Analysis

| No | sampling | or | analysis | was | completed | in | the | 2009 | exploration | program. |
|----|----------|----|----------|-----|-----------|----|-----|------|-------------|----------|
|----|----------|----|----------|-----|-----------|----|-----|------|-------------|----------|



6 **Pre-2008 Exploration Work**

6.1 Drilling

Pre-2009 there were two boreholes drilled in the Onion Syncline area. The two diamond Drillholes (HQ) totaled 571m.

Table 6.1.1 Historical Borehole Summary

| <u>Borehole</u> | rehole <u>Azimuth</u> <u>Inclination</u> | | <u>Total Depth (m)</u> |
|-----------------|--|------|------------------------|
| MOD-7606 | 31° | -60° | 351.80 |
| MOD-7608 | 32° | -60° | 219.40 |

Table 6.1.2 Historical Borehole Locations

| <u>Borehole</u> | Easting Northing | | Elevation (m) |
|-----------------|------------------|---------|---------------|
| MOD-7606 | 641655 | 6065732 | 1165 |
| MOD-7608 | 640822 | 6066570 | 1158 |

Table 5.1.3 lists seam intervals intersected in the two boreholes drilled at the Onion Syncline in 1976. Borehole MOD-7606 targeted the Gates Fm and borehole MOD-7608 targeted the Gething Fm.

Borehole MOD-7606 intersected fourteen seams in the Gates Formation. The largest intersections were found in seams 5.0, 3.2 and 1.2 at 6.60m, 5.30m and 5.60m respectively. The total thickness of intersected seams greater than 1m is 31.60m. Over a 216.20m section this results in a 6.8:1 rock to coal ratio.

Borehole MOD-7608 intersected three seams in the Gething Fm: B3, B2 and B1 with intersected thicknesses of 1.10m, 1.80m and 0.30m respectively.



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| Ν | 10D-7606 | MOD-7608 | | | | | | | |
|------|---------------|----------|---------------|--|--|--|--|--|--|
| Seam | Thickness (m) | Seam | Thickness (m) | | | | | | |
| 7.4 | - | 7.4 | - | | | | | | |
| 7.3 | 1.20 | 7.3 | - | | | | | | |
| 7.2 | 1.90 | 7.2 | - | | | | | | |
| 7.1 | 0.50 | 7.1 | - | | | | | | |
| 6.3 | - | 6.3 | - | | | | | | |
| 6.2 | - | 6.2 | - | | | | | | |
| 6.1 | 1.40 | 6.1 | - | | | | | | |
| 5.3 | - | 5.3 | - | | | | | | |
| 5.2 | - | 5.2 | - | | | | | | |
| 5.1 | - | 5.1 | - | | | | | | |
| 5.0 | 6.60 | 5.0 | - | | | | | | |
| 4.2 | 3.20 | 4.2 | - | | | | | | |
| 4.1 | 2.70 | 4.1 | - | | | | | | |
| 4.0 | - | 4.0 | - | | | | | | |
| 3.4 | - | 3.4 | - | | | | | | |
| 3.3 | - | 3.3 | - | | | | | | |
| 3.2 | 5.30 | 3.2 | - | | | | | | |
| 3.1 | 1.50 | 3.1 | - | | | | | | |
| 3.0 | - | 3.0 | - | | | | | | |
| 2.4 | 0.90 | 2.4 | - | | | | | | |
| 2.3 | 1.10 | 2.3 | - | | | | | | |
| 2.2 | 1.10 | 2.2 | - | | | | | | |
| 2.1 | 0.50 | 2.1 | - | | | | | | |
| 2.0 | - | 2.0 | - | | | | | | |
| 1.2 | 5.60 | 1.2 | - | | | | | | |
| 1.1 | - | 1.1 | - | | | | | | |
| B3 | - | B3 | 1.10 | | | | | | |
| B2 | - | B2 | 1.80 | | | | | | |
| B1 | - | B1 | 0.30 | | | | | | |

Table 6.1.3 Historical Borehole Seam Interval Summary

Limited sampling was completed on boreholes MOD-7606 and MOD-7608. Borehole MOD-7606 intersected seams in the Gething Fm and had a single sample for seam B2. Analysis provided a raw ash value of 18.9% and a raw F.S.I. value of 5.00. Additional analysis was not completed on borehole MOD-7608. Four seams were sampled in borehole MOD-7606: 5.0, 4.2, 3.2 and 1.2. Clean ash values range from 5.4% to 6.8% with clean F.S.I. values as low as 5.5 and as high as 9.0. Clean analysis indicates medium volatile matter values ranging from 27.8% to 31.2%.



