

Ministry of Energy, Mines & Petroleum Resources
Mining & Minerals Division
BC Geological Survey

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]:

TECHNICAL REPORT

TOTAL COST:

\$9600⁰⁰

AUTHOR(S):

JEFF AUSTIN

SIGNATURE(S):

Jeff Austin

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):

MY-4-309

YEAR OF WORK: 2015

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S):

EVENT 5586362

PROPERTY NAME:

~~BLUE 2000~~ WESTERN CANADA LIMESTONE LTD QUARRY

CLAIM NAME(S) (on which the work was done):

BLUE 2000

COMMODITIES SOUGHT:

LIMESTONE AGGREGATE / LIME

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

TENURE # 559349

MINING DIVISION:

KAMLOOPS

NTS/BCGS:

082E

LATITUDE:

50° 0' 22"

LONGITUDE:

119°

33' 39"

(at centre of work)

OWNER(S):

1) WESTERN CANADA LIMESTONE LTD. 2)

MAILING ADDRESS:

906 FAIRWAY CRESCENT

OPERATOR(S) [who paid for the work]:

1) WESTERN CANADA LIMESTONE 2)

MAILING ADDRESS:

906 FAIRWAY CRESCENT
KELOWNA B.C. V1Y 4S7

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

LIMESTONE

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralogaphic			
Metallurgic	AGGREGATE TESTWORK/ENGINEERING BLUE 2001		\$ 9600 ⁰⁰
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
			TOTAL COST:

BC Geological Survey
Assessment Report
36033

CAPITAL AND OPERATING COST ESTIMATES FOR AGGREGATE PRODUCTION

WESTERN CANADA LIMESTONE LTD.

Blue 2000 Claim Group – Tenure number 559349

119 33' 33"W 50 0' 23" N

Prepared for

Western Canada Limestone Ltd.
13 – 2550 Acland Road
Kelowna, B.C.
V1X 7L4

Attention: Mr. Don Sandberg

November 15, 2015

CAPITAL AND OPERATING COST ESTIMATES FOR AGGREGATE AND LIME PRODUCTION
WESTERN CANADA LIMESTONE LTD QUARRY

Prepared by

International Metallurgical and Environmental Inc.
906 Fairway Crescent
Kelowna, B.C.
V1Y 4S7

Signed and Sealed

Jeffrey B. Austin, P.Eng. – President
International Metallurgical and Environmental Inc.

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DESIGN CRITERIA OF A LIME PRODUCTION FACILITY

INTRODUCTION

Western Canada Limestone Ltd operates a limestone mining operation located approximately 17 kilometres from downtown Kelowna, B.C. The operation produces aggregates for use in construction and landscaping.

The Crown granted tenure is contained within the Blue 2000 claim group. Mineral Tenure is held under Tenure Number 559349. On-going mining operations are shown in Figure 1 below.



Figure 1. – Photo of Western Canada Limestone Ltd. Crushing Station Under Construction(June 2015)

Western Canada Limestone Ltd. has contracted International Metallurgical and Environmental Inc. to provide capital and operating costs for a number of options of using crushing and grinding technology to add value to the products that are derived from the quarry operations of Western Canada Limestone Ltd. Within the local market area, stone products have various values and these are summarized in the following Table 1.

Table 1
Typical Aggregate and Stone Market Pricing in the Central Okanagan

Product	Typical Market Value	Comments
Pit run alluvial stone	\$4.00 – \$6.00	Current WCL* product
75 mm crushed stone	\$7.00 – \$10.00	Current WCL* product
25 mm crushed stone	\$7.00 - \$10.00	Current WCL* product
Agricultural lime	\$18.00 – \$25.00	Potential WCL product
Rounded 25 mm stone	\$15.00-\$18.00	Potential WCL product
Rounded 12 mm stone	\$18.00 - \$22.00	Potential WCL product
Calcine Feed	\$25.00 - \$40.00	Potential WCL product

* Western Canada Limestone Ltd.

All of the products which are potentially available from the quarry of Western Canada Limestone Ltd. have substantial market volumes and potentially could be financially very significant to the project. It is the long term plan to move into the production of higher valued aggregates by the use of crushing, screening and grinding to produce these higher valued products. By moving from simple crushed products, Western Canada Limestone Ltd. could potentially double the unit value of the material moved from it quarry.

Within the local market served by Western Canada Limestone Ltd., it is estimated that approximately 1.5 to 2.0 million tonnes of aggregate is consumed in various products from foundation rock to concrete aggregate to drain rock. Local aggregate sales are likely in the range of 15 to 20 million dollars annually.

This report discusses various options for the Western Canada Limestone Ltd. project and outlines the results of capital and operating cost analysis for the project. This report draws on technical work conducted on Western Canada Limestone Ltd sample materials, evaluating limestone grinding as well as detailed quick lime production testing. These previous reports are contained as Appendix 1 and 2 respectively.

PROJECT LOCATION

The project is located at kilometer 10.5 on the Bear Lake Main Road on the western shore of Lake Okanagan. The map below shows Tenure 559349 which holds the operations of Western Canada Limestone Ltd.

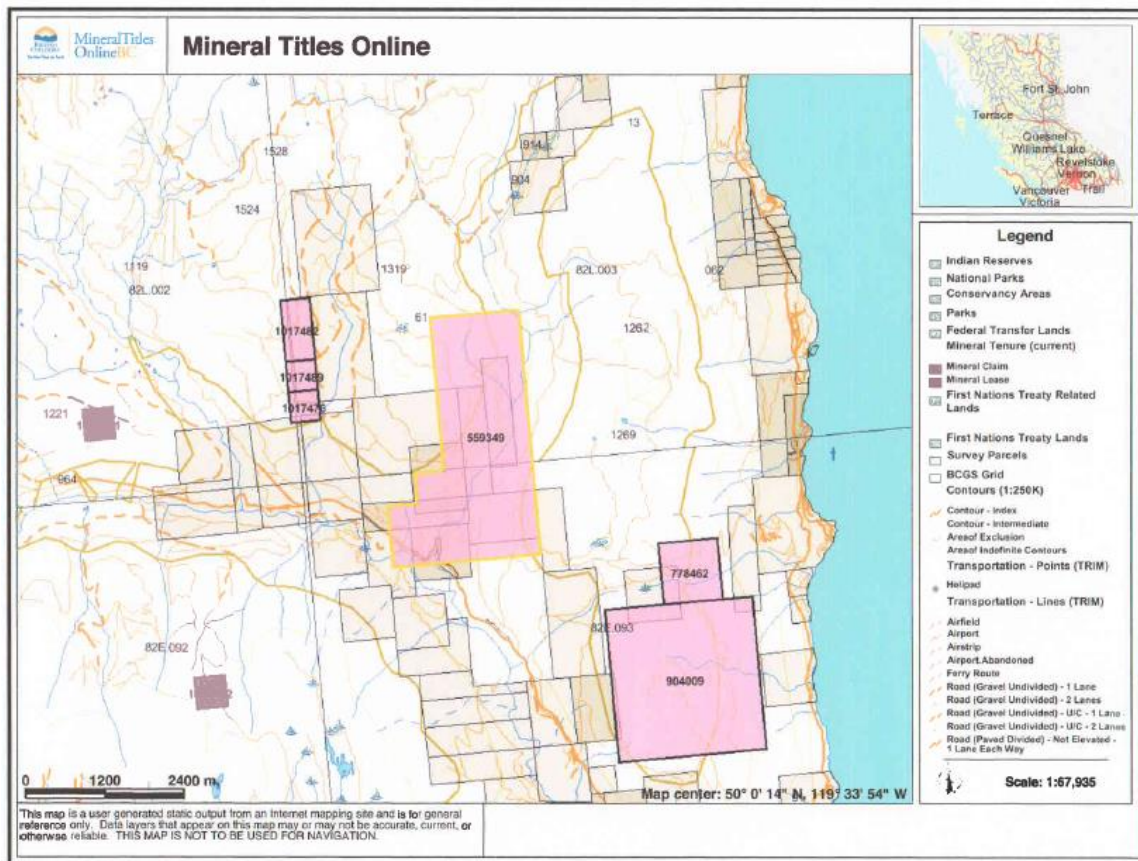


Figure 2. – Location of Mineral Tenure 559349 and Western Canada Limestone Ltd.

Access to the quarry is shown in the following Figure.



Figure 3. – Location of Western Canada Limestone Ltd. Quarry.

The location of Western Canada Limestone Ltd. is approximately 18 km from downtown Kelowna, considered the centre of the local aggregate market. This travel distance is approximately 8 km

greater than average aggregate haulage in the region and disadvantages Western Canada Limestone Ltd. approximately 3 dollars per tonne of supplied material relative to competitive providers of aggregate. Estimates of the prices that can be obtained FOB the site of Western Canada Limestone Ltd. are shown in Table 2 and are based on reductions of the pricing shown in Table 1 owing to a freight disadvantage for the project. These pricing estimates were used in this economic evaluation and are considered conservative .

Table 2
Expected Aggregate and Stone Market Pricing for Western Canada Limestone Ltd.

Product	Typical Market Value	Comments
Pit run alluvial stone	\$4.00 – \$6.00	Current WCL* product
75 mm crushed stone	\$6.00	Current WCL* product
25 mm crushed stone	\$7.00	Current WCL* product
Agricultural lime	\$15.00	Potential WCL product
Rounded 25 mm stone	\$12.00	Potential WCL product
Rounded 12 mm stone	\$12.00	Potential WCL product
Calcine Feed	\$20.00	Potential WCL product

PROJECT DESCRIPTION AND DISCUSSION OF PROJECT OPTIONS

Typical limestone chemistry from the Western Canada Limestone Ltd. quarry is shown in Table 3 below. The limestone chemistry shown below in Table 3 is well above the requirements of the agricultural lime specifications.

