

COAL ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Coal Assessment Report Horizon Project Peace River District

TOTAL COST: 445,803

AUTHOR(S): David Lortie

SIGNATURE(S): David Lite

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): CX-9-015, July 20, 2012, August 3, 2013

YEAR OF WORK: 2015

PROPERTY NAME: Horizon Property

COAL LICENSE(S) AND/OR LEASES ON WHICH PHYSICAL WORK WAS DONE: 416840,

416841, 416843.

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: *Liard* NTS / BCGS: *093I 15*

LATITUDE:

LONGITUDE:

(at center of work)

UTM Zone:

10

EASTING: 620,250

NORTHING: 6,080,250

OWNER(S): Peace River Coal Inc.

MAILING ADDRESS: Suite 800 - 700 West Pender Street, Vancouver, BC V6C 1G8

OPERATOR(S) [who paid for the work]: Peace River Coal Inc.

MAILING ADDRESS: Suite 800 - 700 West Pender Street, Vancouver, BC V6C 1G8

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**)

Coal, sandstone, siltstone, mudstone, shale, Gates Formation, folding, faulting

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

153

- 1. Johnson, A.A. 1972. Exploration Results: Quintette Coal Limited (Coal Assessment Report 0600). Denison Mines Limited, submitted on behalf of Quintette Coal Limited.
- 2. Johnson, A.A. 1972. Interim Regional Report: Quintette Coal Limited (Coal Assessment Report 0601). Denison Mines Limited, submitted on behalf of Quintette Coal Limited.
- 3. McKinstry, B. 1986. Five Cabin Creek Project (Coal Assessment Report 0718). Crows Nest Resources Limited.
- 4. Lortie, D., October 2014: Horizon Property Coal Assessment Report Peace River District B.C. Ministry of Energy and Mines, Coal Assessment Report 00-953.

SUMMAR	Y OF TYPES OF WORK IN THIS REPORT	EXTENT OF WORK	ON WHICH TENURES
		(in metric units)	
GEOLOGI	CAL (scale, area)		
	Ground, mapping		
	Photo interpretation		
GEOPHYS	SICAL (line-kilometres)		
	Ground (Specify types)		
	Airborne		
	(Specify types)		
	Borehole		
	Gamma, Resistivity,		
	Resistivity		
	Caliper		
	Deviation		
	Dip		
	Others (specify)		
	Core		
	Non-core		
SAMPLIN	G AND ANALYSES		
Total # of Samples			
	Proximate		



COAL ASSESSMENT REPORT HORIZON PROPERTY PEACE RIVER DISTRICT

LOCATED AT UTM: 6,080,250 N, 620,250 E

COAL LICENSE: 416840, 416841, 416842, 416843, 416984, 416985, 417463, 417464, 417495, 417496, 417497, 417531, 417532, 417611, 417612, 417613

PEACE RIVER COAL INC. - ANGLO AMERICAN COAL PTY LTD

800 – 700 West Pender Street Vancouver, British Columbia V6C 1G8

Author: David Lortie P.Geo.

June 15, 2016

MINERAL TITLES BC VICTORIA, BC

JUN 13 2016

FILE NO. LOG IN NO This page left blank on purpose

COAL ASSESSMENT REPORT

HORIZON PROPERTY

Col	ntents			
1	SUMMARY		4	
2	Introduction		6	
	2.1	Purpose of Report		6
	2.2	Project Description		6
	2.3	Property Location		6
	2.4	Mineral Rights & Surface Title		6
3	Reclamation	n Program	8	
	3.1	General Practices		8
	3.2	Revegetation Prescriptions		8
	3.3	2015 Horizon Reclamation Summary		9
	3.4	2015 Horizon Reclamation		9
4	References		11	

Tables

2.4.1	Summary of Rights	
3.2.1	Seed Mix A used for ESSF biogeoclimatic zones	
3.2.2	Seed Mix B, used for BWBS biogeoclimatic zones	

