63.4703

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NORTARIO LIMESTONE LTD. SUMMARY EVALUATION

OF

DIAMOND DRILL PROGRAM

Armstrong Twp. Property

851.4119

OM 84-389

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I - INTRODUCTION P. 1 II - PROPERTY P. 1 III - LOCATION & ACCESSIBILITY P. 1 IV - ASSAYS P. 2 V - RESULTS OF ASSAYS P. 2 VI - INTERPRETATION OF RESULTS P. 3

VII - CONCLUSIONS

P. 4

Appendix "A" Diamond drill program & loggs Appendix "B" Assay results Ø10C

INTRODUCTION:

In order to obtain a summary evaluation of the chemical composition of the limestone beds located on its Armstrong Twp. property, NORTARIO LIMESTONE LTD has undertaken a diamond drill program, during the month of March, 1985.

Thus, (3) three (100') one hundred foot deep holes were bored north of the old guarry which lies between highway 11 and the Ontario Northland Railway line.

II - PROPERTY:

The NORTARIO LIMESTONE LTD. property includes parcels of land numbered: 12667 S.S.T and 14282 S.S.T. These adjoining parcels are located on lot 6, south half of concession VI, Armstrong Twp., province of Ontario.

III - LOCATION & ACCESSIBILITY:

The NORTARIO LIMESTONE LTD. property lies at a distance of 2 miles north of the town of Earlton and lies within the limits of the Corporation of the Township of Armstrong. It is located immediately east of north-south trending highway 11 and west of the Ontario Northland Railway line.

Access to the property by vehicle or train may be considered as optimum. IV - ASSAYS:

All of the core obtained from the three diamond drill holes was split: each hole contributed 19 five foot sections; these samples were then sent to Assayers Ltd. in Rouyn, Québec, to be assayed for their content in Calcium oxide (CaO) and Magnesium oxide (MgO).

Subsequent "limestone" composite assays were obtained for the first 20' sections of the three holes and were assayed for the following:

Loss on ignition (L.O.I.) Calcium oxide (CaO) Magnesium oxide (MgO) Silica oxide (SiO₂) Iron oxide (Fe₂O₃) Aluminium oxide (Al₂O₃) Sulfur oxide (SO₃) Phosphurous oxide (P₂O₅)

V - RESULTS OF ASSAYS:

The results of the first series of assays, assays for CaO and MgO, indicate the presence of alternating horizontal beds of <u>Calcium Limestone</u> and <u>Dolomitic</u> Limestone whose thickness vary from 10' to 30'.

- 2 -

The results obtained from the second series of assays, i.e. assays of the "limestone" composite of the first 20' of the three diamond drill holes, confirm the presence of <u>Calcium Limestone</u> but also indicate a relatively high percent of silica, an average of 8.6% SiO_2 .

3 -

VI - INTERPRETATION OF THE DATA:

NORTARIO LIMESTONE LTD. is presently searching for economic "limestone" deposits amenable for the production of <u>quicklime</u> which would be destined mainly to the gold mining industry of northeastern Ontario and northwestern Québec.

<u>Quicklime</u> is produced by the calcination of "limestone" in rotary kilns. The chemical and physical specifications of <u>quicklime</u> varies according to its use. In the gold mining industry it is used in the flotation process as a "depressant" and as a pH control reagent. About 1.6 pounds of <u>quicklime</u> are required for each ton of ore milled.

Most operations would prefer <u>quicklime</u> containing 85% or more carbonate and silica in the range of 5%.



The most important aspect of <u>guicklime</u> is its % of available "lime" as CaO or MgO as it is consumed in the milling process. Impurities such as silica may also be important in determining the quality of <u>guicklime</u>. Metallurgical tests must be completed to evaluate properly the characteristics of any processed "limestone". It shall be possible, only then, to determine if the carbonate and silica contents of the "limestone" located on the Armstrong Twp. property of NORTARIO LIMESTONE LTD. is adaptable to the local gold mining industry.

Respectfully submitted:

E. Chartré, B.A., B. Sc.:

April 14, 1985.

DIAMOND DRILL PROGRAM:

Three, one hundred foot deep vertical holes were bored on the NORTARIO LIMESTONE LTD. Armstrong Twp. property during the month of March, 1985.

These include holes number: W-1-85, E-2-85 and N-3-85. The holes were located along a surveyed grid: hole no W-1-85 was bored on the base line at 0+00, hole E-2-85 was bored on cross line 0+00 at 1+50E and hole N-3-85 was bored on cross line 3+00N at 1+00E.

The pattern of the above drill program was implemented because it is assumed that assays obtained from vertical bore holes through horizontal "limestone" beds are valid for a radius of 150'.

DIAMOND DRILL RECORD

NORTARIO LIMESTONE LTD.

W-1-85 Hole No..... Page No....