Table 3
Summary of Analysis* – Western Canada Limestone Ltd. Quarry Production Sample

Sample	CaO %	CaCO ₃ %	MgO %	SiO ₂ %	S %	LOI %
WCL Quarry Prod.	54.8	97.8	0.15	0.7	0.02	43.4

* Obtained from 2011 analysis of limestone

The limestone from this deposit is coarse grained and relatively hard compared to other limestone deposits, although limestone produces more fines than other blast rock. This generation of fines is approaching the upper limit for meeting the characteristics of structural aggregates used in highway construction. Screening of these fines is simple, although a use for the fines is needed and using them to produce lime is an attractive option. These materials are well-received as structural aggregates in the local market. The minus two millimeter fraction is considered suitable for sale as agricultural lime from a particle size distribution specification. The fine fraction of high grade limestone has also been shown to be excellent feedstock for the production of burnt lime.

By targeting to remove the fine fraction of the crusher discharge product and consider selling it for its chemical content as agricultural lime, it allows the production of aggregates of much higher value in the coarse size ranges. The highest value aggregate in the local market is rounded drain rock which can be produced in a grinding mill which does not include steel grinding media. The coarse stone fractions within the mill, behave as a grinding media and becomes rounded in the grinding process. This concept is similar to the fully autogenous grinding process, which is widely used in the metal-mining industry. Screening of the ground mill product allows for the separation of the drain rock in the fractions above 3/8 of an inch and the production of agricultural lime as the fraction finer than approximately 2 mm. The intermediate size fraction between 2 mm and 3/8 of an inch does not have a ready market and can be returned to the grinding process.

Currently, Western Canada Limestone is commissioning a 250 tonne per hour crushing plant that has been constructed at a cost of approximately \$600,000. Key equipment items in the crushing plant include the following:

- 1) 30 by 42 inch jaw crusher
- 2) 5 by 16 foot double deck screen
- 3) 24 by 48 diameter rolls crusher
- 4) Apron feeder
- 5) Assorted transfer conveyors.

As a base case, this crushing plant is capable of approximately 500,000 tonnes per year of 25mm crushed limestone or a daily throughput of approximately 1923 mtpd.

Three detailed operational scenarios are looked at to provide an indication of the implications of altering pricing and throughput. The first scenario is a smaller tonnage model(100,000 tpy) with higher value stone being produced to compete in the local market. The second and third scenarios look at higher tonnages, but producing a lower value produce, namely crushed stone only. These options are discussed in detail in the next section.

Summary of Project Economics				
100,000 Tonne Annual Aggregate Sales				
	Staff Member Title	Positions Filled	Annual Salary	
Operating Staff Mining	Mine/Production Manager	1	75000	75000
	Sales Engineer	0	40000	0
	Accounting Clerk	1	35000	35000
	Driller/Blaster	1	60000	60000
	Excavator Operator	1	60000	60000
	Truck Driver	1	50000	50000
	Mechanic/Serviceman	2	60000	120000
	Crushing/Processing	Crusher Operators	1	50000
	Crusher Helper	0	38000	0
	Shipper	0	45000	0
	Total Direct Labor	8		450000
	Overheads @ 25%			112500
	Total Labor and overheads			562500
Mining Costs		1.5		150000
	Power and Consumable Ex.			
Fuel	Diesel Fuel - l/tonne	Unit Fuel cost - \$/l		
	0.4	0.7		28000
Blasting	Blasting - kg/tonne	Unit explosive cost		
	0.2	1		20000
Non assigned cons.	Consumables - lot	0.2		40000
Total Operating Costs				800,500.00
Operating costs per tonne				8.005
		Government royalty		\$1.91
		Overall Operating costs		9.915
		Sale price		12
		Pre-tax profit		208,500.00

Summary of Project Economics				
250,000 Tonne Annual Aggregate Sales				
	Staff Member Title	Positions Filled	Annual Salary	
	Mine/Production Manager	1	75000	75000
	Sales Engineer	0	40000	0
	Accounting Clerk	1	35000	35000
Operating Staff	Driller/Blaster	0	60000	0
Mining	Excavator Operator	1	60000	60000
	Truck Driver	1	50000	50000
	Mechanic/Serviceman	3	55000	165000
Crushing/Processing	Crusher Operators	1	50000	50000
	Crusher Helper	1	38000	38000
	Shipper	0	45000	0
	Total Direct Labor	9		473000
	Overheads @ 25%			118250
	Total Labor and overheads			591250
Mining Costs		1.5		375000
	Power and Consumable Ex.			
Fuel	Diesel Fuel - l/tonne	Unit Fuel cost - \$/l		
	0.4	0.7		70000
Blasting	Blasting - kg/tonne	Unit explosive cost		
	0.2	1		50000
Non assigned cons.	Consumables - lot			100000
Total Operating Costs				1,186,250.00
Operating costs per tonne				4.745
	Government royalty			\$1.91
	Overall Operating costs			6.655
	Sale price			7.5
	Pre-tax profit			211,250.00

Summary of Project Economics 500,000 tonnes Annual Aggregate Sales				
	Staff Member Title	Positions Filled	Annual Salary	
Administration	Mine/Production Manager	1	75000	75000
	Sales Engineer	1	40000	40000
	Accounting Clerk	1	35000	35000
Operating Staff Mining	Driller/Blaster	1	60000	60000
	Excavator Operator	1	60000	60000
	Truck Driver	1	50000	50000
	Mechanic/Serviceman	4	60000	240000
Crushing/Processing	Crusher Operators	1	50000	50000
	Crusher Helper	1	38000	38000
	Shipper	<u>2</u>	45000	<u>90000</u>
	Total Direct Labor	14		738000
	Overheads @ 25%			184500
	Total Labor and indirects			922500
Mining Costs		1.5		750000
	Power and Consumable Ex.			
Fuel	Diesel Fuel - l/tonne	0.4	Unit Fuel cost - \$/l 0.7	140000
Blasting	Blasting - kg/tonne	0.2	Unit explosive cost 1	100000
Non assigned cons.	Consumables - lot			100000
Total Operating Costs				2,012,500.00
Operating costs per tonne				4.025
Government royalty				\$1.91
Estimated Operating costs				5.935
Sale price				7.5
Pre-tax profit				782,500.00

Western Canada Limestone Ltd. is currently producing and selling aggregate for use in the local Kelowna market.

The current project is capable of producing approximately 500,000 tonnes per year of crushed aggregate passing 25mm, which is represented in the third economic model shown in the previous section. At sales levels of 500,000 tonnes, the entire project is expected to be repaid in approximately 16 months. These sales levels are optimistic and may not be readily obtained.

The lower tonnage options in the first and second economic models shown in the previous section are likely more representative of the sales levels to be obtained and represent a payback period of approximately 5 years. It is recommended that higher value aggregate such as rounded stone and limestone fines be fully investigated and pursued within this business plan.

Project Capital expenses are summarized in Table 3 and include expenditures to date as well as proposed future capital expenditures.

Table 3
Summary of Capital Expenses

<u>Current Expenditures</u>	Expenditures
Crushing/Screening Plant	\$600,000
Quarry Mobile Equipment	\$350,000
Site Buildings	\$150,000
Road/Site Clearing	<u>\$70,000</u>
Expenditures to Date	\$1,170,000
<u>Future Capital Expenditures</u>	
Limestone Grinding Mill	<u>\$400,000</u>
Overall Project Expenditures	1,570,000

All of the options presented above show a positive return on the investment in the aggregate operation.

It is recommended that higher value aggregate products be pursued to protect the project from the impact of lower volume of sales and lower revenues.

CERTIFICATE OF QUALIFIED PERSON

Jeffrey B. Austin, P.Eng.

I, Jeffrey B. Austin, P.Eng., do hereby certify that:

1. I am a Consulting Engineer and President of International Metallurgical and Environmental Inc., residing at 906 Fairway Crescent, Kelowna, B.C., Canada. 2

This certificate applies to the technical report titled “ Capital and Operating Cost Estimates For Aggregate Production”, dated November 15, 2015 (the “Technical Report”).

2. I fulfill the requirements of a qualified person for the purposes of NI 43-101 based on my academic qualifications, professional membership and relevant experience, as set out below:
 - a. I hold the following academic qualifications:

BASc.	University of British Columbia	1984
-------	--------------------------------	------

- b. I am a member in good standing of the following professional and technical associations:

Association of Professional Engineers and Geoscientists of BC	15708
---	-------

- c. I have worked in the minerals industry as a Consulting Process Engineer continuously since 1987, a period of 26 years.
3. I have personally inspected the property.
4. I am responsible for all aspects of the Technical Report.
5. I am not independent of Western Canada Limestone Ltd. as defined in section 1.5 of NI 43-101. I currently serve as president of Western Canada Limestone Ltd.
6. I have read and am familiar with NI 43-101 and the sections of the Technical Report for which I am responsible. To the best of my knowledge, information, and belief, the parts of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.
7. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 16th day of December, 2012

“Signed and Sealed”

Jeffrey B. Austin, P.Eng.

INVOICE

November 15, 2015

Invoice Number: 21570
HST No.: 898084686

Mr. Don Sandberg
Western Canada Limestone Ltd.
906 Fairway Crescent
Kelowna, B.C.
V1Y4S7

Dear Don,

This invoice covers the costs of completing aggregate test work on composite samples from Western Canada Limestone Ltd.