3.4.1 2015 Exploration cost

List of Figures

- 1 Location Map
- 2 2015 Reclamation Map
- 3 Biogeoclimatic zone Map

List of Appendices

1 Pictures



1 SUMMARY

The Horizon Project is located in the Rocky Mountain Foothills of northeastern British Columbia, about 25 km south southwest of Tumbler Ridge. Tumbler Ridge is about 400km northeast of Prince George, British Columbia by Highways 97 and 29, and 105 km southwest of Dawson Creek, British Columbia by Highways 97 and 52. Access to the project is gained by paved and gravel roads from Tumbler Ridge. (Attachment 1)

The Horizon Project is composed of three areas; Barbour, Northridge and Southridge. The Horizon Project is contained within 17 Coal Licenses which are owned by Peace River Coal Inc. (PRC).

Peace River Coal Inc. was formed on November 29, 2006 as a partnership between Anglo Coal Canada Inc., NEMI Northern Energy and Mining Inc. and Hillsborough Resources Limited. Current shareholding is 73.8%, 12.0% and 14.2% respectively. In 2006 Hillsborough Resources Limited completed four technical studies reviewing various mining and coal processing options for the Horizon Project. The focus of the studies was Barbour, Horizon and Northridge areas and demonstrated a total resource of 45.6 million tonnes of in-situ surface mineable coal for the Barbour and Horizon areas and a total resource of 143.1 million tonnes of in-situ surface and underground mineable coal for the Horizon and Northridge areas. Originally, Horizon and Northridge were two separate areas, however now the Horizon and Northridge areas are now considered to be one area called Northridge. Horizon is now used to refer to all of Barbour, Northridge, and Southridge areas.

Denison Mines Limited (Denison) carried out reconnaissance work on the Horizon Project areas in 1971 and 1972. This work included 6 boreholes, two of which are located in the Southridge area and four of which are located in the Horizon-Northridge areas in addition to 1:50,000 scale mapping. During 1980 and 1981 Shell mapped the Gates and Gething Formations in the Five Cabin area. Shell drilled one borehole in 1981 and one in 1985 in the Southridge area. Additional mapping was completed by Shell in 1981 and 1985 at scales of 1:20,000 and 1:5,000, respectively.

In 2005 and 2006 Hillsborough undertook exploration programmes in the Horizon Project areas. In the Barbour area there were 80 boreholes completed for a total of 9,037 metres in 15 coring boreholes and 65 rotary percussion boreholes. In the Northridge area there were 76 boreholes completed totalling 6,714 metres in 16 coring boreholes and 60 rotary percussion boreholes. In the Southridge areas there were 65 boreholes completed totalling 8,645 metres, respectively in 10 coring boreholes and 55 rotary percussion boreholes.

Anglo Coal Canada completed an exploration programme in 2006 in the Southridge area consisting of 4 coring boreholes and 41 rotary percussion boreholes in 7,740 metres of drilling.

Exploration activities carried out by PRC in 2007 and 2008 focussed on gathering additional geological information to make a mining development decision on the Horizon Project. This work included 8 coring boreholes and 35 rotary percussion boreholes in 9,196 metres of drilling.

In 2012 a drill program was carried out on the Northridge area of the Horizon property. The work consisted of forty four rotary boreholes and 2 HQ core boreholes. The structural information from the 2012 drilling was used in the creation of a resource geological model for the Horizon property which was completed in January 2013.

In 2015 Peace River Coal Exploration undertook reclamation activities during the summer of 2015 at its Horizon Ridge – Five Cabin property. The purpose of the reclamation program in Horizon was to return the areas disturbed in 2012 to an end land use of wildlife habitat. The reclamation work completed for Horizon was modeled after the Reclamation Plan for Waterfall Surface Exploration Program (Stantec



2014), which was submitted as part of the Notice of Work permit requirements for Peace River Coal's Waterfall property (CX-9-058)



2 INTRODUCTION

2.1 Purpose of Report

This report has been prepared to report on the reclamation activities undertaken in 2015 on the Horizon property as part of the requirements under the Mines Act. The reclamation program was undertaken under Notice of Work permit CX-9-015.