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Table 6.1.4 MOD-7606 Sample Summary

| | Thickness | Recovery <u>(%)</u> | | (ADB) | Clean Coal Quality (ADB) | | | | | | | | Fluidity | | | | |
|-------------|-----------|------------------------|-------------------------------|-------------------|--------------------------|------------------|------------------------------|---------------|-----------------|-------------------|--------------------|------------------|-----------------------|------------------|---------------------|-----|-------|
| <u>Seam</u> | (m) | | <u>Moisture</u> <u>(%)</u> | <u>Ash</u> (%) | <u>VM</u> (%) | <u>FC</u> (%) | <u>Sulphur</u> <u>(%)</u> | <u>F.S.I.</u> | Moisture (%) | <u>Ash</u> (%) | <u>VM</u> (%) | <u>FC</u> (%) | <u>Sulphur</u> (%) | <u>F.S.I.</u> | <u>Yield</u> (%) | HGI | (ddp) |
| 7.3 | 1.20 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 7.2 | 1.90 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 7.1 | 0.50 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 6.1 | 1.40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 5.0 | 6.60 | 84.00 | 1.4 | 31.10 | 23.2 | 44.7 | 0.42 | 3.0 | - | 6.8 ¹ | 28.6 ¹ | - | 0.67 ¹ | 6 ¹ | 52.2 ¹ | - | - |
| 4.2 | 3.20 | 47.00 | 1.1 | 22.20 | 24.4 | 52.5 | 0.63 | 4.5 | - | 5.4 ⁴ | 31.2 ⁴ | - | 0.741 | 8.5 ⁴ | 60.6 ⁴ | - | - |
| 4.1 | 2.70 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 3.2 | 5.30 | 46.00 | 1.1 | 15.20 | 25.1 | 58.8 | 0.46 | 5.0 | - | 6.50 ¹ | 28.80 ¹ | - | 0.48 ¹ | 5.5 ¹ | 72.2 ¹ | - | - |
| 3.1 | 1.50 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2.4 | 0.90 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2.3 | 1.10 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2.2 | 1.10 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2.1 | 0.50 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1.2 | 5.60 | 89.00 | 1.0 | 22.90 | - | 52.9 | 0.47 | 4.5 | - | 5.90 ¹ | 27.80 ¹ | - | 0.58 ¹ | 9.0 ¹ | 68.1 ¹ | - | - |

Notes: 1) Clean data @ 1.50 float.

2) Raw data reported on an air-dried basis.

3) Clean data reported on an air-dried basis.

4) Clean data @ 1.45 float.

Table 6.1.5 MOD-7608 Sample Summary

| <u>Seam</u> | <u>Thickness</u> (m) | Recovery (%) | | <u>/ (ADB)</u> | Clean Coal Quality (ADB) | | | | | | | | Fluidity | | | | |
|-------------|-------------------------|-----------------|-----------------|-------------------|--------------------------|------------------|-----------------------|---------------|-----------------|-------------------|------------------|------------------|-----------------------|---------------|---------------------|-----|-------|
| | | | Moisture (%) | <u>Ash</u> (%) | <u>VM</u> (%) | <u>FC</u> (%) | <u>Sulphur</u> (%) | <u>F.S.I.</u> | Moisture (%) | <u>Ash</u> (%) | <u>VM</u> (%) | <u>FC</u> (%) | <u>Sulphur</u> (%) | <u>F.S.I.</u> | <u>Yield</u> (%) | HGI | (ddp) |
| B3 | 1.10 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| B2 | 1.80 | 67.00 | - | 18.90 | - | - | - | 5.00 | - | - | - | - | - | - | - | - | - |
| B1 | 0.30 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



7 Coal Resources

7.1 Historical Estimates

No Historical resources were calculated on the Onion property.

8 Reclamation

PRC policy is to keep exploration disturbance to the smallest practical area. Natural soil profiles are maintained whenever possible to enhance natural regeneration and to control erosion-causing runoff. Drill sites are recontoured and revegetated as soon as work is completed and all exploration areas are left in a clean, safe and stable condition at the end of each field season.

During re-activation of existing trails, woody debris was scattered to the greatest extent possible, and shoulder areas were contoured to a naturalistic form. All re-activated trails were restored to their existing state which included extensive ditching. These trails were not recontoured in 2009, as it is expected that many will be reused in the future. Drainage is controlled by ditches and culverts, with some supplemental cross-ditching.

Reclamation in 2009 totaled 0.55 ha, including 0.5 ha for trails and 0.05 ha for drill pads.

9 Expenditures

A budget prepared in July 2008 estimated the proposed 2008 Belcourt West and Onion drilling program cost at \$1 972 000. This included work at the Onion Syncline. Delays in permitting approval for bridge placement at the Onion Syncline meant that the planned work had to be postponed until early 2009. Actual expenditure for the work completed during the period January through December, 2008 was \$1 323 000 for both the Belcourt West and Onion properties.

10 Conclusions

Results from the 2009 exploration program at the Onion syncline have not shown similar trends to historical data. Seam intersections and individual seam thicknesses were less than that of the previous studies. No new quality data was collected during this program and that will be a requirement for future work.

This is a large area and the completed work has only covered a small percentage of the potential resource area



It is suggested that additional drilling and mapping be carried out on a broader scale to better understand the deposit as a whole.

11 Future Work

The Onion property contains coal deposits for future coal extraction and additional plans for more detailed coal exploration have been developed for Onion. A Notices of Work permit, CX-9-055, has been granted to cover exploration activities in Onion. The permit will expire on December 31, 2015.