Completion of operating cost estimates – 80 hours @ \$120 per hour	\$9,600.00
Sub-total	<u>\$9,600.00</u>
GST	\$480.00
Invoice total	\$10,080.00

Thank-you for the opportunity to provide this service.

Yours very truly,

Jeffrey B. Austin, P.Eng. – President
International Metallurgical and Environmental Inc.

APPENDIX 1

AN EVALUATION OF THE AGGREGATE PRODUCTION POTENTIAL FROM THE WESTERN CANADA LIMESTONE LTD QUARRY

AN EVALUATION OF THE AGGREGATE PRODUCTION POTENTIAL FROM THE
WESTERN CANADA LIMESTONE LTD QUARRY

Blue 2000 Claim Group – Tenure number 559349

119 33' 33"W 50 0' 23" N

Prepared for

Western Canada Limestone Ltd.
13 – 2550 Acland Road
Kelowna, B.C.
V1X 7L4

Attention: Mr. Don Sandberg

October 4, 2014

AN EVALUATION OF THE AGGREGATE PRODUCTION POTENTIAL FROM THE
WESTERN CANADA LIMESTONE LTD QUARRY

Prepared by

International Metallurgical and Environmental Inc.
906 Fairway Crescent
Kelowna, B.C.
V1Y 4S7

Signed and Sealed

Jeffrey B. Austin, P.Eng. – President
International Metallurgical and Environmental Inc.

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INTRODUCTION

Western Canada Limestone Ltd operates a limestone mining operation located approximately 17 kilometres from downtown Kelowna, B.C. The operation produces aggregates for use in construction and landscaping.

The Crown granted tenure is contained within the Blue 2000 claim group. Mineral Tenure is held under Tenure Number 559349. On-going mining operations are shown in Figure 1 below.



Figure 1. – Photo of Western Canada Limestone Ltd. Quarry Operation(August 2012)

Western Canada Limestone Ltd. has contracted International Metallurgical and Environmental Inc. to evaluate the option of using crushing and grinding technology to add value to the products that are derived from the quarry operations of Western Canada Limestone Ltd. Within the local market area, stone products have various values and these are summarized in the following Table 1.

Table 1
 Typical Aggregate and Stone Market Pricing in the Central Okanagan

Product	Typical Market Value	Comments
Pit run alluvial stone	\$4.00 – \$6.00	Current WCL* product
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* Western Canada Limestone Ltd.

All of the products which are potentially available from the quarry of Western Canada Limestone Ltd. have substantial market volumes and potentially could be financially very significant to the project. It is the long term plan to move into the production of higher valued aggregates by the use of crushing, screening and grinding to produce these higher valued products. By moving from simple crushed products, Western Canada Limestone Ltd. could double the unit value of the material moved from it quarry.

This report outlines the results of crushing and grinding tests conducted in the facilities of International Metallurgical and Environmental Inc.

PROJECT LOCATION

The project is located at kilometer 10.5 on the Bear Lake Main Road on the western shore of Lake Okanagan. The map below shows Tenure 559349 which holds the operations of Western Canada Limestone Ltd.

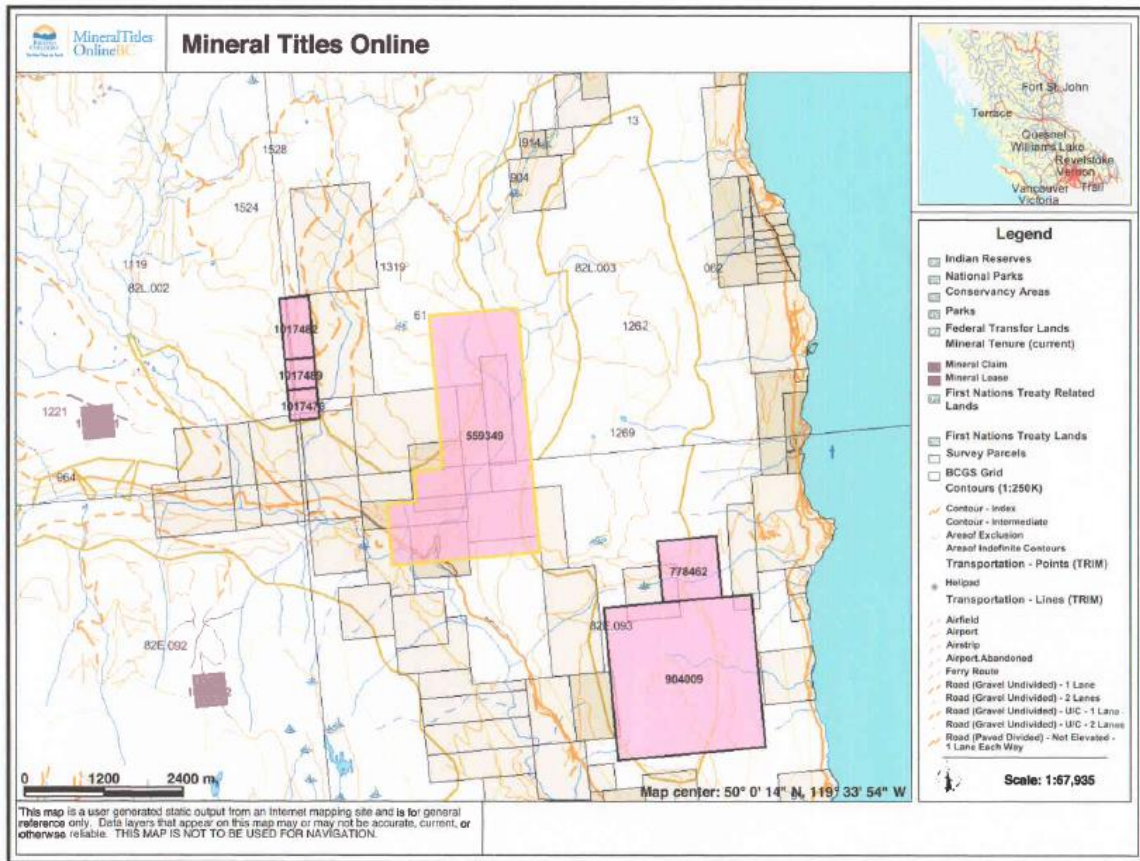


Figure 2. – Location of Mineral Tenure 559349 and Western Canada Limestone Ltd.

RESULTS AND DISCUSSION

Test Samples

Four large representative limestone sample were provided to International Metallurgical and Environmental Inc. for use in this test work program. Approximately 150 kilograms of stone was provided from the on-going operations in the quarry, the location of sampling within the quarry was confined to the upper mining bench with samples collect approximately 30 metres apart at the toe of the mining bench.

The sample material was crushed to less than three inches in a laboratory jaw crusher in order to provide material for screening and preparing material for detailed crushing tests. Typical limestone chemistry from the Western Canada Limestone Ltd. quarry is shown in Table 2 below. The limestone chemistry shown below in table 1 is well above the requirements of the agricultural lime specifications.

Table 2
Summary of Analysis* – Western Canada Limestone Ltd. Quarry Production Sample

Sample	CaO %	CaCO ₃ %	MgO %	SiO ₂ %	S %	LOI %
WCL Quarry Prod.	54.8	97.8	0.15	0.7	0.02	43.4

* Obtained from 2011 analysis of limestone

The limestone from this deposit is coarse grained and relatively hard compared to other limestone deposits, although limestone produces more fines than other blast rock. This generation of fines is approaching the upper limit for meeting the characteristics of structural aggregates used in highway construction. Screening of these fines is simple, although a use for the fines is needed and using them to produce lime is an attractive option. These materials are well-received as structural aggregates in the local market. The minus two millimeter fraction is considered suitable for sale as agricultural lime from a particle size distribution specification.

By targeting to remove the fine fraction of the crusher discharge product and consider selling it for its chemical content as agricultural lime, it allows the production of aggregates of much higher

value in the coarse size ranges. The highest value aggregate in the local market is rounded drain rock which can be produced in a grinding mill which does not include steel grinding media. The coarse stone fractions within the mill, behave as a grinding media and becomes rounded in the grinding process. This concept is similar to the fully autogenous grinding process, which is widely used in the metal-mining industry. Screening of the ground mill product allows for the separation of the drain rock in the fractions above 3/8 of an inch and the production of agricultural lime as the fraction finer than approximately 2 mm. The intermediate size fraction between 2 mm and 3/8 of an inch does not have a ready market and can be returned to the grinding process.

Methods and Procedures

Crushing of the four samples was conducted using a laboratory scale jaw crusher and three different crush sizes were used in this test work, 75 mm, 50 mm and 25 mm. The reason for the selection of the various crush sizes follows typical specifications for various aggregate sizes in the local market. Significant volumes of minus 75 mm stone is sold into highway and engineered foundation projects. As well, significant volumes of minus 25 mm stone is sold into the same market place.

A separate market niche includes drain rock in the ranges from 3/8(8 mm) of an inch to approximately 2 inches(50 mm). Drain rock is required to be rounded in order to maximize the open void space within the stone volume. Industrial grinding mills produce round stone when the stone is used as the grinding media in the absence of steel grinding media.

The various crush sizes were obtained by adjusting the opening of the laboratory jaw crusher to achieve the target crush sizes. The crusher discharge was subsequently screened to obtain detailed size analysis of the crushed stone.

The grinding of limestone samples to obtain rounded stone was done in a laboratory grinding mill using 10 kilogram samples of 50 mm crushed stone. Grinding time was used as a means of controlling the degree of comminution of the samples and each of the four samples were subject to grinding times of 15, 30 and 45 minutes in the grinding mill. The mill contents were subsequently screened to determine the yield of each of the various aggregate products.