2.2 Project Description

The Horizon area was identified historically as the Five Cabin Area and was split into two areas identified as Northridge and Southridge. The Northridge area were held by Hillsborough Resources. The Southridge licenses were acquired by Anglo Coal Canada from Hillsborough Resources as part of a joint venture agreement.

In November 2006 NEMI's assets were consolidated with Hillsborough Resources Ltd. and Anglo Canadian Coal Inc. assets to form a new coal mining company, Peace River Coal Limited Partnership (PRCLP). NEMI and Hillsborough Resources Ltd. remained as minority shareholders in PRCLP, and PRC managed the PRCLP assets as general partner.

In October 2011, the NEMI and Hillsborough Resources Ltd. minority interests were sold to PRC. PRC now manages the assets and is a wholly owned subsidiary of Anglo American plc. PRC operates as part of Anglo American's Coal business unit based in Brisbane Australia.

2.3 Property Location

The Horizon area are located in northeast British Columbia, about 25 km south southwest of Tumbler Ridge. Tumbler Ridge is about 400 km northeast of Prince George, British Columbia by Highways 97 and 29, and 105 km southwest of Dawson Creek, British Columbia by Highways 97 and 52. The Horizon area is accessible up the Murray River valley by all-weather and seasonal exploration roads approximately 30.5 km from the Quintette mine site near Tumbler Ridge. The Horizon is centered approximately on Latitude 54° 52' 30" N and Longitude 121° 05' 00"E.

2.4 Mineral Rights & Surface Title

The Horizon Project occurs on several Crown Coal Licences (Figure 2). Table 1.1 shows the licences and their present status. The company advises that the property has not been legally surveyed.



Table 2.4.1: Summary of Mineral Rights

Tenure Type	Tenure Number	Site	Name	Holder	Holder %	Area	Units	Expiry Date
Coal Licence	416840	Horizon	Horizon	PRC	100	1415	Ha	30/11/2014
Coal Licence	416841	Horizon	Horizon	PRC	100	1415	Ha	31/10/2014
Coal Licence	416842	Horizon	Horizon	PRC	100	1341	На	30/11/2014
Coal Licence	416843	Horizon	Horizon	PRC	100	1414	На	31/10/2014
Coal Licence	416984	Horizon	Horizon	PRC	100	1115	Ha	31/10/2014
Coal Licence	416985	Horizon	Horizon	PRC	100	75	Ha	31/10/2014
Coal Licence	417463	Horizon	Horizon	PRC	100	149	Ha	12/05/2014
Coal Licence	417464	Horizon	Horizon	PRC	100	75	Ha	12/05/2014
Coal Licence	417495	Horizon	Horizon	PRC	100	224	Ha	28/07/2014
Coal Licence	417496	Horizon	Horizon	PRC	100	373	Ha	28/07/2014
Coal Licence	417497	Horizon	Horizon	PRC	100	75	Ha	28/07/2014
Coal Licence	417531	Horizon	Horizon	PRC	100	149	Ha	21/09/2014
Coal Licence	417532	Horizon	Horizon	PRC	100	75	Ha	21/09/2014
Coal Licence	417611	Horizon	Horizon	PRC	100	75	Ha	17/08/2014
Coal Licence	417612	Horizon	Horizon	PRC	100	75	Ha	17/08/2014
Coal Licence	417613	Horizon	Horizon	PRC	100	149	Ha	17/08/2014



3 RECLAMATION PROGRAM

In 2015 Peace River Coal Exploration undertook reclamation activities during the summer of 2015 at its Horizon Ridge – Five Cabin property. The purpose of the reclamation program in Horizon was to return the areas disturbed in 2012 to an end land use of wildlife habitat.

The reclamation work completed for Horizon was modeled after the Reclamation Plan for Waterfall Surface Exploration Program (Stantec 2014), which was submitted as part of the Notice of Work permit requirements for Peace River Coal's Waterfall property (CX-9-058)

3.1 General Practices

The basis for the general practices that were used were derived from The Handbook for Mineral and Coal Exploration in British Columbia (BC MEMPR 2009), The Health, Safety and Reclamation Code for Mines in British Columbia (BC MEMPR 2008), and The Reclamation Plan for Horizon Exploration program (Stantec 2012).