Under the NOW permit, Peace River Coal (PRC), as the manager of Belsax Joint venture, the proposed Onion exploration activities will employ a combination of rotary and diamond drills to explore coal resources at a total of 200 sites. Drill sites will be accessed by a track-mounted drill rig or a skid-mounted drill rig and cat. Where possible, Peace River Coal will attempt to clean-out and re-log old drill holes by modern down-hole geophysical tools. All drill sites will be situated on slopes no greater than 10% with access road gradient not in excess of 15%. Sediment sumps will be constructed at each site to capture all drill cuttings. A total of 102 trench sites are planned and 34 clear-span stream crossings will be required to access the 200 drill sites, with 6 of these crossings situated on existing roads and 28 situated on new roads. For the sake of this application, the 6 existing crossings will be considered adequate for exploratory purposes and will not be considered as environmental impacts.

Given the current economic climate within the coal industry and the distance from existing infrastructure the exploration of the Onion property has been put on hold. A regional development plan has been formulated to plan for the future development of the Belcourt property and once the economic climate changes, funds will be budgeted to undertake additional exploration of the Onion property.



12 Signature page

I, David Phillippe Lortie, P. Geo., do hereby certify that:

- I am currently employed as Coal Resource Manager by Peace River Coal Inc., Suite 800 700 West Pender Street, Vancouver, British Columbia, Canada V6C 1G8. Peace River Coal Inc. is a subsidiary of Anglo American Plc.
- 2. This certificate applies to the Coal Assessment Report entitled "Belcourt West Coal Assessment Report, Peace River Coal District", dated September 8, 2014.
- I graduated with a Bachelor of Science in Geology degree from Acadia University in 1976. I have worked as a Geologist for more than 21 years since my graduation from university. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (License #31067) I am a "qualified person" for purposes of National Instrument 43-101 ("NI 43-101").
- 4. I am responsible for the preparation of this Coal Assessment Report.
- 5. I have previously been involved with the Northeast British Columbia coal fields since 2004 as the Chief Geologist with Western Coal Corp. (previously Western Canadian Coal Corp.) and now with Peace River Coal Inc. planning and supervising the exploration work.

Dated this 8 day of September, 2014

David botto

D.P. Lortie P. Geo.



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13 References

Allen, E.J., 1988: Review of the Mining and Development Potential of the North Wapiti Dip Slope. Petro-Canada Inc. B.C. Ministry of Energy and Mines, Coal Assessment Report 00-745.

Gormley, G., January 1976: 1975 Exploration and Development Report. B.C. Ministry of Energy and Mines, Coal Assessment Report 00-607.

Gormley, G., December 1976: 1976 Geological Assessment Report. B.C. Ministry of Energy and Mines, Coal Assessment Report 00-609.

Hughes, J.D., Klatzel-Maudry, L. and Nikols, D.J. 1989: A Standardized Coal Resource/Reserve Reporting System for Canada. Geological Survey of Canada Paper 88-21, 17p.

Johnson, A.A., 1972: Exploration Results: Quintette Coal Limited, License Numbers 1303 to 1427 and 2607 to 2644 Incl., January 31, 1972 to August 31, 1972. B.C. Ministry of Energy and Mines, Coal Assessment Report 00-600.

Kakizaki, I. 1974: Report on the Geological Exploration of the Babcock Property, June to September, 1974. Mitsui Mining Co. Ltd. B.C. Ministry of Energy and Mines, Coal Assessment Report 00-605.

McKelvie, D.L. 1973: Geological Report on Monkman Pass Coal Licenses. McIntyre Porcupine Mines Ltd. B.C. Ministry of Energy and Mines, Coal Assessment Report 00-539.

Paul Dyson Consultants and Holdings Ltd. November 1975: Geology and Coal Potential of Belcourt-Monkman Area British Columbia. Canadian Superior Oil Ltd. B.C. Ministry of Energy and Mines, Coal Assessment Report 00-540.

Petro-Canada Coal Division, 1981: Monkman Coal Project 1981. Petro-Canada Inc. B.C. Ministry of Energy and Mines, Coal Assessment Report 00-542.

Quintette Joint Venture, 1973: Second Interim Report, Babcock Area, May 1973, Volume II. B.C. Ministry of Energy and Mines, Coal Assessment Report 00-602.



Smith L.A., Bienia, A.E. and Wright, J.Y. 1977: Monkman Coal Project 1977. Pacific Petroleums Ltd. B.C. Ministry of Energy and Mines, Coal Assessment Report 00-542.

Smith L.A. and Rowe R.B. 1976: Report on 1976 Exploration Program Monkman Coal Property, Volume I. Canadian Superior Oil Ltd. B.C. Ministry of Energy and Mines, Coal Assessment Report 00-541.

Wright, J.Y. 1978: Monkman Coal Project 1978. Pacific Petroleums Ltd. B.C. Ministry of Energy and Mines, Coal Assessment Report 00-543.

Wright, J.Y. and Panchy, E. 1982: Petro-Canada Monkman Coal Project. Petro-Canada Inc. B.C. Ministry of Energy and Mines, Coal Assessment Report 00-464.



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14 Appendices (Attached as folders on DVD)

14.1 2009 Geophysical Logs