DETAILED TEST RESULTS

Crushing Tests

Each of the four samples were crushed to three different upper sizes, namely 75, 50 and 25 mm and the crushed stone was analyzed by screen fraction analysis. All of the screen analysis data is contained in Appendix 1.

A typical data set for one of the samples is shown in Table 3 for all three of the crush sizes and this same data is shown graphically in Figure 3.

Table 3
Summary of Screen Analysis for Sample 1.

Mesh Size	Cumulative Percent Passing		
	75 mm crush	50 mm crush	25 mm crush
3 in. - 75.0 mm	100.0	100	100
2 in. - 50 mm	83.0	99.6	100
1 in. - 25 mm	63.6	76.15	98.01
1/2 in. 12.5 mm	51.0	62.74	71.68
1/4 in. - 6.35 mm	40.3	51.75	55.35
8 mesh - 2.35 mm	28.0	34.2	43.77
12 mesh - 1.4 mm	22.8	28.66	36.86
20 mesh - 0.85 mm	17.2	24.35	30.84
40 mesh - 0.425 mm	13.7	20.23	22.49
80 mesh - 0.18 mm	9.1	14.99	15.51
100 mesh - 150 um	7.9	12.74	14.29
200 mesh - 75 um	4.9	8.19	11.3

All of the samples tested, showed similar crushing characteristics, with increasing volumes of minus 200 mesh material as the crushing top-size was made finer. The 25 mm crush material will not pass specifications for use as a road building structural aggregate due to the high volume of minus 200 mesh material contained. The coarse fractions, 75 and 50 mm crush products have suitable size distributions for use in engineered structural foundations including road structures.

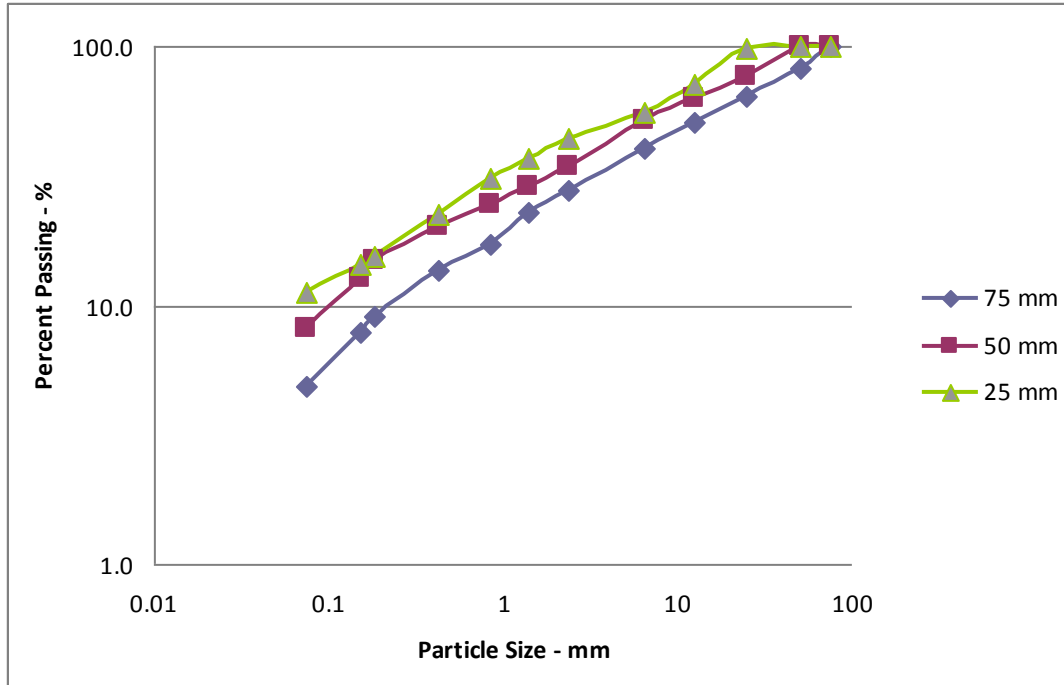


Figure 3 – Particle Size Distributions for 75, 50 and 25 Crush Products, Sample 1

Grinding Tests

All four of the samples were subject to grinding tests to produce round cobble from the shape sharp shaped crushed stone and to increase the fines contained within the sample. The detailed results are contained in Appendix 2, as size distribution data obtained from batch grinding the rock samples in a large laboratory grinding mill.

The volume of drain rock obtained from the grinding tests was dependent on the amount of grinding time used or more accurately, the grinding power input to the sample. Shown below in Table 4 is an example of the distribution of drain rock and agricultural lime produced by grinding and screening of sample 1. All other samples performed in a similar manner to sample 1.

The quality of round rock is considered to be very high from this process and will be readily accepted into the local market.

Table 4
Summary of Product Distribution from Screening of Mill Discharge Product.
Sample 1

Product	15 minute grind	30 minute grind	45 minute grind
Drain Rock – 1 to 2 inch	18.4	15.9	12.7
Drain Rock – ½ to 1 inch	13.6	12.3	10.4
Drain Rock – 3/8 to 1/8 inch	8.1	7.4	5.5
Agricultural lime minus 2.35 mm	46.0	54.8	62.4
Intermediate Product(recycle)	13.9	9.6	8.9

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this test work, the following can be concluded:

- 1) Coarse crushing of the limestone can be used to produce good quality structural aggregated in a top-size range of 50 mm and greater. At a size of 25 mm, the fine content of the crushed rock appears too excessive and this material will likely not meet current specifications.
- 2) The grinding of crushed material followed by screening can be used to produce high value drain rock and agricultural lime in large volumes. This represents an approximate doubling of the unit value of limestone when used to produce these two products.

CERTIFICATE OF QUALIFIED PERSON

Jeffrey B. Austin, P.Eng.

I, Jeffrey B. Austin, P.Eng., do hereby certify that:

8. I am a Consulting Engineer and President of International Metallurgical and Environmental Inc., residing at 906 Fairway Crescent, Kelowna, B.C., Canada. 2

This certificate applies to the technical report titled “ An Evaluation of the Aggregate Production Potential from the Western Canada Limestone Ltd. Quarry”, dated October 4, 2014 (the “Technical Report”).

9. I fulfill the requirements of a qualified person for the purposes of NI 43-101 based on my academic qualifications, professional membership and relevant experience, as set out below:
- a. I hold the following academic qualifications:

BASc.	University of British Columbia	1984
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- b. I am a member in good standing of the following professional and technical associations:

Association of Professional Engineers and Geoscientists of BC	15708
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- c. I have worked in the minerals industry as a Consulting Process Engineer continuously since 1987, a period of 26 years.
10. I have personally inspected the property.
11. I am responsible for all aspects of the Technical Report.
12. I am not independent of Western Canada Limestone Ltd. as defined in section 1.5 of NI 43-101. I currently serve as president of Western Canada Limestone Ltd.
13. I have read and am familiar with NI 43-101 and the sections of the Technical Report for which I am responsible. To the best of my knowledge, information, and belief, the parts of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.
14. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 16th day of December, 2012

“Signed and Sealed”

Jeffrey B. Austin, P.Eng.

INVOICE

October 4, 2014

Invoice Number: 21548
HST No.: 898084686

Mr. Don Sandberg
Western Canada Limestone Ltd.
906 Fairway Crescent
Kelowna, B.C.
V1Y4S7

Dear Don,

This invoice covers the costs of completing aggregate test work on composite samples from Western Canada Limestone Ltd.

Sample preparation – 14 hours @\$80 per hour	\$1,120.00
12 batch grinding tests @ \$600 each	\$7,200.00
Project management and reporting of results – 20 hours @ \$120 per hour	\$2,400
Sub-total	<u>\$10,720.00</u>
GST	\$536.00
Invoice total	\$11,256.00

Thank-you for the opportunity to provide this service.

Yours very truly,

Jeffrey B. Austin, P.Eng. – President
International Metallurgical and Environmental Inc.

APPENDIX 1

Detailed Particle Size Distribution Data of Crushed Limestone

International Metallurgical and Environmental Inc.
Screen Analysis

Date: April 14, 2014

Sample: No. 1 - Minus 75 mm crushed limestone

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	17.04	83.0
1 in. - 25 mm	19.40	63.6
1/2 in. 12.5 mm	12.60	51.0
1/4 in. - 6.35 mm	10.70	40.3
8 mesh - 2.35 mm	12.30	28.0
12 mesh - 1.4 mm	5.20	22.8
20 mesh - 0.85 mm	5.52	17.2
40 mesh - 0.425 mm	3.52	13.7
80 mesh - 0.18 mm	4.66	9.1
100 mesh - 150 um	1.15	7.9
200 mesh - 75 um	3.01	4.9
minus 200 mesh - 75 um	4.90	

International Metallurgical and Environmental Inc.
Screen Analysis

Date: April 14, 2014

Sample: No. 1 - Minus 50 mm crushed limestone

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.40	99.6
1 in. - 25 mm	23.45	76.2
1/2 in. 12.5 mm	13.41	62.7
1/4 in. - 6.35 mm	10.99	51.8
8 mesh - 2.35 mm	17.55	34.2
12 mesh - 1.4 mm	5.54	28.7
20 mesh - 0.85 mm	4.31	24.4
40 mesh - 0.425 mm	4.12	20.2
80 mesh - 0.18 mm	5.24	15.0
100 mesh - 150 um	2.25	12.7
200 mesh - 75 um	4.55	8.2
minus 200 mesh - 75 um	8.19	