- Exploration trails and drill sites proposed for reclamation will be recontoured to original ground slope.
- Soils will be decompacted and/or scarified as part of the recontouring process, to allow for formation of microsites and to promote seed germination.
- Ditches will be re-sloped to allow for reestablishment of natural drainage patterns.
- Culverts and stream crossings will be removed and stream channels restored to their natural state.
- Recontoured sites will be covered with topsoil material and coarse woody debris where available.
- Recontoured sites will be revegetated as described in "Revegetation Prescriptions".
- Predator access blocks will be installed along exploration trails near core caribou habitat.

3.2 Revegetation Prescriptions

Sites and exploration trails were seeded based on the recommendations from the Reclamation Plan for Horizon. Seed mixes and seed mix application densities are dependent on slope gradients with respect to erosion and sediment control, as well as biogeoclimatic zones. In Horizon two seed mixes were used depending on the biogeoclimatic zone. Table 3.2.1 and 3.2.2 list the two seed mixes used on the property. See Figure 3 for a map of the different biogeoclimatic zones identified on the Horizon property.

Table 3.2.1 Seed Mix A used for ESSF biogeoclimatic zones

Species	Scientific Name	Percent by weight	Plant type	Persistence	Growth habit
Canada milkvetch	Astragalus alpinus or canadensis	3	Native legume	Perennial	Rhizomatous legume
Slender wheatgrass	Elymus trachycaulus	32	Native grass	Perennial	Bunch/tufted grass
Rocky Mountain fescue	Festuca saximontana	10	Native grass	Perennial	Dense bunch/tufted grass
Annual ryegrass (diploid)	Lolium multiflorum	10	Agronomic grass	Annual	Bunch/tufted grass
Alpine bluegrass	Poa alpine	6	Native grass	Perennial	Dense, low bunch/tufted grass
Fall rye	Secale cereal	36	Agronomic grass	Annual	Bunch/tufted grass
Spike trisetum	Trisetum spicatum	3	Native grass	Perennial	Bunch/tufted grass



Table 3.2.2 Seed Mix B, used for BWBS biogeoclimatic zones

Species	Scientific Name	Percent by weight	Plant type	Persistence	Growth habit
Annual ryegrass (diploid)	Lolium multiflorum	15	Agronomic grass	Annual	Bunch/tufted grass
Fall rye	Secale cereal	45	Agronomic grass	Annual	Bunch/tufted grass
Bluejoint reedgrass	Calamagrostis canadensis	4.5	Native grass	Perennial	Sod grass
Slender wheatgrass	Elymus trachycaulus	15	Native grass	Perennial	Bunch/tufted grass
Fuzzy-spiked wild rye	Leymus innovatus	13	Native grass	Perennial	Tufted grass
Fowl bluegrass	Poa palustris	4.44	Native grass	Perennial	Bunch/tufted grass
Spike trisetum	Trisetum spicatum	2.2	Native grass	Perennial	Bunch/tufted grass
Mountain/sitka alder	Alnus viridis	.63	Native shrub	Perennial	Multi-stemmed shrub
Fireweed	Epilobiun angustifolium	.23	Native forb	Perennial	Rhizomatous

3.3 2015 Horizon Reclamation Summary

All 2012 drill sites and access trails were inspected to determine the amount of reclamation required.

Those that had steep slopes or showed no sign of revegetation were:

- Recontoured and sloped backed to original ground
- Woody material was placed for slope stability.
- Seeded with the prescribed seed mix.

On the main access trail needed for trapper access to trap line, 9.4 km of trail had all culverts removed and then partially reclaimed with erosion bars and cross ditching.

Work was started May 21, 2015 and completed July 27, 2015.

Stantec completed a Reclamation Assessment report following a site visit June 5, 2015.

A total of 81 drill pads and 26.5 km of trails were fully reclaimed on the property in 2015.

