

Absorbent Products Ltd.,
724 East Sarcee Street,
Kamloops, B.C., V2H 1E7

B.C. Ministry of Energy and Mines,
PO Box 9320,
Stn Prov Govt,
Victoria, B.C.,
V8W 9N3

Dear Sir:

Enclosed is a copy of Absorbent Products Ltd's required annual reclamation report for 2015. The required table for the covering letter follows below:

Annual Reclamation Report
Cover Letter Summary Table

The Annual Reclamation Report submission must be accompanied by a cover letter that includes the following data entered in the tabulated format shown below:

Company:	Absorbent Products Ltd	
Mine Name:	Red Lake Quarry	
Mines Act Permit #:	Q-15-006	
	Previous Report (e.g., 2014)	Current Report (e.g., 2015)
Total Disturbance Area (ha)	11.71	11.48
Total Reclaimed Area (ha)	15.66	15.49
Total Exempt Area (ha) (i.e., pit walls)	0.00	0.00
Total Liability Estimate	\$64,405	\$68,880
Date for next Five Year Mine Plan and Reclamation Plan update (if required)		

Should there be any problems with this report please address them to the preparer:

Dr. P.B. Read,
Geotex Consultants Limited,
Suite 832 – 470 Granville Street,
Vancouver, B.C.
V6C 1V5
Telephone: (604) 681-4643

You will receive by surface mail one hard copy of this report.

Sincerely,



Peter B. Read

**ANNUAL RECLAMATION REPORT
FOR YEAR 2015**

MINES ACT PERMIT NUMBER: Q-15-006

MINING LEASE # 310888

RED LAKE QUARRY

ABSORBENT PRODUCTS LTD.

Mine Manager and	Steve Gurney
Person Responsible for	
Reclamation:	1(250) 372-1600 ext 111
Author:	Peter B. Read,
	Geotex Consultants Limited
	Suite 832 – 470 Granville St.,
	Vancouver, B.C., V6C 1V5
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November 20, 2015

TABLE OF CONTENTS

1. INTRODUCTION	1
2. LOCATION	1
3. GEOLOGY OF THE RED LAKE QUARRY	1
4. MINING PROGRAM	2
5. RECLAMATION PROGRAM	8
6. RECLAMATION LIABILITY COSTS	16
7. ACID DRAINAGE POTENTIAL	19
8. REFERENCES	19

LIST OF FIGURES

Figure 1:	Location map of the Red Lake Quarry lying immediately west of Bunting's Field	7
Figure 2:	Map showing the location of the four pits comprising the Red Lake Quarry . . .	8
Figure 3:	Main Pit, October 14, 2015 at 1:2000-scale	11
Figure 4:	West Pit, October 14, 2015 at 1:2000-scale	12
Figure 5:	Northwest Pit, October 14, 2015 at 1:2000-scale	13
Figure 6:	Bepple Pit, October 14, 2015 at 1:2000-scale	14

LIST OF TABLES

Table 1:	Details of Disturbed and Reclaimed Areas as of October 14, 2015	3
Table 1A	Summary of Areas Disturbed and Reclaimed To December 31, 2015	5
Table 2:	2015 Quarterly Composites and Annual Average of Red Lake Trace Element Analyses	15
Table 3:	Summary Table of Reclamation Liability Costs	17
Table 4:	Summary Table of Material Costs	18
Table 5:	Monthly pH's of Red Lake Diatomaceous Earth (November 2014 to November 2015)	19
Table 2A	Quantities of Waste Rock, Tailings, Low Grade Ore, Coarse Reject and Other Mine Waste as of December 31, 2015	21

EXECUTIVE SUMMARY

Red Lake Quarry, situated 41 km northwest of Kamloops, is accessed by 8 km of paved road to the railway crossing near Tranquille and thereafter 33 km of publically maintained gravel road called the Criss Creek Forestry Access Road. Hauling of diatomaceous earth from the quarry to Absorbent Products Ltd plant at 724 East Sarcee Street, Kamloops is seasonal in nature avoiding road load restrictions. The quarry consists of four pits called Main, West, Northwest and Bepple pits yielding a combined total area of 60.8 hectares.

The diatomaceous earth (DE) comes from two layers, Upper and Basal, which are separated by a medial layer of carbonaceous shale called leonardite. On the eastern edge of Bepple Pit an erosional remnant of basalt flows tops the diatomaceous earth sequence. Here and there lenses of basal carbonaceous shale intervene between the diatomaceous earth and underlying andesite flows.

In 1982 the former DEM started quarrying the Upper diatomaceous earth layer in the Main Pit Since then quarrying spread west to West Pit. With the exception of small areas, the Upper and Basal layers of diatomaceous earth are exhausted and the Northwest and Bepple pits produce the present plant feed. Briefly summarized for the next five years the following activities are anticipated:

1. Main Pit: removal of DE in the northeast corner beside and under present stockpiles and removed of DE under present haul road between Main and Bepple pits. Reclamation of waste and carbonaceous shale stockpiles in southeast corner of pit and use of north edge of pit for topsoil and waste piles from northward mining in Bepple Pit.
2. West Pit: removal of Basal DE area and reclamation
3. Northwest Pit: Taking southern portion of pit area down to basement, reclamation and placement of waste pile on small part reclaimed ground as quarrying progresses northward.
4. Bepple Pit: Taking present leonhardite floor down to basement and reclaiming ground prior to northward progression of quarrying.