International Metallurgical and Environmental Inc.
Screen Analysis

Date: April 14, 2014

Sample: No. 1 - Minus 25 mm crushed limestone

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	1.99	98.0
1/2 in. 12.5 mm	26.33	71.7
1/4 in. - 6.35 mm	16.33	55.4
8 mesh - 2.35 mm	11.58	43.8
12 mesh - 1.4 mm	6.91	36.9
20 mesh - 0.85 mm	6.02	30.8
40 mesh - 0.425 mm	8.35	22.5
80 mesh - 0.18 mm	6.98	15.5
100 mesh - 150 um	1.22	14.3
200 mesh - 75 um	2.99	11.3
minus 200 mesh - 75 um	11.30	

International Metallurgical and Environmental Inc.
Screen Analysis

Date: April 14, 2014

Sample: No. 2 - Minus 75 mm crushed limestone

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	18.33	81.7
1 in. - 25 mm	18.99	62.7
1/2 in. 12.5 mm	12.83	49.9
1/4 in. - 6.35 mm	11.25	38.6
8 mesh - 2.35 mm	11.36	27.2
12 mesh - 1.4 mm	5.96	21.3
20 mesh - 0.85 mm	5.01	16.3
40 mesh - 0.425 mm	3.55	12.7
80 mesh - 0.18 mm	3.87	8.9
100 mesh - 150 um	1.24	7.6
200 mesh - 75 um	2.96	4.7
minus 200 mesh - 75 um	4.65	

International Metallurgical and Environmental Inc.
Screen Analysis

Date: April 14, 2014

Sample: No. 2 - Minus 50 mm crushed limestone

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.10	99.9
1 in. - 25 mm	20.77	79.1
1/2 in. 12.5 mm	14.87	64.3
1/4 in. - 6.35 mm	11.01	53.3
8 mesh - 2.35 mm	17.28	36.0
12 mesh - 1.4 mm	6.34	29.6
20 mesh - 0.85 mm	3.39	26.2
40 mesh - 0.425 mm	6.99	19.3
80 mesh - 0.18 mm	5.31	13.9
100 mesh - 150 um	1.68	12.3
200 mesh - 75 um	3.96	8.3
minus 200 mesh - 75 um	8.30	

International Metallurgical and Environmental Inc.
Screen Analysis

Date: April 14, 2014

Sample: No. 2 - Minus 25 mm crushed limestone

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	0.87	99.1
1/2 in. 12.5 mm	26.10	73.0
1/4 in. - 6.35 mm	17.35	55.7
8 mesh - 2.35 mm	10.99	44.7
12 mesh - 1.4 mm	7.30	37.4
20 mesh - 0.85 mm	6.54	30.9
40 mesh - 0.425 mm	7.25	23.6
80 mesh - 0.18 mm	7.01	16.6
100 mesh - 150 um	1.46	15.1
200 mesh - 75 um	3.08	12.1
minus 200 mesh - 75 um	12.05	

International Metallurgical and Environmental Inc.
Screen Analysis

Date: April 14, 2014

Sample: No. 3 - Minus 75 mm crushed limestone

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	16.93	83.1
1 in. - 25 mm	20.05	63.0
1/2 in. 12.5 mm	12.41	50.6
1/4 in. - 6.35 mm	9.87	40.7
8 mesh - 2.35 mm	11.38	29.4
12 mesh - 1.4 mm	5.69	23.7
20 mesh - 0.85 mm	5.50	18.2
40 mesh - 0.425 mm	4.15	14.0
80 mesh - 0.18 mm	4.50	9.5
100 mesh - 150 um	1.69	7.8
200 mesh - 75 um	2.99	4.8
minus 200 mesh - 75 um	4.84	

International Metallurgical and Environmental Inc.
Screen Analysis

Date: April 14, 2014

Sample: No. 3 - Minus 50 mm crushed limestone

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.55	99.5
1 in. - 25 mm	24.60	74.9
1/2 in. 12.5 mm	14.50	60.4
1/4 in. - 6.35 mm	10.87	49.5
8 mesh - 2.35 mm	16.89	32.6
12 mesh - 1.4 mm	6.33	26.3
20 mesh - 0.85 mm	4.16	22.1
40 mesh - 0.425 mm	3.77	18.3
80 mesh - 0.18 mm	4.55	13.8
100 mesh - 150 um	1.09	12.7
200 mesh - 75 um	4.60	8.1
minus 200 mesh - 75 um	8.09	

International Metallurgical and Environmental Inc.
Screen Analysis

Date: April 14, 2014

Sample: No. 3 - Minus 25 mm crushed limestone

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	0.26	99.7
1/2 in. 12.5 mm	25.41	74.3
1/4 in. - 6.35 mm	16.15	58.2
8 mesh - 2.35 mm	13.66	44.5
12 mesh - 1.4 mm	7.06	37.5
20 mesh - 0.85 mm	5.34	32.1
40 mesh - 0.425 mm	8.00	24.1
80 mesh - 0.18 mm	7.45	16.7
100 mesh - 150 um	2.95	13.7
200 mesh - 75 um	3.74	10.0
minus 200 mesh - 75 um	9.98	

International Metallurgical and Environmental Inc.
Screen Analysis

Date: April 14, 2014

Sample: No. 4 - Minus 75 mm crushed limestone

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.15	99.9
2 in. - 50 mm	18.33	81.5
1 in. - 25 mm	20.45	61.1
1/2 in. 12.5 mm	12.05	49.0
1/4 in. - 6.35 mm	10.11	38.9
8 mesh - 2.35 mm	12.36	26.6
12 mesh - 1.4 mm	4.24	22.3
20 mesh - 0.85 mm	5.60	16.7
40 mesh - 0.425 mm	4.01	12.7
80 mesh - 0.18 mm	4.22	8.5
100 mesh - 150 um	1.20	7.3
200 mesh - 75 um	2.88	4.4
minus 200 mesh - 75 um	4.40	

International Metallurgical and Environmental Inc.
Screen Analysis

Date: April 14, 2014

Sample: No. 4 - Minus 50 mm crushed limestone

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	24.11	75.9
1/2 in. 12.5 mm	12.91	63.0
1/4 in. - 6.35 mm	10.96	52.0
8 mesh - 2.35 mm	16.80	35.2
12 mesh - 1.4 mm	5.50	29.7
20 mesh - 0.85 mm	5.06	24.7
40 mesh - 0.425 mm	5.56	19.1
80 mesh - 0.18 mm	6.02	13.1
100 mesh - 150 um	2.05	11.0
200 mesh - 75 um	3.05	8.0
minus 200 mesh - 75 um	7.98	

International Metallurgical and Environmental Inc.
Screen Analysis

Date: April 14, 2014

Sample: No. 4 - Minus 25 mm crushed limestone

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	0.23	99.8
1/2 in. 12.5 mm	23.80	76.0
1/4 in. - 6.35 mm	17.41	58.6
8 mesh - 2.35 mm	12.55	46.0
12 mesh - 1.4 mm	7.65	38.4
20 mesh - 0.85 mm	6.54	31.8
40 mesh - 0.425 mm	9.00	22.8
80 mesh - 0.18 mm	6.94	15.9
100 mesh - 150 um	1.30	14.6
200 mesh - 75 um	2.87	11.7
minus 200 mesh - 75 um	11.71	

APPENDIX 2

Particle Size Distributions of Ground Limestone

International Metallurgical and Environmental Inc.
Screen Analysis

Date: May 12, 2014

Sample: No. 1 - Minus 50 mm crushed limestone

Grinding time: 15 minutes

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	18.40	81.6
1/2 in. 12.5 mm	13.56	68.0
1/4 in. - 6.35 mm	8.10	59.9
8 mesh - 2.35 mm	13.93	46.0
12 mesh - 1.4 mm	4.49	41.5
20 mesh - 0.85 mm	3.65	37.9
40 mesh - 0.425 mm	3.87	34.0
80 mesh - 0.18 mm	7.25	26.8
100 mesh - 150 um	2.89	23.9
200 mesh - 75 um	4.61	19.3
minus 200 mesh - 75 um	19.25	

Drain rock 1 inch to 2 inch	18.40	percent
Drain rock 1/2 inch to 1 inch	13.56	percent
Drain rock 1/4 to 1/2 inch	8.10	percent
Agricultural lime	46.0	percent
Unassigned recycle	13.93	percent

International Metallurgical and Environmental Inc.
 Screen Analysis

Date: May 12, 2014

Sample: No. 1 - Minus 50 mm crushed limestone

Grinding time: 30 minutes

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	15.89	84.1
1/2 in. 12.5 mm	12.31	71.8
1/4 in. - 6.35 mm	7.44	64.4
8 mesh - 2.35 mm	9.56	54.8
12 mesh - 1.4 mm	4.55	50.3
20 mesh - 0.85 mm	3.21	47.0
40 mesh - 0.425 mm	3.00	44.0
80 mesh - 0.18 mm	4.17	39.9
100 mesh - 150 um	2.71	37.2
200 mesh - 75 um	4.09	33.1
minus 200 mesh - 75 um	33.07	

Drain rock 1 inch to 2 inch	15.89	percent
Drain rock 1/2 inch to 1 inch	12.31	percent
Drain rock 1/4 to 1/2 inch	7.44	percent
Agricultural lime	54.8	percent
Unassigned recycle	9.56	percent

International Metallurgical and Environmental Inc.
 Screen Analysis

Date: May 12, 2014

Sample: No. 1 - Minus 50 mm crushed limestone

Grinding time: 45 minutes

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	12.71	87.3
1/2 in. 12.5 mm	10.44	76.9
1/4 in. - 6.35 mm	5.54	71.3
8 mesh - 2.35 mm	8.91	62.4
12 mesh - 1.4 mm	3.79	58.6
20 mesh - 0.85 mm	2.01	56.6
40 mesh - 0.425 mm	2.00	54.6
80 mesh - 0.18 mm	3.45	51.2
100 mesh - 150 um	2.23	48.9
200 mesh - 75 um	2.45	46.5
minus 200 mesh - 75 um	46.47	