Footage From - To	Geological & Physical Description	Sample Numb e r	From - To		
0' - 7.5'	OVERBURDEN				
·					
7.5' - 24'	CALCIUM LIMESTONE (grey)				
	Contains 85% nodular grey				
	calcarenite fragments in				
	calcisiltite matrix				
					·
24' - 55-	DOLOMITIC LIMESTONE (beige)				
	Thinly bedded calcisiltite of				
	dolomitic composition, contains				
	occ. fragments of grey calcare	hite.			
	43'-46'; numerous mud seams				
	47'-55': bedding becomes more				
	massive, presence of small whi	te			
· · · · · · · · · · · · · · · · · · ·	fossils (10%)				
<u> 55' - 80'</u>	CALCIUM LIMESTONE (beige)				
	55'-60':mottled with grey sect	ions			
	of calcarenite				
	60-68':nodular,beige calciluti	te			
	with large nodules of g	rey		. i	
	chert (10%)				
	68'-80':nodular grey calcareni	te			
80' - 90'	DOLOMITIC LIMESTONE (beige)				
	Varies in color from beige to				
	grey, nodular, fossiliferous				
90' - 100'	CALCIUM LIMESTONE (grey)	·			
	Nodular calcarenite in silty				
	matrix.				
100'	END OF HOLE W-1-85				
/	E. Chartré: Ella	<u>к</u> .			

WINNUND UNILL RECORD

Hole No. . E-2-85

Page No.....-1-...

NORTARIO LIMESTONE LTD.

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Footage From - To	Geological & Physical Description	Sample Numb e r	From - To		
0 - 5'	OVERBURDEN				
·				1	
5 - 20'	CALCIUM LIMESTONE (grey)				· ·
	Grey, mottled calcarenite fragme	ents			
	in calcisiltite matrix				
20' - 55'	DOLOMITIC LIMESTONE (beige)	· · · · · · · · · · · · · · · · · · ·			
	Thinly bedded calcisiltite of	i			
	dolomitic composition, contains	5	····		
	Occ. fragments of cacarenite				
	48-53' occ. large fragments	·			
				1	
55' - 80'	CALCIUM LIMESTONE (grey-beige)			 	
	Mostly grey calcarenite with			<u> </u>	
	occ. beige sections of bedded				
	calcisiltite.				
	@ 58' a 6" nodule of grey cher	<u> </u>	·		
	@ 63.5' @ 2" nodule " "				
	l' of lost core between 75 & 8	0'			
80' - 90'	DOLOMITIC LIMESTONE (beige)				
<u> </u>	Thinly beddedmassive, homogene	ous	• • • • • • • • • • • • • • • • • • •		
	calcisiltite			ļ	
<u>90' - 100'</u>	CALCIUM LIMESTONE (grey)				
	Mottled,calcarenite fragments	in			
· · · · · · · · · · · · · · · · · · ·	calcarenite_matrix				
· · · · · · · · · · · · · · · · · · ·		· .		ļ	
100'	END OF HOLE E-2-85				
			······		
	E. Chartré: Elle				
	April 3, 1985				

DIAMOND DRILL RECORD

NORTARIO LIMESTONE LTD.

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N-3-85 Role No....

Page No....1

Footage From - To	Geological & Physical Description	Sample Number	From - To		
*** · · ·					
0 - 5'	OVERBURDEN				
•					
5 - 21'	CALCIUM LIMESTONE (grey)				
	Mottled calcarenite			•	
21' - 30'	CALCIUM LIMESTONE (brownish gr	ey)			
	Mottled thinly bedded calosilt	ite	. <u></u>		
30' - 55'	DOLOMITIC LIMESTONE (beige)				
	Massive calcisiltite with occ				
	grey calcarenite sections				
55' - 87'	CALCIUM LIMESTONE (greyish-bro	wn)			
	Mottled, fossiliferous				
871 - 1001	CALCTUM LIMESTONE (grow)				
	871-901: grey mottled calcaren	i+0			
	90'-95': finely bedded grey &	1.00			
······	grevish brown section	s	<u> </u>		
* <u></u>	with occ. small fossi	ls			
	95'-100':massive beige calcisi	ltite	~~~~~		
	interlayered with occ	•			
	grey calcarenite & òc	с.			
	chalk white sections	·	4		
100'	END OF HOLE N-3-85		· · · · · · · · · · · · · · · · · · ·		
	E. Chartré: Cli				
	April 3, 1985				
			·····		
			• ••••••••••••••••••••••••••••••••••••		
	a and a second			†	†