The past year's reclamation program concentrated again on the basement high which separates Northwest Pit from Bepple Pit and involves 0.97 hectares, in which the ground level was raised by backfilling with waste. Reconstruction of the southern haul road is nearly complete and with the decommissioning of the Main Haul road will allow extraction of diatomaceous earth from beneath the old haul road. The drainage ditches shown in the Main and West pits were maintained. These ditches have water flow during spring runoff only. As the topsoil, waste and stockpiles of diatomaceous earth and leonardite contain no acid-generating materials; neither the piles nor drainage waters from the quarry are subject to any special treatment. Table 5 gives the pH results taken monthly for the past ten months and Table 2 gives the trace element analyses for the last four quarters all taken from the Red Lake Diatomaceous Earth products produced at Absorbent Products Ltd plant at Kamloops, B.C.

At the end of 2015, the amount of unreclaimed land stands at 11.48 ha with an estimated reclamation cost of \$68,800, which lies within the reclamation bond of \$70,000.

ANNUAL RECLAMATION REPORT FOR 2015,

RED LAKE QUARRY

Peter B. Read

November 20, 2015

1. INTRODUCTION

This report details mining and reclamation activities carried out at the Red Lake Quarry to October 14, 2015 and a five-year projection of anticipated mining and reclamation. The quarry is operated under Permit Q-15-006 issued to Western Industrial Clay Products Ltd., (WICPL) on November 30, 1992 with subsequent amendments in 1996, 2001 and 2003. On February 4, 2005, WICPL transferred ownership of the lease to Absorbent Products Ltd (APL). On November 30, 2012 this lease was extended an additional 10 years to November 30, 2022. With the payment of the annual lease fee, Mining Leases No. 310888 and No. 376818 are good until November 30, 2016.

Mining Lease No. 310888 encompasses Main Pit, West Pit and Northwest Pit and No. 376818 covers the Bepple Pit with a combined total of 60.8 hectares (150 acres) divided into these four pit areas (Figure 2). In early 2006, APL purchased the 44.35 hectares of Crown land within Mining Lease 310888. Diatomaceous earth was extracted from the Northwest and Bepple pits during 2015. Reclamation work, consisting of backfilling from waste, medial leonardite and topsoil piles and recontouring of mined out areas and reseeding with an approved grass mixture, continued in 2015 in the West and Main pits

Prior to quarrying the area had been selectively logged and used for grazing amid debris left from logging. The aim of the reclamation project is to return the land to either hay production or a much higher grazing capacity than originally.

2. LOCATION

The Red Lake Quarry is 41 km northwest of Kamloops at an elevation of approximately 1,300 metres (Figure 1). The first eight kilometres of road from APL's plant in Kamloops is paved with the remaining 33 km a publically maintained gravel road called the Criss Creek Forestry Access Road. APL has its processing and bagging plant, distribution warehouse, research laboratory and offices at 724 East Sarcee Street in Kamloops. The quarrying and trucking of the raw diatomaceous earth to the Kamloop's plant is of a seasonal nature to avoid winter and load restriction conditions and usually operates seven to eight months of the year.

3. GEOLOGY OF THE RED LAKE QUARRY

At the Red Lake Quarry, the diatomaceous earth deposit consists of Upper and Basal layers of diatomaceous earth separated by a 1.0 to 1.5 m thick medial carbonaceous shale (leonardite) all locally overlying a lenticular basal carbonaceous shale (leonardite) up to 1.5 m thick. These sedimentary rocks comprise the Deadman River Formation of Miocene age, which unconformably overlies andesite to dacite flows of the Dewdrop Flats Formation of the Kamloops Group of mid-Eocene age. Here and there, such as on the eastern edge of the Bepple Pit, an erosional remnant of a once extensive sheet of Miocene basalt flows of the Chasm Formation overlies the Miocene sedimentary succession. The Miocene sedimentary and volcanic sequences comprise the southern edge of the Chilcotin Group, which is widespread in central British Columbia. Quaternary soil, till and locally sand, silt and gravel form a 1.5 to 3.0 m thick cover over bedrock.

The Upper Diatomaceous Earth layer is up to 8 m thick in the Bepple Pit and overlies the Basal Diatomaceous Earth layer which averages 2 to 6 m in thickness but locally can attain 15 m. Because the density of the Upper DE is higher than the Basal DE, the two DE layers are blended in the quarry before trucking. Although the medial carbonaceous shale is rich in fulvic and humic acids, it is not presently marketable and instead is used along with topsoil to provide an excellent growing medium to enhance reclamation.

4. MINING PROGRAM

In 1982, DEM started quarrying in the Main Pit area (Figure 3). Because litigation tied up the Bepple Pit area, quarrying proceeded westward into the West Pit area (Figure 4) and eventually into the Northwest Pit (Figure 5) before access became available to the Bepple Pit area (Figure 6). In the Main Pit area, an area of only 0.97 hectares of Basal Diatomaceous Earth resource and 0.05 hectares of Upper Diatomaceous Earth resource remain (Figure 3). In West Pit, an area of only 0.33 hectares of Basal Diatomaceous Earth resource exists (Figure 4). In the Northwest Pit, the cleared area of 7.47 hectares covers a potential resource of Basal and Upper diatomaceous earth spanning the length and breadth of the pit (Figure 5). An area of 1.15 hectares presently produces Upper Diatomaceous Earth and an area of 0.36 hectares is stripped and ready to produce Upper and Basal diatomaceous earth in 2016. In Bepple Pit, an area of 1.23 hectares (1.15 of Medial Leonardite + 0.08 ha of Basal DE) has a resource potential for Basal Diatomaceous Earth and an area of 0.77 hectares is currently producing Upper Diatomaceous Earth (Figure 6). In the Bepple Pit, the combined cleared and stripped areas of 13.57 hectares have a resource potential for both Upper and Basal diatomaceous earth layers. All of this information is summarized in Table 1 and Table 1A (the required Table 1 BC Ministry Reclamation Table).