Drain rock 1 inch to 2 inch	12.71	percent
Drain rock 1/2 inch to 1 inch	10.44	percent
Drain rock 1/4 to 1/2 inch	5.54	percent
Agricultural lime	62.4	percent
Unassigned recycle	8.91	percent

International Metallurgical and Environmental Inc.
 Screen Analysis

Date: May 12, 2014

Sample: No. 2 - Minus 50 mm crushed limestone

Grinding time: 15 minutes

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	19.30	80.7
1/2 in. 12.5 mm	14.77	65.9
1/4 in. - 6.35 mm	8.41	57.5
8 mesh - 2.35 mm	14.33	43.2
12 mesh - 1.4 mm	3.75	39.4
20 mesh - 0.85 mm	2.99	36.5
40 mesh - 0.425 mm	4.15	32.3
80 mesh - 0.18 mm	5.98	26.3
100 mesh - 150 um	1.89	24.4
200 mesh - 75 um	3.56	20.9
minus 200 mesh - 75 um	20.87	

Drain rock 1 inch to 2 inch	19.30	percent
Drain rock 1/2 inch to 1 inch	14.77	percent
Drain rock 1/4 to 1/2 inch	8.41	percent
Agricultural lime	43.2	percent
Unassigned recycle	14.33	percent

International Metallurgical and Environmental Inc.
Screen Analysis

Date: May 12, 2014

Sample: No. 2 - Minus 50 mm crushed limestone

Grinding time: 30 minutes

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	16.44	83.6
1/2 in. 12.5 mm	13.87	69.7
1/4 in. - 6.35 mm	7.02	62.7
8 mesh - 2.35 mm	10.41	52.3
12 mesh - 1.4 mm	4.52	47.7
20 mesh - 0.85 mm	3.33	44.4
40 mesh - 0.425 mm	3.65	40.8
80 mesh - 0.18 mm	5.12	35.6
100 mesh - 150 um	2.20	33.4
200 mesh - 75 um	3.71	29.7
minus 200 mesh - 75 um	29.73	

Drain rock 1 inch to 2 inch	16.44	percent
Drain rock 1/2 inch to 1 inch	13.87	percent
Drain rock 1/4 to 1/2 inch	7.02	percent
Agricultural lime	52.3	percent
Unassigned recycle	10.41	percent

International Metallurgical and Environmental Inc.
 Screen Analysis

Date: May 12, 2014

Sample: No. 2 - Minus 50 mm crushed limestone

Grinding time: 45 minutes

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	11.33	88.7
1/2 in. 12.5 mm	10.74	77.9
1/4 in. - 6.35 mm	6.69	71.2
8 mesh - 2.35 mm	7.49	63.8
12 mesh - 1.4 mm	3.76	60.0
20 mesh - 0.85 mm	2.29	57.7
40 mesh - 0.425 mm	3.77	53.9
80 mesh - 0.18 mm	5.11	48.8
100 mesh - 150 um	2.78	46.0
200 mesh - 75 um	3.15	42.9
minus 200 mesh - 75 um	42.89	

Drain rock 1 inch to 2 inch	11.33	percent
Drain rock 1/2 inch to 1 inch	10.74	percent
Drain rock 1/4 to 1/2 inch	6.69	percent
Agricultural lime	63.8	percent
Unassigned recycle	7.49	percent

International Metallurgical and Environmental Inc.
Screen Analysis

Date: May 12, 2014

Sample: No. 3 - Minus 50 mm crushed limestone

Grinding time: 15 minutes

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	16.33	83.7
1/2 in. 12.5 mm	13.44	70.2
1/4 in. - 6.35 mm	8.71	61.5
8 mesh - 2.35 mm	15.35	46.2
12 mesh - 1.4 mm	4.77	41.4
20 mesh - 0.85 mm	3.00	38.4
40 mesh - 0.425 mm	4.89	33.5
80 mesh - 0.18 mm	7.31	26.2
100 mesh - 150 um	3.36	22.8
200 mesh - 75 um	2.98	19.9
minus 200 mesh - 75 um	19.86	

Drain rock 1 inch to 2 inch	16.33	percent
Drain rock 1/2 inch to 1 inch	13.44	percent
Drain rock 1/4 to 1/2 inch	8.71	percent
Agricultural lime	46.2	percent
Unassigned recycle	15.35	percent

International Metallurgical and Environmental Inc.
Screen Analysis

Date: May 12, 2014

Sample: No. 3 - Minus 50 mm crushed limestone

Grinding time: 30 minutes

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	13.71	86.3
1/2 in. 12.5 mm	11.99	74.3
1/4 in. - 6.35 mm	6.44	67.9
8 mesh - 2.35 mm	9.71	58.2
12 mesh - 1.4 mm	4.11	54.0
20 mesh - 0.85 mm	3.75	50.3
40 mesh - 0.425 mm	2.29	48.0
80 mesh - 0.18 mm	3.99	44.0
100 mesh - 150 um	1.98	42.0
200 mesh - 75 um	3.21	38.8
minus 200 mesh - 75 um	38.82	

Drain rock 1 inch to 2 inch	13.71	percent
Drain rock 1/2 inch to 1 inch	11.99	percent
Drain rock 1/4 to 1/2 inch	6.44	percent
Agricultural lime	58.2	percent
Unassigned recycle	9.71	percent

International Metallurgical and Environmental Inc.
 Screen Analysis

Date: May 12, 2014

Sample: No. 3 - Minus 50 mm crushed limestone

Grinding time: 45 minutes

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	9.77	90.2
1/2 in. 12.5 mm	8.75	81.5
1/4 in. - 6.35 mm	5.21	76.3
8 mesh - 2.35 mm	7.77	68.5
12 mesh - 1.4 mm	2.96	65.5
20 mesh - 0.85 mm	2.75	62.8
40 mesh - 0.425 mm	2.34	60.5
80 mesh - 0.18 mm	4.75	55.7
100 mesh - 150 um	2.22	53.5
200 mesh - 75 um	2.71	50.8
minus 200 mesh - 75 um	50.77	

Drain rock 1 inch to 2 inch	9.77	percent
Drain rock 1/2 inch to 1 inch	8.75	percent
Drain rock 1/4 to 1/2 inch	5.21	percent
Agricultural lime	68.5	percent
Unassigned recycle	7.77	percent

International Metallurgical and Environmental Inc.
Screen Analysis

Date: May 12, 2014

Sample: No. 4 - Minus 50 mm crushed limestone

Grinding time: 15 minutes

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	17.50	82.5
1/2 in. 12.5 mm	13.40	69.1
1/4 in. - 6.35 mm	7.45	61.7
8 mesh - 2.35 mm	14.30	47.4
12 mesh - 1.4 mm	4.50	42.9
20 mesh - 0.85 mm	3.00	39.9
40 mesh - 0.425 mm	4.01	35.8
80 mesh - 0.18 mm	6.22	29.6
100 mesh - 150 um	2.45	27.2
200 mesh - 75 um	4.10	23.1
minus 200 mesh - 75 um	23.07	

Drain rock 1 inch to 2 inch	17.50	percent
Drain rock 1/2 inch to 2 inch	13.40	percent
Drain rock 1/4 to 1/2 inch	7.45	percent
Agricultural lime	47.4	percent
Unassigned recycle	14.30	percent

International Metallurgical and Environmental Inc.
Screen Analysis

Date: May 12, 2014

Sample: No. 4 - Minus 50 mm crushed limestone

Grinding time: 30 minutes

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	15.60	84.4
1/2 in. 12.5 mm	12.90	71.5
1/4 in. - 6.35 mm	6.45	65.1
8 mesh - 2.35 mm	10.50	54.6
12 mesh - 1.4 mm	3.87	50.7
20 mesh - 0.85 mm	3.01	47.7
40 mesh - 0.425 mm	3.10	44.6
80 mesh - 0.18 mm	4.51	40.1
100 mesh - 150 um	2.15	37.9
200 mesh - 75 um	3.55	34.4
minus 200 mesh - 75 um	34.36	

Drain rock 1 inch to 2 inch	15.60	percent
Drain rock 1/2 inch to 2 inch	12.90	percent
Drain rock 1/4 to 1/2 inch	6.45	percent
Agricultural lime	54.6	percent
Unassigned recycle	10.50	percent

International Metallurgical and Environmental Inc.
Screen Analysis

Date: May 12, 2014

Sample: No. 4 - Minus 50 mm crushed limestone

Grinding time: 45 minutes

Mesh Size	Percent retained	Cumulative Percent Passing
3 in. - 75.0 mm	0.00	100.0
2 in. - 50 mm	0.00	100.0
1 in. - 25 mm	10.74	89.3
1/2 in. 12.5 mm	9.41	79.9
1/4 in. - 6.35 mm	5.02	74.8
8 mesh - 2.35 mm	7.44	67.4
12 mesh - 1.4 mm	3.15	64.2
20 mesh - 0.85 mm	2.24	62.0
40 mesh - 0.425 mm	2.64	59.4
80 mesh - 0.18 mm	4.06	55.3
100 mesh - 150 um	1.76	53.5
200 mesh - 75 um	2.09	51.5
minus 200 mesh - 75 um	51.45	

Drain rock 1 inch to 2 inch	10.74	percent
Drain rock 1/2 inch to 2 inch	9.41	percent
Drain rock 1/4 to 1/2 inch	5.02	percent
Agricultural lime	67.4	percent
Unassigned recycle	7.44	percent

APPENDIX 2

Limestone Calcining Test Work Report

PRELIMINARY CALCINING TEST WORK OF LIMESTONE FINES FROM
WESTERN CANADA LIMESTONE LTD FOR DEVELOPING
DESIGN CRITERIA OF A LIME PRODUCTION FACILITY

Blue 2000 Claim Group – Tenure number 559349

119 33' 33"W 50 0' 23" N

Prepared for

Western Canada Limestone Ltd.
13 – 2550 Acland Road
Kelowna, B.C.
V1X 7L4

Attention: Mr. Don Sandberg

November 15, 2012

PRELIMINARY CALCINING TEST WORK OF LIMESTONE FINES FROM
WESTERN CANADA LIMESTONE LTD FOR DEVELOPING
DESIGN CRITERIA OF A LIME PRODUCTION FACILITY

Prepared by

International Metallurgical and Environmental Inc.
906 Fairway Crescent
Kelowna, B.C.
V1Y 4S7

Signed and Sealed

Jeffrey B. Austin, P.Eng. – President
International Metallurgical and Environmental Inc.