•		· · · · ·			APPENDIX	"B"	·			
ORTARIO LIMEST	ONE LTD.	TD. ASSAY RESULTS								
		Hole numbe	<u>r: W-</u>	1	E-2		N-3	}		
(<u>Footage</u>		. %	CaO	MgO	CaO	MgO	CaO	MgO		
5 - 10"			44.07	2.92	44.68	2,22	48.45	2.02		
10 - 15'			46.80	2.30	42.43	2.35	44.86	3.22		
15 - 20'			42.73	4.08	44.54	2.74	45.33	3.68		
20 - 25'		,	36.44	9.60	34.11	10.53	34.21	8.41		
25 - 30'			26.12	10.61	49.83	1.62	49.55	1.11		
30 - 35'			36.06	12.85	36.68	11.27	36.06	15.42		
35 - 40'		· · ·	31.01	17.49	29.94	10.98	30.04	17.99		
40 - 45'			34.11	13.26	29.71	17.08	32.30	15.75		
45 - 50'			36.06	14.21	33.31	14.46	37.43	12.38		
50 - 55'			29.28	17.82	27.17	18.07	34.42	13.26		
(- 60'			45.44	4.97	42.95	6.05	47.35	4.97		
60 - 65'			45.99	1.49	43.93	1.33	43.47	1.53		
65 - 70'			44.38	0.83	41.85	0.98	46.35	0.65		
70 - 75'			46.03	1.03	43.17	1.24	42.73	1.38		
75 - 80'		1	43.03	5.12	36.38	8.39	34.72	11.61		
80 - 85'			26.56	17.67	25.96	19.53	26.43	19.41		
85 - 90'			26.56	16.02	31.40	11.95	35.02	7.61		
90 - 95'			49.55	2.02	45.44	1.96	43.31	1.72		
95 - 100'			44.87	3.00	43.17	3.61	43.33	3.13		
1	\verage for	: 19 samples	38.69	8.28	38.24	8.12	39.76	7.64		
	= ;	-	#							

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General average for 57 samples: CaO = 38.90%

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MgO = 8.01%

NORTARIO LIMESTONE	E LTD ASSAYS	OF LIMES	STONE CO	OMPOSI	TES - P	RMSTRON	NG TWP.	PROPERI	TY - LOT	<u>6 – CON</u>	
HOLE NO. W-1-85										+	-
Sample Number	Footage	L.O.I.	CaO	MgO	sio2	Fe203	A1203	so3	P205		
E-1-85 - 1	7.5 - 10'	%	%	%	%	%	%	%	%		
E-2-85 - 1	10.0 - 15'	39,06	44.22	4.14	(8.32	P- 86	1.81	0.85	0.027		
E-3-85 - 1	15.0 - 20'	0,000	11022		0.02		1.01	-	0.027		
E-4-85 - 1	20.0 - 25'				•	-					
							,				
					,						
HOLE NO. E-2-85											
E = 1 - 85 - 2	5.0 - 10!									•	
E - 2 - 85 - 2	10.0 - 15'	-				•	• •				
E-3-85 - 2	15.0 - 20'	38.36	42.56	4.18	3 10.06	0.60	1.62	0.28	0.020		AF
E-3-85 - 2	20.0 - 25'										Edd
						•	•				×
		÷									В
HOLE NO. N-3-85	•										1-
<u></u>	•			\$							
E-1-85 - 3	5.0 - 10'										
E-2-85 - 3	10.0 - 15'						* * .				
E-3-85 - 3	15.0 - 20'	39.90	44.70	4.0	7 7.45	0.67	1.85	0.37	7 0.018		
E-4-85 - 3	20.0 - 25'										





1" = 200'

REAVICES EXELOBATION ENDIL



PROPERTY LOCATION

l'' = 1/2 mi.



ASSAYERS LIMITED QUEBEC: 183 RUE GAMBLE O., C.P. 665 - ROUYN, J9X 2R8 - TEL: (819) 762-3010 ONTARIO: 20 VICTORIA STREET, SUITE 506 - TORONTO, M5C 2NB - TEL: (416) 366-3100

CERTIFICATE OF ANALYSIS

f O R	Nortario	Limestone	Ltd.
100			

E. Bedard

Copy: E. Chartre

LAB NO.	SAMPLE NO.	GOLD OZ. PER TON	SILVER OZ. PER TON	COPPER %	ZINC X	CaO %	MgO	
10942	E-1-85 1		· · ·			44.07	2.92	<u></u>
3	2					44.68	2.22	
4	3					48.45	2.02	
5	E-2-85 1					46.80	2.30	
6	2					42.43	2.35	
7	3					44.86	3.22	
8	E-3-85			····		42.73	4.08	
9	2					44.54	2.74	
10950	7			· · · · · · · · · · · · · · · · · · ·		43.33	3.68	- <u></u>
1	E-4-85					36.44	9.60	
2	2					34.11	10.53	<u> </u>
3	7					34.21	8.41	
4	E-5-85	and the second sec		ni en la gra de la senata de la secona de la s	an a ang esterne sanas	26.12	10.61	
5	2			· · · · · · · · · · · · · · · · · · ·		49.83	1.62	
6	3					49.55	1.11	
7	E-6-85					36.06	12.85	
8	2				:	36.68	11.27	
9	3					36.06	15.42	
10960	E-7-85					31.01	17.49	
10961	2					29.94	18.98	

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March 29, 1985

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UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPEN-SATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS. SAUF MENTION CONTRAIRE, LES ESSAIS POUR L'OR ET L'ARGENT, NE SONT PAS CORRIGES POUR LES PERTES ET GAINS QUI SONT INHERENTS AU PROCEDE D'ANALYSE Ø



CERTIFICATE OF ANALYSIS

FOR Nortario Limestone Ltd.