In 2015, the mining program concentrated on production from the Northwest and Bepple pits.

Table 1: Details of Disturbed and Reclaimed Areas for the Four Pits as of October 14, 2015
Compared to 2012 (blue), 2013 (green) and 2014 (red)

DISTURBANCE	MINING AREA (hectares)					RECLAIMED AREA (hectares)				
	Main Pit	West Pit	NW Pit	Bepple Pit	TOTALS	Main Pit	West Pit	NW Pit	Bepple Pit	TOTALS
Waste Pile (2015)	1.23	0.02	0.00	0.00	1.25	5.59	8.68	0.74	0.48	15.49
Topsoil Pile	0.25	0.00	0.01	0.06	0.32	5.37	9.31	0.80	0.44	15.66
Tailings Ponds	0.00	0.00	0.00	0.00	0.00	4.70	9.06	0.78	0.67	15.21
Plant Site	0.04	0.00	0.01	0.01	0.06	4.70	9.06	0.78	0.67	15.21
Roads	0.97	0.62	0.56	0.13	2.28					
Totals (2015)	2.49	0.64	0.58	0.20	3.91					
Totals (2014)	3.27	0.01	0.52	0.19	4.00					
Totals (2013)	3.43	0.26	0.34	0.07	4.10					
Totals (2012)	3.43	0.26	0.34	0.07	4.09					
Active Mining						VEGETATED AREA CLEARED OF TREES				
Stripped (2015)	0.00	0.00	0.36	0.42	0.78	0.38	0.00	7.47	13.15	21.00
Stripped (2014)	0.00	0.00	0.44	0.44	0.88	0.39	0.00	7.47	13.11	20.97
Stripped (2013)	0.00	0.00	0.45	0.44	0.89	0.38	0.00	7.47	13.11	20.96
Stripped (2012)	0.00	0.00	0.74	0.00	0.74	0.49	0.00	7.66	14.29	22.44
Upper DE (2015)	0.05	0.00	1.15	0.77	1.97					
Upper DE (2014)	0.11	0.00	1.87	0.97	2.95					
Upper DE (2013)	0.12	0.00	1.57	1.10	2.79					
Upper DE (2012)	0.01	0.00	1.38	0.42	1.81					
Medial Leon (2015)	0.66	0.00	0.69	1.15	2.50					
Medial Leon. (2014)	0.59	0.00	0.18	0.97	1.56					
Medial Leon. (2014)	0.56	0.00	0.18	0.84	1.58					
Medial Leon.(2012)	0.56	0.00	0.10	0.78	1.44					
Basal DE (2015)	0.31	0.33	0.03	0.08	0.75					
Basal DE (2014)	0.36	0.30	0.03	0.08	0.73					
Basal DE (2013)	0.36	0.26	0.03	0.08	0.73					
Basal DE (2012)	0.36	0.26	0.03	0.09	0.74					
Basal Leon. (2015)	0.00	0.04	0.00	0.00	0.04					
Basal Leon. (2014)	0.00	0.04	0.00	0.00	0.04					
Basal Leon. (2013)	0.00	0.04	0.00	0.00	0.04					
Basal Leon. (2012)	0.00	0.04	0.00	0.00	0.04					
Active Mining Totals (2015)	1.02	0.34	2.23	2.42	6.04					
Active Mining Totals (2014)	1.06	0.34	2.34	2.46	6.20					
Active Mining Totals (2013)	1.04	0.30	2.23	2.46	6.03					
Active Mining Totals (2012)	0.93	0.30	2.25	1.29	4.77					
Stockpiles						NATURAL STATE				
Upper DE	0.22	0.00	0.42	0.13	0.77	5.98	7.27	0.01	0.00	13.26
Medial Leonardite	0.51	0.00	0.00	0.00	0.51	5.98	6.27	0.01	0.00	12.26
Basal DE	0.19	0.00	0.06	0.00	0.25	5.98	6.27	0.01	0.00	12.26
Totals (2015)	0.92	0.00	0.48	0.13	1.53					
Totals (2014)	0.81	0.03	0.96	0.10	1.51					
TOTALS ALL DISTURBANCES (2015)	4.43	0.98	3.29	2.75	11.48					
TOTALS ALL DISTURBANCES (2014)	5.14	0.38	3.82	2.75	11.71					
TOTALS ALL DISTURBANCES (2013)	5.28	0.63	3.53	2.63	12.07					
TOTALS ALL DISTURBANCES (2012)	5.17	0.63	3.55	1.44	10.78					

In the next five years, in the Main Pit:

- Removal of the Basal Diatomaceous Earth resource from an area of 0.97 hectares in the northeast corner of the pit area.
- Use of the waste and medial leonardite stockpiles at the south edge of the pit area in the reclamation of the Main Pit.
- Mining and removal of the diatomaceous earth layers and carbonaceous shales down to the volcanic basement beneath the presently used haul road situated along the northern edge of the pit.
- Reactivation of the southern haul road passing through the middle of Main Pit.
- Mining of the Basal Diatomaceous Earth beneath the “emergency” stockpiles in the northeast corner of the pit.
- After mining of the diatomaceous earth from beneath the present haul road, this area on the north edge of the reclaimed area will be used for waste and topsoil piles from quarrying the southern portion of the Bepple Pit.