To help with caribou habitat preservation, 7 predator access blocks were built. Figure 2 displays the reclamation work that has been carried out on the Horizon property in the last few years.

The equipment used to undertake the reclamation was a John Deere 210 excavator hoe and a Hitachi 270 excavator hoe (Appendix 1, picture 18).

3.4 2015 Horizon Reclamation

Planning for the 2015 reclamation work in Horizon commence in March 2015 with an assessment of the current Summary of Work (SoW) submitted for Horizon Notice of Work permit CX-9-015 under approval number 13-1640439-0803. The area map from the SoW was used as a base to calculate the amount of reclamation that was required on the Horizon property. Following discussions with Stantec Consulting Ltd. (Stantec) and J McConnachie of B.C. Ministry of Energy and Mines, a workplan was created for the 2015 Horizon reclamation. The Horizon property was split into three areas, North Limb Zone A, North Limb Zone B and South Limb (Figure 2). Drill sites and trails were identified from the 2012 exploration program and the amount of disturbed that required reclamation was calculated. Two biogeoclimatic zones (Figure 2) were identified from work undertaken by Stantec and seed mixes for both areas were sourced from Twin Sisters Native Plants Nursery Ltd located in Moberly Lake BC.

Reclamation work on the Horizon project started on May 21, 2015 with the re installation of two bridges over Horizon Creek, the bridges were required to access the North Limb Zone A reclamation area (Figure 2, Appendix 1, picture 1). Once access was completed to the area, all the trails and drill pads were inspected and a decision was made on what type of reclamation was required. Many of the trails



and pads built previous to 2012 were found to have significant regrowth of natural plants and small conifer seedlings (Appendix 1, picture 11). During a Stantec site visit in early June, these areas were identified and it was agreed that no further reclamation was required. The criteria for this prescription was defined by Stantec as "This treatment is applied to areas that currently have naturally regenerated vegetation or are on natural regeneration trajectory without recontouring and seeding based on topography and surrounding vegetation". This prescription was then applied over all three zones. The reclamation was completed in the North Limb Zone A on June 25, 2015 and the two bridges were removed and the two crossings were reclaimed.

Reclamation work shifted to the South Limb (Appendix 1, picture 3) the access along the main trail was re-establish with the removal of any erosion bars and the installation of culverts. Work was carried out from June 26, 2015 until July 3, 2015 on trails and drill pads while areas in North Limb Zone B dried out. After the completion of the reclamation in the North Limb Zone B, the remaining trails and pads were reclaimed from July 18, 2015 until July 27, 2015 when the reclamation was completed and the heavy equipment was moved to the next reclamation project.

Reclamation work shifted to the North Limb Zone B (Appendix 1, picture 2) the access along the main trail was re-establish with the removal of any erosion bars and the installation of culverts. Work was carried out from July 3, 2015 until July 17, 2015 as prescribed in section 3.3.

In Horizon the main access trail that was used to access North Limb Zone B and the South Limb was only partially reclaimed, all culverts were removed, erosion bars and cross ditch were developed. The main bridge over Barbour Creek was left in place. This was done at the request of the trapper who uses the main trail as an access to his trap line.

In Appendix 1 attached, there are pictures of the different areas at different stages of reclamation.

Table 3.4.1 2015 Exploration Cost

Exploration Cos	st	
Type of Work		2015
Total for Supplies	\$	11,314
Total for Consultants	\$	21,429
Total for Borehole and Trail Reclamation	\$	277,107
Total for Project Horizon Reclamation	\$	309,850
Coal Tenure	\$	79,502
Staffing	\$	56,451
Total Horizon Reclamation cost	\$	445,803