E. Bedard

Copy: E. Chartre

LAB NO.	SAMPLE NO.	GOLD OZ. PER TON	SILVER OZ. PER TON	COPPER 3	ZINC	CaO	MgO	
10962	<u>E-7-85</u> 3					30.04	17.99	
10963	E-8-85 1				· · · · · · · · · · · · · · · · · · ·	34.11	13.26	
4	2					29.71	17.08	
10965	.3					32.30	15.75	
11099	E-9-85 1			<u> </u>		36.06	14.21	
11101	2					33.31	14.46	
11100	3					37.43	12.38	
11102	E-10-85					29.28	17.82	
3	2					27.17	18.07	·
4	3					34.42	13.26	
5	E-11-85 1			·		45.44	4.97	
6	2		· · · · · · · · · · · · · · · · · · ·			42.95	6.05	
7	3					47.35	4.97	[
8	E-12-85					45.99	1.49	
9	2					43.93	1.33	
11110	3					43.47	1.53	
1	E-13-85 1					44.38	0.83	
2	2			· · · · · · · · · · · · · · · · · · ·		41.85	0.98	
3.	3					46.35	0.65	
11114	E-14-85 1					46.03	1.03	

DATE

March 29, 1985

CERTIFIED CORRECT

UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPEN-SATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS. SAUF MENTION CONTRAIRE, LES ESSAIS POUR L'OR ET L'ARGENT. NE SONT PAS CORRIGES POUR LES PERTES ET GAINS QUI SONT INHERENTS AU \bigtriangledown PROCEOE O'ANALYSE.

ASSAYERS LIMITED ONTARIO: 20 VICTORIA STREET, SUITE 506 - TORONTO, M5C 2N8 - TEL: (416) 366-3100

CERTIFICATE OF ANALYSIS

FOR Nortario Limestone Ltd.

E. Bedard

Copy: E. Chartre

A. 1

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LAB NO.	SAMPLE NO.	GOLD OZ. PER TON	SILVER OZ. PER TON	COPPER %	ZINC %	CaO %	MgO %	
11115	E-14-85 2					43.17	1.24	
6	3					42.73	1.38	
7	E-15-85					43.03	5.12	
8	2			а. 1		36.38	8.39	
9	3					34.72	11.61	
11120	E-16-85 1					26.56	17.67	
1	2			<u></u>		25.96	19.53	
2	3					26.43	19.41	
3	E-17-85 1					26.56	16.02	
4	2					31.40	- 11.95	
5	3		-			35.02	7.61	
6	E-18-85 1				•	49.55	2.02	
7	2					45.44	1.96	
8	3					43.31	1.72	
9	E-19-85 1	· · ·				44.87	3.00	
11130	2				•	43.17	3.61	
11131	3					43.33	3.13	
<u> </u>								

DATE

CERTIFIED CORRECT

March 29, 1985

UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOTBEEN ADJUSTED TO COMPEN-SATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS. SAUF MENTION CONTRAIRE, LES ESSAIS POUR L'OR ET L'ARGENT, NE SONT PAS CORRIGES POUR LES PERTES ET GAINS QUI SONT INHERENTS AU PROCEDE D'ANALYSE. QUEBEC: 183 RUE GAMBLE O., C.P. 665 - ROUYN, J9X 2RB - TEL: (819) 762-3010 ONTARIO: 20 VICTORIA STREET, SUITE 506 - TORONTO, M5C 2N8 - TEL: (416) 366-3100

ROUYN, QUE. _____ April 9, 1985

CERTIFICATE OF ANALYSIS

Received from: Reçu de: Date Received: Reçu le: Nortario Limestone March/85

Samples of: Echantillons de:

Identification:

SAVERS

Limestone Composites

See below.

Si0, LAB NO. SAMPLE 50, L. O. I. CaO MgO P2⁰5 Hole W-1-85 10942 E-1-85-1 10945 E-2-85-1 10948 E-3-85-1 10951 E-4-85-1 39.06 8.32 0.86 1.81 0.85 0.027 44.22 4.14 Hole E-2-85 10943 E-1-85-2 E-2-85-2 10946 10949 E-3-85-2 4.18 10.06 0.60 10952 E-4-85-2 38.36 42.56 1.62 0.28 0.020 Hole N-3-85 10944 E-1-85-3 10947 E-2-85-3 10950 1-3-85-3 1.85 0.018 10953 E-4-85-3 44.70 4.07 0.37 39.90 7.45 0.67