In the West Pit:

- In the southern part of the pit, removal of the Basal Diatomaceous Earth resource underlying an area of 0.33 hectares will be followed by reclamation.
- Complete reactivation of the southern haul through the northeast corner of the pit.

In the Northwest Pit:

- Development of the Basal and Upper Diatomaceous Earth resources in the south half of the pit area.
- Placement of waste and topsoil piles on the basement high which separates Northwest Pit from Bepple Pit.
- On the eastern side of the pit, the main Upper diatomaceous earth stockpile has been reduced by 0.06 hectares to 0.42 hectares. Any underlying diatomaceous earth will be removed.

In Bepple Pit:

- North to northeastward progress of the working face in Upper and Basal diatomaceous earth layers has increased exposure of the medial leonardite layer from 0.84 hectares to 1.15 hectares and reduced exposure of the Upper Diatomaceous Earth 0.77 ha.
- Definition drilling for the outline of the Miocene basalt cap erosional remnant has started, but a decision as to whether it is economic to remove requires more drilling to define both the areal extent and thickness of the cap.
- Use of the topsoil and waste piles from the northern part of the Main Pit for reclamation.

- **TABLE 1A**
- **SUMMARY OF AREAS DISTURBED AND RECLAIMED TO DECEMBER 31, 2015**
- **COMPANY:** Absorbent Products Ltd **PERMIT NO.:** Q-15-006

DISTURBANCE	MINING		RECLAMATION								
	AREA DISTURBED (ha)		AREA RECONTOURED (ha)		AREA SEEDED/PLANTED (ha)		AREA FERTILIZED (ha)		AREA REVEGETATED* (ha)		LAND USE OBJECTIVE**
	2014	TOTAL***	2014	TOTAL***	2014	TOTAL***	2014	TOTAL***	2014	TOTAL***	
WASTE DUMPS	1.23 ha	1.25 ha									Grazing
TAILINGS PONDS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PLANT SITE	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ROADS	1.73	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ADMINISTRATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PIT	6.79	6.27	0.00	0.00	0.00	0.00	0.00	0.00	15.66	15.49	Grazing
STOCKPILES	1.90	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0/00	0.00	
LINEAR	0.00										

OTHER	0.00										
TOTAL	11.71	11.48									

•

EXEMPT	0.00	ha
e.g., pit high walls		

•

- * In order for an area to be recorded as “revegetated”, it must have supported vegetation that will lead to the designated land use objective for at least one year. Please provide monitoring data in the Annual Reclamation Report to support the areas reported here.
- ** Specify land use. Options include: forestry, grazing, wildlife habitat, recreation, agricultural, industrial, residential, and other.
- *** Total up to December 31, 2015.



Figure 1: Location map of the Red Lake Quarry which lies immediately west of Bunting's Field.

- Placement of topsoil and waste piles on the basement high which separates Northwest Pit from Bepple Pit.

5. RECLAMATION PROGRAM

The past year's reclamation program concentrated again on the basement high which separates Northwest Pit from Bepple Pit and involves 0.97 hectares, in which the ground level was raised by backfilling with waste. Reconstruction of the southern haul road is nearly complete and with the decommissioning of the Main Haul road will allow extraction of diatomaceous earth from beneath it. The drainage ditches shown in the Main and West pits were maintained. These ditches have water flow during spring runoff only. As the topsoil, waste and stockpiles of diatomaceous earth and leonardite contain no acid-generating materials; neither the piles nor drainage waters from the quarry are subject to any special treatment. Table 5 gives the pH results taken monthly for the past ten months and Table 2 gives the trace element analyses for the last four quarters all taken from the Red Lake Diatomaceous Earth products produced at Absorbent Products Ltd plant at Kamloops, B.C.