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INTRODUCTION

Western Canada Limestone Ltd operates a limestone mining operation located approximately 17 kilometres from downtown Kelowna, B.C. The operation produces aggregates for use in construction and landscaping.

The Crown granted tenure is contained within the Blue 2000 claim group. Mineral Tenure is held under Tenure Number 559349. On-going mining operations are shown in Figure 1 below.



Figure 1. – Photo of Western Canada Limestone Ltd. Quarry Operation(August 2012)

Western Canada Limestone Ltd. has contracted International Metallurgical and Environmental Inc. to evaluate the calcining of limestone fines as a means of producing lime for sale into the local industrial market. Lime is produced by the heating of limestone to drive CO_2 from the CaCO_3 to produce CaO . Pure calcite, the primary carbonate mineral in limestone is 56 percent CaO .

Lime has uses in mining operations, pulp and paper processing and water treatment and the local market in the southern B.C. region is estimated at 200,000 tonnes annually. The local market is estimated to be worth approximately 40 to 50 million dollars.

This report outlines the results of calcining tests conducted in the facilities of International Metallurgical and Environmental Inc. Generally, the limestone production of Western Canada Limestone Ltd. is capable of making excellent lime products.

PROJECT LOCATION

The project is located at kilometer 10.5 on the Bear Lake Main Road on the western shore of Lake Okanagan. The map below shows Tenure 559349 which holds the operations of Western Canada Limestone Ltd.

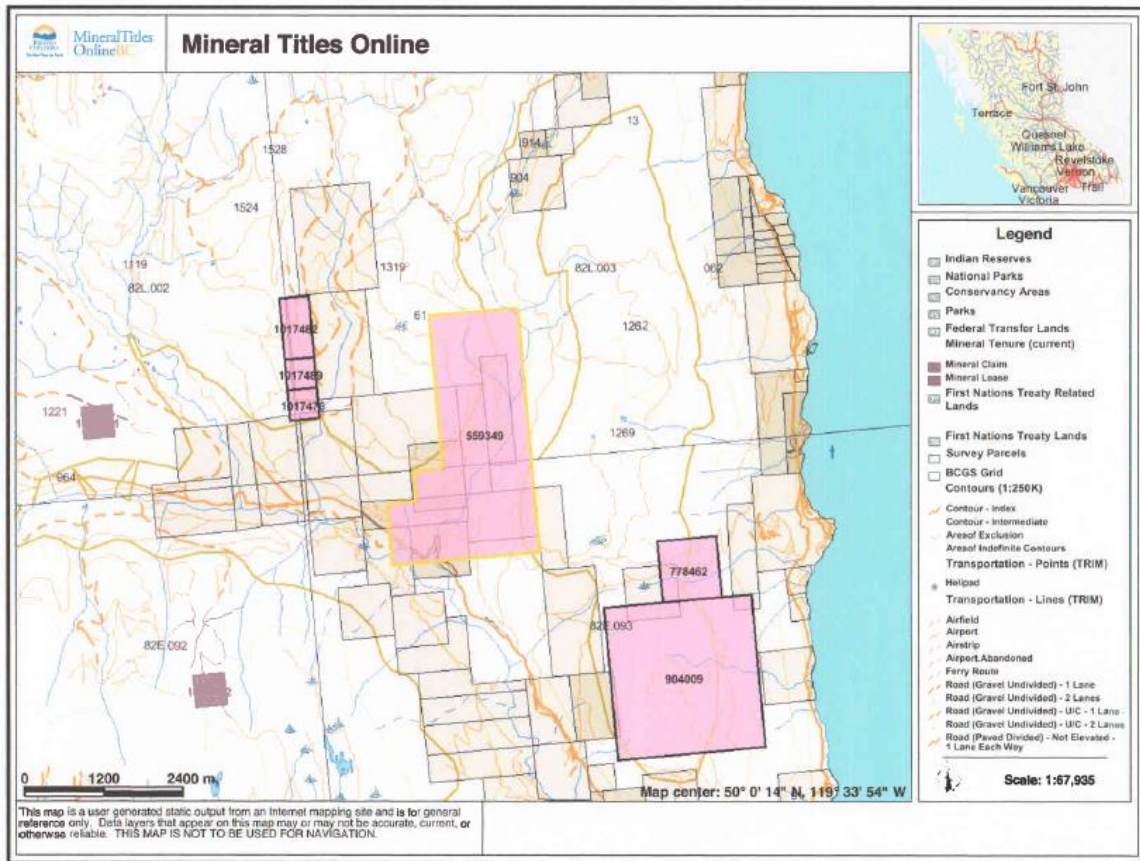


Figure 2. – Location of Mineral Tenure 559349 and Western Canada Limestone Ltd.

RESULTS AND DISCUSSION

Test Samples

A representative limestone sample was provided to International Metallurgical and Environmental Inc. for use in this test work program. Approximately 100 kilograms of 75 mm stone was provided from the on-going operations in the quarry.

The sample material was crushed to approximately 6 mm in a laboratory jaw crusher in order to provide material for screening and preparing material for calcining tests. Analysis of the feed material is shown in Table 1 below and indicates the high grade nature of the sample material.

Table 1
Summary of Analysis – Western Canada Limestone Ltd. Quarry Production Sample

Sample	CaO %	CaCO ₃ %	MgO %	SiO ₂ %	S %	LOI %
WCL Quarry Prod.	54.8	97.8	0.15	0.7	0.02	43.4

A photograph of the crushed limestone is shown in Figure 3. The limestone from this deposit is coarse grained and relatively hard. The crushing and handling of this material generates fines which range to approximately 5 percent minus 75 microns(200 mesh). This generation of fines is approaching the upper limit for meeting the characteristics of structural aggregates used in highway construction. Screening of these fines is simple, although a use for the fines is needed and using them to produce lime is an attractive option. These materials are well-received as structural aggregates in the local market.

The sample material was screened into 5 separate fractions in order to evaluate each of the particle sizes separately. The rationale behind looking at each size fraction separately was to determine if particle size played a major role in calcine times and ultimately reaction rates. The sample was screened into the following fractions. This is a key factor in selection of screen sizes in classification prior to calcining.

Table 2
Summary of Feed Sample Size Distribution

Sieve size fraction	Percent passing
2.36 mm	68.1
1.40 mm	49.0
0.85 mm	28.9
0.300 mm	11.3
Minus 0.300 mm	-



Figure 3. – Photograph of Limestone Sample Used in Calcining Test Work.

Methods and Procedures

A series of calcining tests were conducted to evaluate the effect of particle size and retention time on the rate of the calcine reaction. The test work was done using a high-temperature furnace in the facilities of International Metallurgical and Environmental Inc.

The furnace was set to a target temperature and the sample materials heated for a fixed amount of time after which the sample was removed from the furnace and then quickly cooled to stop the calcining process. Sample weights were used to determine the degree to which the calcining process was completed. With this data it is possible to track the calcining process as time is varied for each of 5 particle sizes used in the test work.

A photo of the Thermolyne furnace is shown in the photo below.



Figure 4. – Thermolyne High Temperature furnace used in Calcining Test Work

Five separate size fractions were evaluated in the study to look at calcining rates. A summary of the test numbers and test parameters are shown in Table 3.

Table 3
Summary of Test Work Parameters

Test Number	Sample	Calcining Temp	Calcining Time
1	+2.36 mm	950-975 C	10
2	+2.36 mm	950-975 C	20
3	+2.36 mm	950-975 C	30
6	2.36-1.40 mm	950-975 C	30
7	2.36-1.40 mm	950-975 C	20
8	2.36-1.40 mm	950-975 C	10
10	1.40 - 0.85 mm	950-975 C	30
11	1.40 - 0.85 mm	950-975 C	20
12	1.40 - 0.85 mm	950-975 C	10
14	0.85 – .300 mm	950-975 C	30
15	0.85 – .300 mm	950-975 C	20
16	0.85 – .300 mm	950-975 C	10
18	minus 0.300 mm	950-975 C	30
19	minus 0.300 mm	950-975 C	20
20	minus 0.300 mm	950-975 C	10

In each of the tests, a 100 gram sample was weighed prior to placement in the high temperature furnace. A tundish of high grade silica was used to hold the sample during the calcining test. The tundish was heated to operating temperature prior to placing the sample in the test apparatus, this was done to remove any thermal inertia in the system due to the tundish being cool.