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NORTARIO LIMESTONE LTD. SUMMARY EVALUATION OF DIAMOND DRILL PROGRAM

Armstrong Twp. Property

8515/13

13/5/86

SI	JM	M	A	R	Y	
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I		INTRODUCTION	Ρ.	1
II		PROPERTY	Ρ.	1
III	-	LOCATION & ACCESSIBILITY	Ρ.	1
IV	-	DIAMOND DRILL PROGRAM	Ρ.	2
v	-	ASSAYS - PHASE 1	P.	3
VI		RESULTS OF ASSAYS - PHASE 1	P.	3
VII	-	INTERPRETATION OF DATA	Ρ.	4
VIII	-	RESULTS OF ASSAYS - PHASE 2	P.	5 [.]
IX	-	ESTIMATION OF RESERVES	Ρ.	5
x	-	CONCLUSIONS & RECOMMENDATIONS	Ρ.	6

				•				
Plate	I.	-	Sketch of	surveyed land parcels		Ρ.	7	
Plate	II	-	Sketch of	diamond drill hole				
			locations			Ρ.	8	
Plate	III	-	Sketch of	property location	•	Ρ.	9	

Appendix	"A"	Diamond	drill	record	and	assays	-	phase	1
Appendix	"B"	Diamond	drill	record	and	assays	-	phase	2
Appendix	"C"	Summary	of ass	says	·				

, **a**

INTRODUCTION:

In order to obtain a summary evaluation of the chemical composition and potential reserves of the limestone beds located on its Armstrong Twp. property, NORTARIO LIMESTONE LTD., has undertaken an initial diamond drill program during the month of March, 1985, and a subsequent diamond drill program, during the month of April, 1985.

Thus three (3) one hundred foot deep holes were bored initially, immediately north of the old quarry which lies between highway 11 and the Ontario Northland Railway line. Subsequently, five (5) additional holes were bored to a depth of 28'.

II - PROPERTY:

The NORTARIO LIMESTONE LTD. property includes parcels of land numbered: 12667 S.S.T. and 14282 S.S.T. These adjoining parcels are located on lot 6, south half, concession VI, Armstrong Twp., Ontario.

III - LOCATION & ACCESSIBILITY:

The NORTARIO LIMESTONE LTD. property lies at a distance of 2 miles north of the town of Earlton and within the limits of the Corporation of the township of Armstrong. It is located immediately east of north-south trending highway 11 and west of the Ontario Northland Railway line. IV - DIAMOND DRILL PROGRAM:

Within the first phase of the diamond drill program, three, one hundred foot deep vertical holes were bored on the NORTARIO LIMESTONE LTD. Armstrong Twp. property during the month of March, 1985.

These include holes number: W-1-85, E-2-85 and N-3-85. The holes were located along a surveyed grid: hole no. W-1-85 was bored on the base line at 0+00, hole E-2-85 was located on cross line 0+00 at 1+50 E and hole no. N-3-85 was bored on cross line 3+00N at 1+00 E.

A second series of 5 diamond drill holes (phase 2), were bored during the month of April, 1985. These are described as follows:

Location Dep	τη
N-4-85 L 3N - 1+00W 22	1
N-5-85 L 6N - 2+00W 27	I
N-6-85 L 6N - 0+50E 28	I
N-7-85 L 9N - 0+50W 27	1
N-8-85 L 9N - 3+00W 24	•

V - ASSAYS:

All of the core obtained from the three diamond drill holes was split: each hole contributed 19 five foot sections; these samples were then sent to Assayers Ltd in Rouyn, Québec, to be assayed for their content in Calcium oxide (CaO) and Magnesium oxide (MgO).

Subsequent "limestone" composite assays were obtained for the first 20' sections of the three holes and were assayed for the following:

Loss on ignition (L.O.I.) Calcium oxide (CaO) \times /.7 Magnesium oxide (MgO) \times 2 Silica oxide (SiO₂) Iron oxide (Fe₂O₃) Aluminium oxide (Al₂O₃) Sulfur oxide (SO₃) Phosphurous oxide (P₂O₅)

VI - RESULTS OF ASSAYS:

The results of the first series of assays, assays for CaO and MgO, indicate the presence of alternating horizontal beds of <u>Calcium Limestone</u> and <u>Dolomitic</u> <u>Limestone</u> whose thickness vary from 10' to 30'.

- 3 -

The results obtained from the second series of assays, i.e. assays of the "limestone" composite of the first 20' of the three diamond drill holes, confirm the presence of <u>Calcium Limestone</u> but also indicate a relatively high percent of silica, an average of 8.6% SiO_2 .

VII - INTERPRETATION OF THE DATA:

NORTARIO LIMESTONE LTD. is presently searching for economic "limestone" deposits amenable for the production of <u>quicklime</u> which would be destined mainly to the gold mining industry of northeastern Ontario and northwestern Québec.

<u>Quicklime</u> is produced by the calcination of "limestone" in rotary kilns. The chemical and physical specifications of <u>quicklime</u> varies according to its use. In the gold mining industry it is used in the flotation process as a "depressant" and as a pH control reagent. About 1.6 pounds of <u>quicklime</u> are required for each ton of ore milled.

Most operations would prefer <u>quicklime</u> containing 85% or more carbonate and silica in the range of 5%.