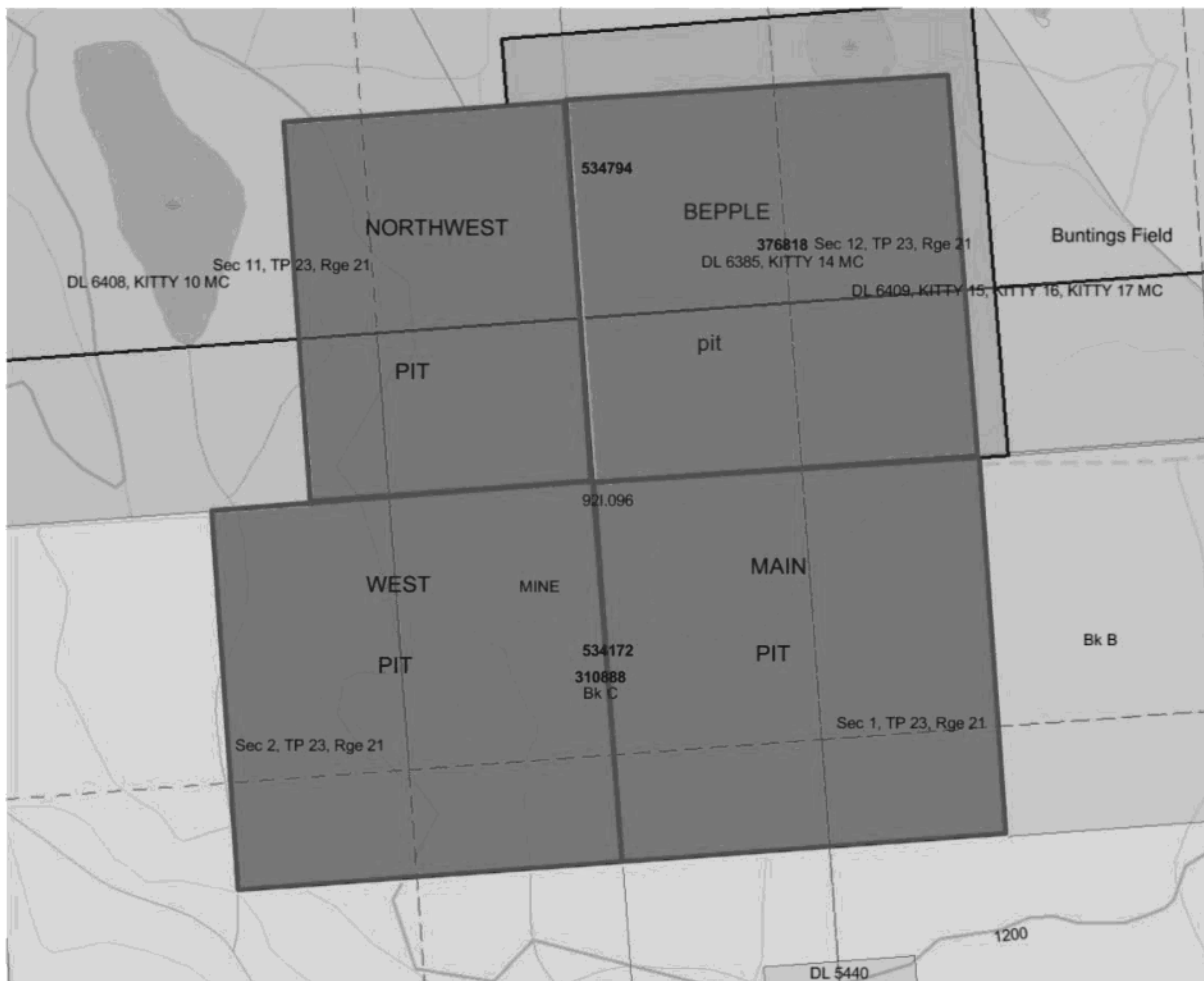


Figure 2: Map showing the location of the four pits comprising the Red Lake Quarry

Table 1 shows the total disturbed area for the Red Lake quarry broken down into the four pit areas. It is quantitatively accurate to 0.01 hectares. It can be compared with Tables 1 in Read (2012, 2013 and 2014), but cannot be compared to earlier Tables 1 in Beresford reclamation reports because the areas in these reports were “guesstimates” only and are not quantitatively correct. In addition, Table 1 shows the reclaimed area broken down into the pit areas, which can be compared to Tables 1 in Read (2012, 2013 and 2014). However, it cannot be compared to earlier tables by Beresford, which are grossly inaccurate. Where significant differences exist among 2012 (blue), 2013 (green) and 2014 (red) compared with 2015 (black) data, Table 1 shows the values. The differences are mainly due to the reconstruction of the southern haul road through Main and West pits. These are reflected in the positive changes in reclaimed ground from 4.70 ha (2012) to 5.59 ha (2015) for Main Pit, but a reduction from 9.06 ha (2012) to 8.68 ha (2015) in West pit. The large decrease in vegetated area of cleared of trees between 2012 (22.44 ha) and 2015 (21.00 ha) of 1.44 ha results mostly from stripping either to overburden or Upper Diatomaceous Earth in Bepple Pit. In this pit, the continued mining of the Upper DE only, without any mining of the underlying Basal DE, is reflected in the reduction of Upper DE available for mining from a high of 1.10 ha (2013) to 0.77 ha (2015) accompanied by an increase in Medial Leonhardite from a low of 0.78 ha (2012) to a high of 1.15 ha (2015).

The reclamation program for the next five years will involve the following:

In the Main Pit:

- Reclamation of an area of 0.92 hectares underlain by Basal Diatomaceous Earth.
- Mining of the diatomaceous earth resource from beneath the present haul road and subsequent reclamation of the ground.
- Use of the northern portion of the reclaimed Main Pit for topsoil and waste pile derived from the northward progress of mining in Bepple Pit.

In the West Pit:

- Reclamation of an area of 0.37 hectares underlain by Basal Diatomaceous Earth (not done in 2015).

In the Northwest Pit:

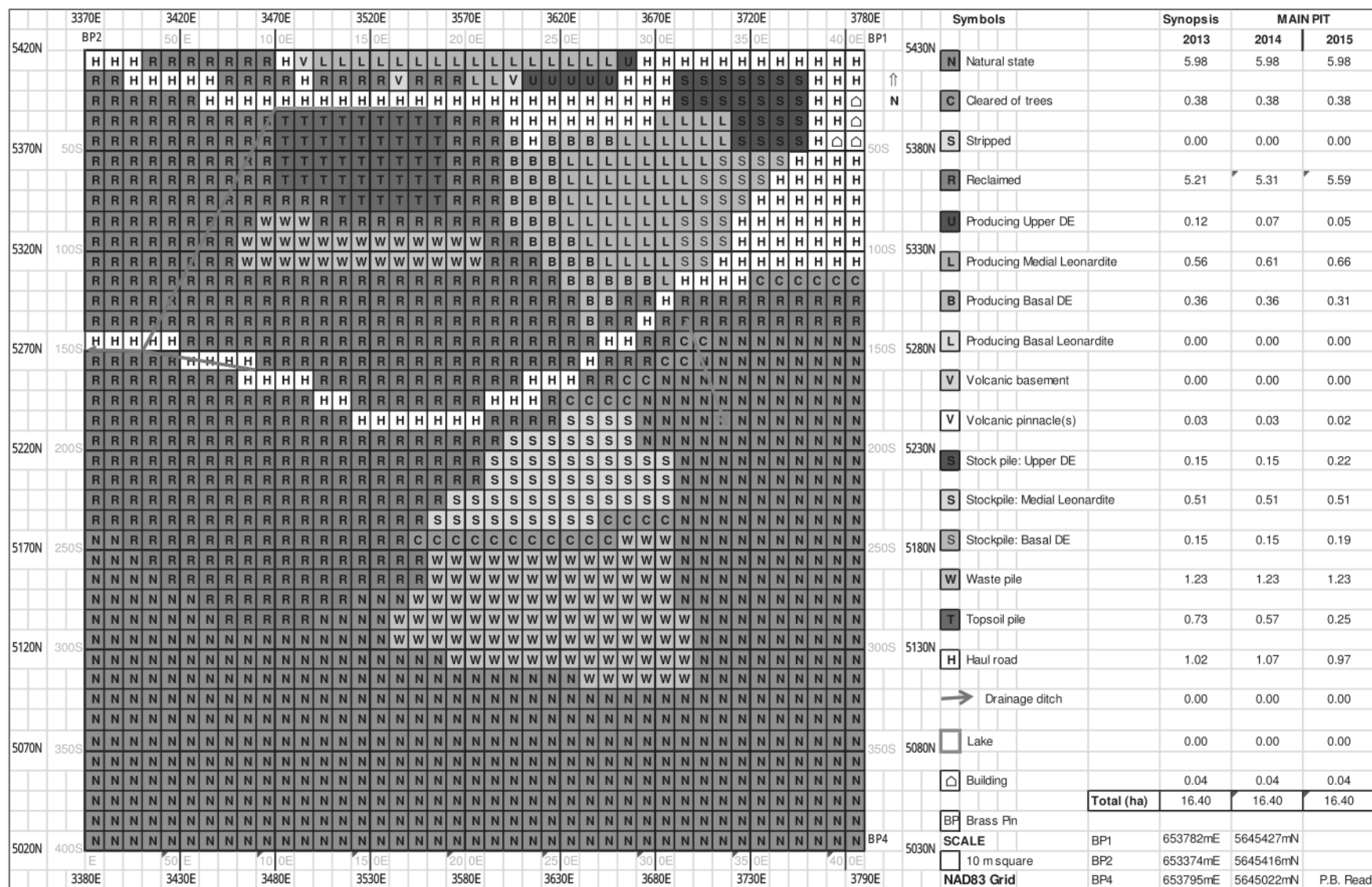
- Continued reclamation of the southern part of the Northwest Pit as quarrying proceeds northward.
- The rate of reclamation will depend upon the northward rate of mining which will probably reach approximately 5650N in five years.

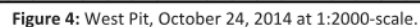
In Bepple Pit:

- Continued reclamation of the southwest corner of Bepple Pit as mining progresses northward to approximately 5530N in five years (continuing in 2015).

- The rate of reclamation will depend upon the rate of mining which will probably reach a depth of 15 m at the eastern end and whether or not a covering basalt cap can be removed.
- Placement of topsoil and waste piles on the basement high which separates Northwest Pit from Bepple Pit and on the north edge of the Main Pit.

The drainage ditches shown in the Main and West pits were maintained. These ditches have water flow only during spring runoff. As the topsoil, waste and stockpiles of diatomaceous earth and leonardite contain no acid-generating materials; neither the piles nor drainage waters from the quarry are subject to any special treatment. Table 2 gives the trace element analyses for the last four quarters taken on the Red Lake Diatomaceous Earth and Table 5, the pH results taken monthly for the past eleven months. Among Red Lake diatomaceous earth uses, it is a registered feed additive.





Page 17 of 26 EGM-2016-63863

Table 2: 2015 Quarterly Composites and Annual Average of Red Lake Trace Element Analyses

Element Reading	Jan-15	Apr-15	Jul-15	Oct-15	Yearly Average
	Reg. DE	Reg. DE	Reg. DE	Reg. DE	2015
Ag ppm	0.11	0.10	0.11	0.12	0.11
Al %	6.94	6.95	6.87	6.85	6.90
As ppm	8.00	7.50	7.79	8.03	7.83
Ba ppm	280	280	273	276	277
Be ppm	1.37	1.38	1.31	1.43	1.37
Bi ppm	0.18	0.18	0.19	0.2	0.19
Ca %	0.64	0.66	0.63	0.66	0.65
Cd ppm	0.18	0.17	0.18	0.2	0.18
Ce ppm	38.5	39.4	39	40	39.2
Co ppm	13.8	13.2	13.7	14.1	13.7
Cr ppm	46	45	44	45	45
Cs ppm	2.32	2.32	2.33	2.43	2.35
Cu ppm	43.2	40.5	42.1	42.7	42.1
Fe %	3.20	3.19	3.16	3.13	3.17
Ga ppm	16.6	15.9	16.4	16.7	16.4
Ge ppm	0.17	0.16	0.14	0.15	0.16
Hf ppm	3.6	3.7	3.7	3.8	3.7
Hg ppm	0.11	0.13	0.12	0.13	0.12
In ppm	0.053	0.051	0.05	0.06	0.054
K %	0.50	0.48	0.49	0.49	0.49
La ppm	18.5	18.9	18.8	19.3	18.9
Li ppm	20.8	21.7	20.6	23.3	21.6
Mg %	0.46	0.48	0.45	0.47	0.47
Mn ppm	108	112	117	113	113
Mo ppm	10.35	11.50	10.79	11.79	11.11
Na %	0.48	0.48	0.47	0.49	0.48
Nb ppm	10.4	10.5	10	10	10.2
Ni ppm	27.4	26.3	27.5	29.2	27.6
P ppm	270	280	274	276	275
Pb ppm	10.3	8.5	10.2	9.3	9.6
Rb ppm	31.6	30.7	31.6	31.5	31.4
Re ppm	0.006	0.005	0.01	0.01	0.008
S %	0.20	0.26	0.21	0.28	0.24
Sb ppm	0.74	0.70	0.74	0.77	0.74
Sc ppm	14.1	13.5	13.6	13.7	13.7
Se ppm	3	3	3	3	3
Sn ppm	1.3	1.2	1.3	1.4	1.3
Sr ppm	120.5	119.5	119.6	121.5	120.3
Ta ppm	0.58	0.59	0.61	0.63	0.60
Te ppm	0.07	0.07	0.07	0.09	0.08
Th ppm	4.9	4.8	4.9	5.1	4.9
Ti %	0.364	0.364	0.36	0.36	0.362
Tl ppm	0.42	0.42	0.43	0.45	0.43
U ppm	2.2	2.1	2.2	2.2	2.2
V ppm	112	112	110	110	111
W ppm	0.8	0.7	0.8	0.8	0.8
Y ppm	18.3	18.8	18.4	19.2	18.7
Zn ppm	81	79	80	78	80
Zr ppm	142.0	143.0	140.1	145.6	142.7