The hot tundish and the limestone sample were then placed into the furnace and held in the high temperature furnace for a prescribed time and then remove and placed on a large metal plate which acts as a heat sink to quickly bring the tundish temperature below reaction temperatures and therefore halting the calcining process. The sample was not mixed during time in the furnace.

The sample is weighed to record the mass loss during placement in the kiln.

Detailed Test Results

A series of calcining tests were conducted to evaluate the effect of particle size and retention time on the rate of calcining.

The furnace was set to a target temperature and the sample materials heated for a fixed amount of time after which the sample was removed from the furnace and then quickly cooled to stop the calcining process. Sample weights were used to determine the degree to which the calcining process was completed. With this data it is possible to track the calcining process as time is varied for each of 5 particle sizes used in the test work. All five samples were subjected to 10, 20 and 30 minute calcining tests.

Five separate size fractions were evaluated in the study to look at calcining rates. The detailed test results are shown below in Table 3. As can be seen in the results table, the material has the ability to produce high-grade lime suitable to marketing into the local lime markets. Typically, lime specifications require a lime content of 95 to 96 percent lime, the material produced in these tests typically exceeded these specifications.

Table 4
Detailed Calcining Test Results

Test Number	Sample	Calcining Temp	Calcining Time Min.	Retained mass %	Lime content %
1	+2.36 mm	950-975 C	10	56.3	99.5
2	+2.36 mm	950-975 C	20	56.6	98.9
3	+2.36 mm	950-975 C	30	56.5	99.2
6	2.36-1.40 mm	950-975 C	30	57.3	97.7
7	2.36-1.40 mm	950-975 C	20	57.0	98.2
8	2.36-1.40 mm	950-975 C	10	63.1	88.7
10	1.40 - 0.85 mm	950-975 C	30	57.5	97.4
11	1.40 - 0.85 mm	950-975 C	20	56.9	98.5
12	1.40 - 0.85 mm	950-975 C	10	66.5	84.2
14	0.85 – .300 mm	950-975 C	30	57.0	98.3
15	0.85 – .300 mm	950-975 C	20	56.6	98.9
16	0.85 – .300 mm	950-975 C	10	66.7	83.9
18	minus 0.300 mm	950-975 C	30	56.5	99.2
19	minus 0.300 mm	950-975 C	20	56.7	98.8
20	minus 0.300 mm	950-975 C	10	74.1	75.6

The results are in a sense contradictory, with coarse material performing very well in all three calcining tests, showing no dependence on calcining time in the range of 10 to 30 minutes. The finer samples showed better results for longer calcining times. This effect is likely due to the limestone insulating the sample from complete heat penetration, as the slow-down of the calcining process is more pronounced in the finer samples. This effect points to the need to agitate the sample during heating to allow for better heat adsorption in the kiln.

Based on the results of these tests, the following graphical presentations of the data can be made and points to short retention times in the heating and calcining of the limestone fines.

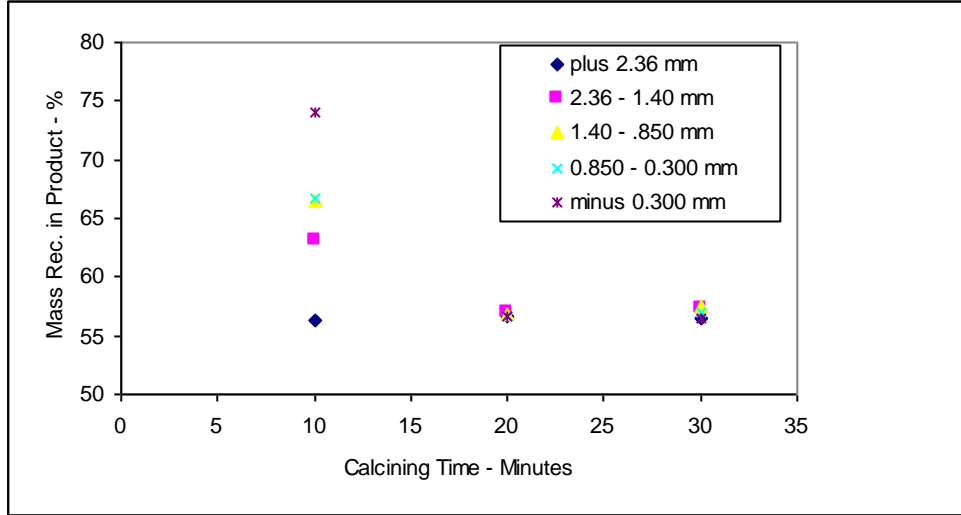


Figure 5. – Mass Retained of Calcined Product as a Function of Calcining Time

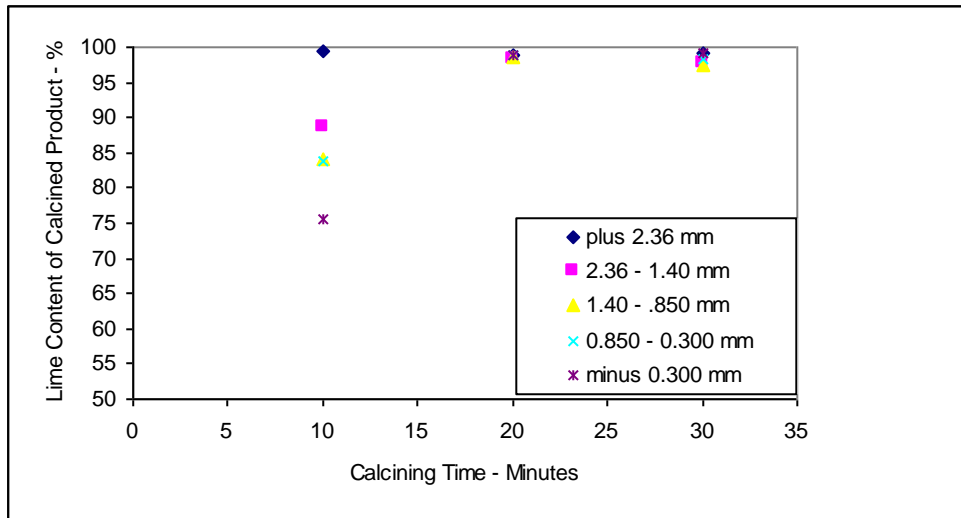


Figure 6. – Lime Content of Calcined Product as a Function of Calcining Time

These results point to a required retention time in the range of 10 minutes in a kiln at a temperature of 950C. There appears to be little impact on the calcining rates observed in the particle sizes tested, namely less than 2.36 mm.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of completing calcining tests, it can be concluded that the materials currently being mined and sold by Western Canada Limestone Ltd. has the potential to be converted into high-quality lime products. Lime products from Western Canada Limestone Ltd. quarry operations will likely range from 97 to 99 percent lime

The use of limestone fines for the production of lime has the ability to alleviate a minor issue of fines generation which is affecting the quality of structural aggregates from the mining operation.

The option of screening material in the quarry at approximately 2 mm would provide feed material to a kiln and this size is readily screened in most standard screening equipment. This removal of fines would bring aggregate specifications well into target ranges for the local market.

It is recommended that further engineering design work be considered on this project, including the completion of heat requirements and gas flow calculations in a low air velocity kiln. It is also recommended that a fixed hearth kiln be considered for this application.

CERTIFICATE OF QUALIFIED PERSON

Jeffrey B. Austin, P.Eng.

I, Jeffrey B. Austin, P.Eng., do hereby certify that:

15. I am a Consulting Engineer and President of International Metallurgical and Environmental Inc., residing at 906 Fairway Crescent, Kelowna, B.C., Canada. 2
16. This certificate applies to the technical report titled “PRELIMINARY CALCINING TEST WORK OF LIMESTONE FINES FROM WESTERN CANADA LIMESTONE LTD FOR DEVELOPING DESIGN CRITERIA OF A LIME PRODUCTION FACILITY”, dated November 15, 2012 (the “Technical Report”).
17. I fulfill the requirements of a qualified person for the purposes of NI 43-101 based on my academic qualifications, professional membership and relevant experience, as set out below:
 - a. I hold the following academic qualifications:

BASc.	University of British Columbia	1984
-------	--------------------------------	------
 - b. I am a member in good standing of the following professional and technical associations:

Association of Professional Engineers and Geoscientists of BC	15708
---	-------
 - c. I have worked in the minerals industry as a Consulting Process Engineer continuously since 1987, a period of 26 years.
18. I have personally inspected the property.
19. I am responsible for all aspects of the Technical Report.
20. I am not independent of Western Canada Limestone Ltd. as defined in section 1.5 of NI 43-101. I currently serve as president of Western Canada Limestone Ltd.
21. I have read and am familiar with NI 43-101 and the sections of the Technical Report for which I am responsible. To the best of my knowledge, information, and belief, the parts of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.
22. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 16nd day of December, 2012

“Signed and Sealed”

Jeffrey B. Austin, P.Eng.

INVOICE

December 4, 2012

Invoice Number: 21511
HST No.: 898084686

Western Canada Limestone Ltd.
906 Fairway Crescent
Kelowna, B.C.
V1Y4S7

Dear Sir/Madam,

This invoice covers the costs of completing calcining test work on composite samples from Western Canada Limestone Ltd.

14 calcining tests @ \$800 each	\$11,200.00
Analytical costs	\$1,600
Reporting of results – 20 hours @ \$120 per hour	\$2,400
Sub-total	<u>\$15,200</u>
HST	\$1,824.00
Invoice total	\$17,024.00

Thank-you for the opportunity to provide this service.

Yours very truly,

Jeffrey B. Austin, P.Eng. – President
International Metallurgical and Environmental Inc.