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VIII - RESULTS OF ASSAYS - PHASE II:

All of the core obtained from diamond drill holes N-4-85 to N-8-85 was split and assayed in five foot sections for values of CaO, MgO and SiO₂. An average of 44% CaO, 4% MgO and 9% SiO₂ was obtained from the $\times 1.7 = 743$ $\times 2 = 3$ /=3234. samples. These results are conformable to the assays obtained from diamond drill holes W-1-85, E-2-85 and N-3-85 from surface to a depth of 25'.

IX - ESTIMATION OF RESERVES:

The first phase of the diamond drill program indicated that the upper 25' of the limestone horizons were the ones containing the maximum percentage of CaO at shallow depths. The second phase of the diamond drill program was thus implemented to obtain information as to the horizontal continuity of these CALCIUM LIMESTONE beds.

The drill pattern infers the presence of CALCIUM LIMESTONE for an approximate length of 1,200', an approximate width of 500' for a depth of 20' thus representing approximately 12 million cubic feet of "limestone".

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Assuming a weight in the range of 12 pounds per cubic feet, a total of one million tons of CALCIUM LIMESTONE, is inferred to be present from the two diamond drill programs and from the assays obtained.

X - CONCLUSIONS & RECOMMENDATIONS:

The most important aspect of <u>quicklime</u> is its % of available "lime" as CaO or MgO, as it is consumed in the milling process. Impurities such as silica (SiO) may also be important in determining the quality of <u>quicklime</u>. Metallurgical tests must be completed to evaluate properly the characteristics of any processed "limestone". It shall be possible, only then, to determine if the carbonate and silica contents of the "limestone" located on the Armstrong Twp. property of NORTARIO LIMESTONE LTD. is adaptable to the local mining industry.

Respectfully submitted:

Ell E. Chartré, B.A., B.Sc.:

May 13, 1985.

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APPENDIX "A"

DIAMOND DRILL RECORD & ASSAYS - PHASE 1

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NORTARIO LIMESTONE LTD.

W-1-85 Hole No....1-Page No...-1-

Footage From - To	Geological & Physical Description	Sample Numb e r	From - To		
		//			
0' - 7.5'	OVERBURDEN		1		
•					
7.5' - 24'	CALCIUM LIMESTONE (grey)				
	Contains 85% nodular grey				
	calcarenite fragments in				
	<u>calcisiltite matrix</u>				
24' - 55-	DOLOMITIC LIMESTONE (beige)			 	
	Thinly bedded calcisiltite of				
	dolomitic composition.contains				
	occ. fragments of grey calcare	hite.			
	43'-46': numerous mud seams				
	47'-55': bedding becomes more			 	
	massive, presence of small whi	te			
	fossils (10%)				
55' 80'	CALCIUM LIMESTONE (beige)		-		
	55'-60':mottled with grey sect	ions			
	of calcarenite				
	60-68':nodular,beige calciluti	te	 		
	with large nodules of g	rey	· · ·		
	chert (10%)				
	68'-80':nodular grey calcareni	te			
80' - 90'	DOLOMITIC LIMESTONE (beige)				
	Varies in color from beige to			-	·
	grey, nodular, fossiliferous				
90' - 100'	CALCIUM LIMESTONE (grey)	· .	· · · · · · · · · · · · · · · · · · ·		
	Nodular calcarenite in silty				
	matrix.				
100	END OF HOLE W-1-85				
	E. Chartré:				
	April 3 1005				

DIAMOND DRILL RECORD

Role No. . E-2-85

NORTARIO LIMESTONE LTD.

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Page No.....-1-....

Footage From - To	Geological & Physical Description	Sample Number	From - To	
0, - 5'	OVERBURDEN			
· ·				
5 - 20'	CALCIUM LIMESTONE (grey)			
	Grey, mottled calcarenite fragm	ents		
	in calcisiltite matrix			
20' - 55'	DOLOMITIC LIMESTONE (beige)			
	Thinly bedded calcisiltite of			
	dolomitic composition, contains	5		
	Occ. fragments of cacarenite			
	48-53' occ. large fragments			
55' - 80'	CALCIUM LIMESTONE (grey-beige)			
	Mostly grey calcarenite with			
	occ. beige sections of bedded			
	calcisiltite.			
	@ 58' a 6" nodule of grey cher	c	:;	
	@ 63.5' @ 2" nodule " "			
	l' of lost core between 75 & 8	D •		
80' - 90'	DOLOMITIC LIMESTONE (beige)		· · · · · · · · · · · · · · · · · · ·	
	Thinly beddedmassive, homogene	bus		
	calcisiltite			
90' - 100'	CALCIUM LIMESTONE (grey)			·
	Mottled, calcarenite fragments	in		
	calcarenite matrix			
100'	END OF HOLE E-2-85			
······································				
	E. Chartré:			
	Anril 3 JORS			

DIAMOND DRILL RECORD

N-3-85

RTARIO LIMESTONE LTD.