6. RECLAMATION LIABILITY COSTS

Sequenced mining and reclamation development plans were approved under Permit Q-15-006 in October 2000 and have been followed. Continuing reclamation has been carried out since commencement of backfill and grading in 2001. APL utilizes its own earth moving equipment to backfill and re-contour the mined out areas. The majority of the area requiring backfill and grading is included in the diatomaceous earth production costs if overburden is being moved as part of the mining process. When overburden is moved separately and piled or pushed onto the mined out areas from existing pile, then this cost is separated out as a direct reclamation cost. APL has allowed \$5,500 per hectare for the direct reclamation costs based on previous experience of actual costs at the quarry over the past 13 years. Based on the APL reclamation cost of \$5725/hectare, which includes grass seed (Table 3), and its distribution, and the amount of unreclaimed area of 11.48 hectares (Table 1), the current reclamation security bonding of \$70,000.00 is sufficient to cover the estimated cost of \$68,880 for reclaiming the present 11.48 hectares of disturbed land (Table 4). The summary of material costs is given in Table 4.

Table 3: Summary Table of Material Costs

Mine Activity Category	AREA (ha)				RECLAMATION PRESCRIPTION			Total Cost
	Total Disturbed	Perm. Disturb.	Current Reclaimed	To be Reclaimed	Site Preparation	Revegetation	Maintenance	
AREA DISTURBANCE								
Dump Face Resloping								
Resloped				0	\$0	\$0	\$0	\$0
Master 1	11.48			11.48	\$63,140	\$5,740	\$0	\$68,880
Master 2				0	\$0	\$0	\$0	\$0
Master 3				0	\$0	\$0	\$0	\$0
Master 4				0	\$0	\$0	\$0	\$0
Master 5				0	\$0	\$0	\$0	\$0
Master 6				0	\$0	\$0	\$0	\$0
Master 7				0	\$0	\$0	\$0	\$0
Master 8				0	\$0	\$0	\$0	\$0
Master 9				0	\$0	\$0	\$0	\$0
Master 10				0	\$0	\$0	\$0	\$0
Master 11				0	\$0	\$0	\$0	\$0
Master 12				0	\$0	\$0	\$0	\$0
Master 13				0	\$0	\$0	\$0	\$0
Master 14				0	\$0	\$0	\$0	\$0
TOTAL	11.48	0.00	0.00	11.48	\$63,140	\$5,740	\$0	\$68,880
LUMP SUM ITEMS								
ARD Capital Costs								\$0
Mill Building								\$0
Admin. Building								\$0
Mill								\$0
Silos								\$0
Structures								\$0
Power line								\$0
Conveyor								\$0
Stockpiles								\$0
Sealing of Openings								\$0
Hauling--Surface Materials								\$0
Optional Item 1								\$0
Optional Item 2								\$0
Optional Item 3								\$0
Optional Item 4								\$0
Optional Item 5								\$0
Optional Item 6								\$0
Optional Item 7								\$0
POST CLOSURE COSTS								\$0
Present Value								\$0
TOTAL								\$68,880