4 REFERENCES

- Bennett, Kendra and Tashe, Natalie, 2015: Horizon Reclamation Assessment Site Visit Summary 2015, Stantec Consulting Ltd. Internal PRC document.
- 2. British Columbia Ministry of Energy, Mines and Petroleum Resources (BC MEMPR). 2008. Health, Safety and Reclamation Code for Mines in British Columbia. Mining and Minerals Division, Ministry of Energy, Mines and Petroleum Resources, Province of British Columbia. Victoria, BC.
- 3. British Columbia Ministry of Energy, Mines and Petroleum Resources (BC MEMPR). 2009. Handbook for Mineral and Coal Exploration in British Columbia: A Working Field Guide. British Columbia Ministry of Energy, Mines and Petroleum Resources, British Columbia Ministry of Environment, Association for Mineral Exploration British Columbia, Mining Association of British Columbia. Victoria, BC. 145pp.
- 4. Stantec Consulting Ltd. (Stantec). 2014. *Reclamation Plan for Waterfall Surface Exploration Program.* Prepared for Peace River Coal, Inc. Vancouver BC. 16pp.



Figure 1 General Property Map

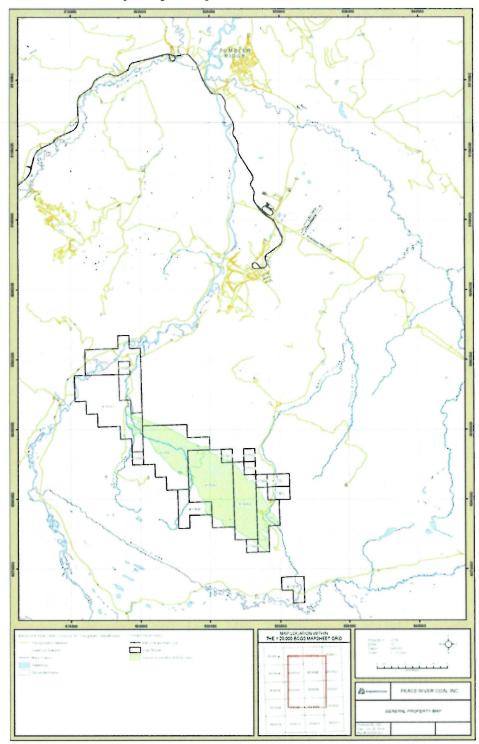


Figure 2

2015 Reclamation Map

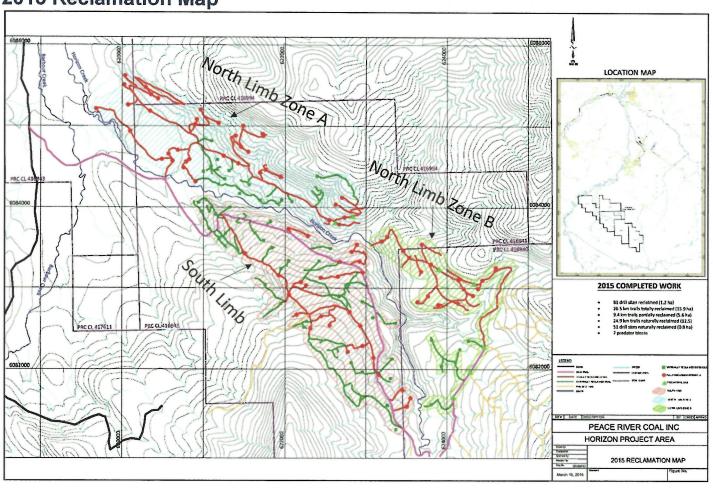
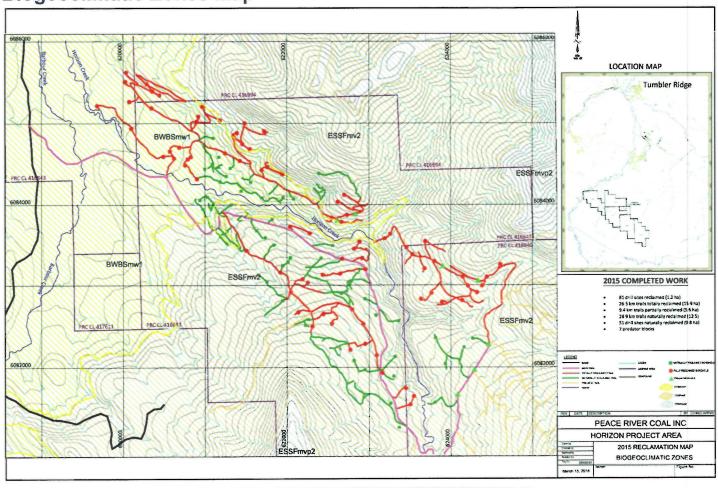