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Role No.....

Page No.....1

Footage From - To	Geological & Physical Description	Sample Number	From - To	
0 - 5'	OVERBURDEN			
•				
5 - 21'	CALCIUM LIMESTONE (grey)			 · ·
	Mottled calcarenite			
21' - 30'	CALCIUM LIMESTONE (brownish gr	ey)		
	Mottled thinly bedded calosilt	ite		
30' - 55'	DOLOMITIC LIMESTONE (beige)			
	Massive calcisiltite with occ		• .	
	grey calcarenite sections			
55' - 87'	CALCIUM LIMESTONE (greyish-bro	wn)		
	Mottled, fossiliferous			
87' - 100'	CALCIUM LIMESTONE (grey)			
	871-901: grey mottled calcaren	ite		
	90'-95': finely bedded, grey &			-
	greyish brown section	S		
	with occ. small fossi	ls		
	95'-100':massive beige calcisi	ltite		
	interlayered with occ	•		
	grey calcarenite & oc	с.		
	chalk white sections	·		
100'	END OF HOLE N-3-85			
	E. Chartré:			
	April 3, 1985	•		

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NORTARIO LIMESTONE	LTD ASSAYS	OF LIMES	TONE C	OMPOSI	TES - A	RMSTRON	IG TWP. I	PROPERT	Y - LOT 6	- co
HOLE NO. W-1-85								•		-
Sample Number	Footage	L.O.I.	CaO	MgO	SiO2	Fe203	A1203	so ₃	P205 .	•
E-1-85 - 1	7.5 - 10'	%	%	%	%	%	%	%	%	
E-2-85 - 1	10.0 - 15'								•	
E-3-85 - 1	15.0 - 20'	39.06	44.22	4.14	8.32	0.86	1.81	0.85	0.027	
E-4-85 - 1	20.0 - 25'						-	-		
•					· ·					
HOLE NO. E-2-85						۰.				
E-1-85 - 2	5.0 - 10'				·		•-			•
E-2-85 - 2	10.0 - 15'	•					· .			
E-3-85 - 2	15.0 - 20'	38.36	42.56	4.18	10.06	0.60	1.62	0.28	0.020	
E-3-85 - 2	20.0 - 25'									
		•				•				
· \$		•			•					
HOLE NO. N-3-85		• .								
Ber 2003 - april 2009 - april 2009 - april 2009 - april 2009				3 . · ·						
E-1-85 - 3	5.0 - 10'									
E-2-85 - 3	10.0 - 15'	•			· ·	•				
E-3-85 - 3	15.0 - 20'	39.90	44.70	4.07	7.45	0.67	1.85	0.37	0.018	
E-4-85 - 3	20.0 - 25'			•			•			

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RTARIO LIMESTONE LTD. ASSAY RESULTS

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	Hole numbe	r: <u>W-</u>	1	E-2		N-3		
Cootage	, %	CaO	MgO	CaO	MgO	CaO	MgO	
5 - 10"		44.07	2.92	44.68	2,22	48.45	2.02	
10 - 15'		46.80	2.30	42.43	2.35	44.86	3.22	
15 - 20'		42.73	4.08	44.54	2.74	45.33	3.68	
20 - 25'		36.44	9.60	34.11	10.53	34.21	8.41	
25 - 30'		26.12	10.61	49.83	1.62	49.55	1.11	
30 - 35'		36.06	12.85	36.68	11.27	36.06	15.42	
35 - 40'		31.01	17.49	29.94	10.98	30.04	17.99	
40 - 45'		34.11	13.26	29.71	17.08	32.30	15.75	
45 - 50'		36.06	14.21	33.31	14.46	37.43	12.38	
50 - 55'		29.28	17.82	27.17	18.07	34.42	13.26	
(_)- 60*	N	45.44	4.97	42.95	6.05	47.35	4.97	
60 - 65'		45.99	1.49	43.93	1.33	43.47	1.53	
65 - 70'		44.38	0.83	41.85	0.98	46.35	0.65	
70 - 75'		46.03	1.03	43.17	1.24	42.73	1.38	
75 - 80'		43.03	5.12	36.38	8.39	34.72	11.61	
80 - 85'	•	26.56	17.67	25.96	19.53	26.43	19.41	
85 - 90'		26.56	16.02	31.40	11.95	35.02	7.61	
90 - 95'		49.55	2.02	45.44	1.96	43.31	1.72	
95 - 100'		44.87	3.Ò0	43.17	3.61	43.33	3.13	
Average for	19 samples	38.69	8.28	38.24	8.12	39.76	7.64	

General average for 57 samples: CaO = 38.90%

MgO = 8.01%

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APPENDIX "B"

DIAMOND DRILL RECORD & ASSAYS - PHASE 2

DIAMOND DRILL RECORD

Role No.....

TARIO LIMESTONE LTD.

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Page No.1.0f.2

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DIAMOND DRILL RECORD

Role No....

Page No.....-2-.