Table 4: Summary Table of Reclamation Liability Costs

Project Name:		Red Lake Quarry							
Reclamation Permit #:		Q-15-006							
Disturbance Category:		Master 1							
Area to be reclaimed		11.48							
Additional Notes:									
RECLAMATION PRESCRIPTIONS									
A.		Area (ha)	Unit Cost \$/ha or km	Item Subtotal \$	TOTAL \$				
Site Preparation									
Recontouring (max. ht. of 10m)				\$0					
Surfacing Material									
Haul									
Spread		11.48	\$5,500	\$63,140					
Compact				\$0					
Ripping				\$0					
optional				\$0					
optional				\$0					
optional				\$0					
optional				\$0					
optional				\$0					
optional				\$0					
optional				\$0					
optional				\$0					
optional				\$0					
					\$63,140				
B.		Area (ha)	Application Rate (kg/ha)	No. of Kg.	Appl. Cost \$/ha	Unit Cost \$/ha	Item Subtotal \$	Subtotal \$	TOTALS
Revegetation					\$150	\$150	\$0		
Aerial Broadcast - application						\$500	\$5,740		
Seed		11.48	100	1148		\$0	\$0		
Fertilizer				0		\$0	\$0		
								\$5,740	
Tractor - application						\$0	\$0		
Seed				0		\$0	\$0		
Fertilizer				0		\$0	\$0		
								\$0	
Hydroseed									
Hydroseed - application						\$0	\$0		
Seed				0		\$0	\$0		
Fertilizer				0		\$0	\$0		
Mulch				0		\$0	\$0		
Tackifier				0		\$0	\$0		
								\$0	
optional - application				0		\$0	\$0		
optional - material 1				0		\$0	\$0		
optional - material 2				0		\$0	\$0		
								\$0	
Woody species		Area (ha)	Appl. Rate (stems/ha)	No. of Plants	Appl. Cost \$/stem	Unit Cost \$/ha	Item Subtotal \$		
Plant Installation						\$0	\$0		
Seedlings				0		\$0	\$0		
Fertilizer tablets				0		\$0	\$0		
Plant protectors (installed)				0		\$0	\$0		
optional - material 3				0		\$0	\$0		
optional - material 4				0		\$0	\$0		
								\$0	
					\$5,740				
C.	Years	Area (ha)	Application Rate (kg/ha)	No. of Kg.	Appl. Cost \$/ha	Unit Cost \$/ha	Subtotal \$ per year	Subtotal \$	TOTALS
Maintenance									
Aerial Broadcast - application						\$0	\$0		
Seed				0		\$0	\$0		
Fertilizer				0		\$0	\$0		
								\$0	
Tractor - application						\$0	\$0		
Seed				0		\$0	\$0		
Fertilizer				0		\$0	\$0		
								\$0	
Hydroseed									
Hydroseed - application						\$0	\$0		
Seed				0		\$0	\$0		
Fertilizer				0		\$0	\$0		
Mulch				0		\$0	\$0		
Tackifier				0		\$0	\$0		
								\$0	
optional - application				0		\$0	\$0		
optional - maint.material 1				0		\$0	\$0		
optional - maint.material 2				0		\$0	\$0		
								\$0	
					\$0				
Total Cost for Reclamation Prescriptions					\$68,880				

Table 4 (cont'd.): Summary Table of Reclamation Liability Costs

Material Summary Report	No. of Kg. or No. of Plants	Unit Cost \$/kg, \$/plant	Subtotal \$
Seed mix	1148	\$5.00	\$5,740
Fertilizer	0		\$0
Mulch	0		\$0
Tackifier	0		\$0
<i>Woody species</i>			
Seedlings (\$ per plant)	0		\$0
Fertilizer tablets (\$/tablet)	0		\$0
Plant protectors (\$/unit)	0		\$0
optional - material 1	0		\$0
optional - material 2	0		\$0
optional - material 3	0		\$0
optional - material 4	0		\$0
maint.material 1	0		\$0
maint.material 2	0		\$0
			\$5,740

7. ACID ROCK DRAINAGE POTENTIAL

The diatomaceous earth quarried by APL is non-acid generating with a pH that lies between 5.62 and 6.13 and averages 5.95 based on monthly results between November 2014 and October 2015 (Table 5). From the West pit, the ephemeral spring runoff is directed toward a small pond slightly east of the centre of the West Pit. From this pond a drainage ditch leads to the west where it is joined by a south-draining ditch from Northwest Pit and both drain to a naturally vegetated gully on the west side of West Pit (Figure 4). The same information is summarized in the B.C. Ministry's Table 2.

Table 5: Monthly pH's of Red Lake Diatomaceous Earth (December 2014 to November 2015)

Time	14-Nov	14-Dec	15-Jan	15-Feb	15-Mar	15-Apr	15-May	15-Jun	15-Jul	15-Aug	15-Sep	15-Oct
Product	Reg. DE	Reg. DE	Reg. DE	Reg. DE	Reg. DE	Reg. DE	Reg. DE	Reg. DE	Reg. DE	Reg. DE	Reg. DE	Reg. DE
pH	5.62	5.87	5.87	5.92	5.86	6.1	5.92	6.13	5.86	6.04	6.13	6.07

8. REFERENCES

Read, P. B. (2012):

Annual Reclamation Report for the Year 2012, Mine Permit Q-15-006, Mining Lease 310888, Red Lake Quarry; unpublished report, *Geotex Consultants Limited*, 14 p.

Read, P. B. (2013):

Annual Reclamation Report for the Year 2013, Mine Permit Q-15-006, Mining Lease 310888, Red Lake Quarry; unpublished report, *Geotex Consultants Limited*, 14 p.

Read, P. B. (2014):

Annual Reclamation Report for the Year 2014, Mine Permit Q-15-006, Mining Lease 310888, Red Lake Quarry; unpublished report, *Geotex Consultants Limited*, 20 p.

TABLE 2A
QUANTITIES OF WASTE ROCK, TAILINGS, LOW GRADE ORE, COARSE REJECT
AND OTHER MINE WASTE AS OF DECEMBER 31, 2015

COMPANY: Absorbent Products Ltd **PERMIT NO.:** Q-15-006

Use the space below to enter information for each waste dump, tailings pond or low grade ore pile. All quantities should be given in tonnes.

Name of Waste Pile or Pond	Acid Generating Waste		Potentially Acid Generating Waste		Non-Acid Generating Waste	
Waste Dumps	2015	Total	2015	Total	2015	Total
1 West Pit					25	25
2 Main Pit (3 piles)					100,000	100000
3						
4						
5						
Total					125,000	125000
Tailings Ponds						
1						
2						
3						
4						
5						
Total						
Low Grade Ore/Coarse Reject/Other Mine Waste						
1						

2						
3						
4						
5						
Total					125,000	125000