Figure 3

Biogeoclimatic Zones Map





Appendix 1 Pictures



PICTURE 1 HORIZON RECLAMATION NORTH LIMB ZONE A

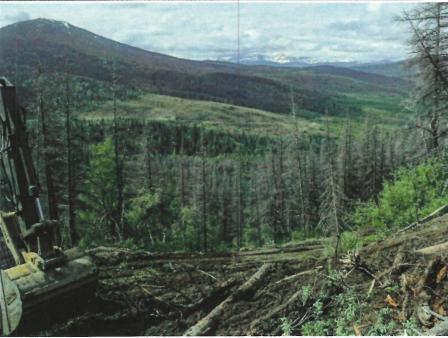


PICTURE 2 HORIZON RECLAMATION NORTH LIMB ZONE B



PICTURE 3 HORIZON RECLAMATION SOUTH LIMB





PICTURE 4 EXAMPLES OF RECLAMATION BEFORE

ACCESS TRAIL



PICTURE 5 EXAMPLES OF RECLAMATION AFTER

ACCESS TRAIL RECONTOURED AND SEEDED JUNE 26, 2015



PICTURE 6 EXAMPLES OF RECLAMATION AFTER

ACCESS TRAIL RECONTOURED AND SEEDED SEPTEMBER 18, 2015



PICTURE 7 EXAMPLES OF RECLAMATION BEFORE

CONSTRUCTED DRILL SITE AND ACCESS TRAIL



PICTURE 8 EXAMPLES OF RECLAMATION AFTER

DRILL SITE AND ACCESS TRAIL RECONTOURED AND SEEDED JUNE 18, 2015



PICTURE 9 EXAMPLES RECLAMATION AFTER

DRILL SITE AND ACCESS TRAIL RECONTOURED AND SEEDED SEPTEMBER 18, 2015



PICTURE 10 EXAMPLES RECLAMATION AFTER

DRILL SITE AND ACCESS TRAIL RECONTOURED AND SEEDED SEPTEMBER 18, 2015



PICTURE 11 EXAMPLES OF NATURAL REGROWTH

2008 DRILL SITE



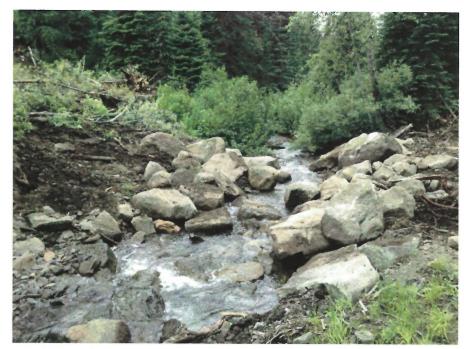






PICTURE 12 EXAMPLES OF RECLAMATION

CREEK CROSSING





PICTURE 13 EXAMPLES RECLAMATION

PREDATOR ACCESS BLOCK





PICTURE 14 EXAMPLES RECLAMATION

RECONTOURING AND RESLOPING WITH PLACEMENT OF WOODY MATERIAL



Before



After

PICTURE 15 EXAMPLES RECLAMATION

RECONTOURING AND RESLOPING WITH PLACEMENT OF WOODY MATERIAL



After

PICTURE 16 EXAMPLES RECLAMATION

RECONTOURING AND RESLOPING WITH PLACEMENT OF WOODY MATERIAL



Before



After

PICTURE 17 EXAMPLES RECLAMATION

RECONTOURING AND SEEDED



Before



After

EQUIPMENT PICTURE 18



Hitachi 270 excavator hoe



John Deere 210 excavator hoe

Appendix 2 Maps