Footage From - To	Geological & Physical Description	Sample Number	From - To		
					• •
HOLE NO/ N-	7-85				
0 - 2'	Overburden .				
2' - 27'	CALCIUM LIMESTONE				
	2' - 16': grey, fossiliferous			· · ·	
	16'- 25': beige with grey foss.			·	
	fragments				
	21'-25': thinly bedded, occ.	1			
	fossil				
	25' - 27' : grey, mottled.	· ·	· · · · · · · · · · · · · · · · · · ·		
	······································		······································		
HOLE NO. N-	8 – 85	[]	·		· · · · · · · · · · · · · · · · · · ·
[[]			
0 - 2'	Overburden				
	CALCIUM LIMESTONE:		·		
	2'-16': beige with large fossil:	\$	- <u>i</u>		
	16'-23': thinly bedded, beige				
 	23'-24' grey		· · · · · · · · · · · · · · · · · · ·		
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ASSAYERS OURBEC: 183 RUE GAMBLE O,, C.P. 665 . ROUYN, JUX 288 . TEL. 1819) 762-3010 ONTARIO: 20 VICTORIA STREET, SUITE 506 - TORONTO, M5C 2N8 - TEL: (416) 305 3100

CERTIFICATE OF ANALYSIS

Nortario Liméstone Ltd. FOR

Copy: Mr. E. Chartre

<u> </u>						CaO	ΜσΟ	Si0-
LAB NO.	SAMPLE NO.	Hole No:	From	to	length	98	*	\$2
17863	500	N-4-85	 7 '	10'	31	47.67	2.28	9.66
4	1	N-4-85	10'	15'	5 '	44.91	3.07	7.80
5	2	N-4-85	י 15	20'	5 '	41.33	2.97	15.25
6	503	N-4-85	20	22 1	2'	36.40	9.17	5.80
7	505	N-5-85	7 '	10'	31	45.43	2.27	10.00
8	6	N-5-85	10'	י 15	5 ۱	43.50	3.55	10.52
9	7	N-5-85	15'	20'	5'	41.26	4.95	13.01
1/870	8	N-5-85	20'	25 '	5 '	49.73	4.20	4.95
1	9	N-5-85	25'	27'	2 '	47.17	0.90	8,81
2	510	N-6-85	2 '	5'	3 1	45.33	2.97	7.45
3	- 1	N-6-85	5 '	10.	51	47.17	3.00	5.66
4	2	N-6-85	10'	15'	5 •	41.27	4.05	13.64
5	3	N-6-85	15'	20 •	5 1	38.22	9.93	6.77
6	4	N-6-85	20'	25'	5'	48.38	1.03	6.95
7	5	N-6-85	25'	28'	<u>`</u> 3'	44.31	7.32	4.46
8	6	N-7-85	2'	5'	.3 '	48.17	1.87	7.11
9	7	N-7-85	5 '	10.	5,	46.55	2.20	7.11
17880	8	N-7-85	10'	15'	5 '	45.33	3.28	9.92
1	9	N-7-85	15'	201	5 '	43.90	4.42	8.28
LJ82	520	N-7-85	20'	25	51	50.20	0.77	7.27
DATE	lay 8, 1985		4	CERTIFIED CORREC		Verber	/	•



ASSAYERS OULBEC: 183 HUE GAMBLE O., C.P. 605 + HOUYN, JOX 2HB + TEL: (810) 762-3910 ONTARIO: 20 VICTORIA STREET, SUITE 508 + TORONTO, MSC 2N8 + TEL: (416) 366 3100

CERTIFICATE OF ANALYSIS

10H Nortario Limestone Ltd.

Copy: Mr. E. Chartre

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LAB NO.	SAMPLE NO.	Hole No.	From	to	lenqth	CaO \$	MgO %	\$102
17883	521	N-7-85	25'	27'	2'	53.47	0.67	3.45
4	2	N-8-85	2'	5'	3'	49.00	1.22	7.35
5	3	N-8-85	51	10'	5	49.00	1.12	8.10
6	4	N-8-85	10'	15'	5 *	41.27	2.63	13.45
7	5	N-8-85	15'	20'	5 '	38.42	9.53	5.96
17888	526	N-8-85	20'	24'	41	46.14	0.87	7.45
					•			
K.,								
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\bigcirc								
date May	8, 1985		c	CERTIFIED CORREC	· Are	Juik	il	*

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AVERAGE ASSAYS FOR 8 DIAMOND DRILL HOLES - SECTIONS 5' TO 2

· · · ·			
HOLES NO.	Ca0 %	MgO %	SiO ₂ %
W - 1 85	44.22	4.14	8.32
E - 2-85	42.56	4.18	10.06
N - 3-85	44.70	4.07	7.45
N - 4-85	41.82	4.37	9.60
N - 5-85	44.98	3.74	9.62
N - 6-85	43.76	4.50	8.25
N - 7-85	46.49	2.66	8.14
N - 8-85	43.70	3.53	8.74
•			
Average	44.02	3.89	8.77

