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#### CONTINENTAL LIME LTD.

### FLAGGING ACCESS TRAILS, ROAD IMPROVEMENT, AND GEOLOGY IN 1994 ON THE KELLY LAKE LIMESTONE DEPOSITS, MARBLE RANGE WEST OF CLINTON, BRITISH COLUMBIA

CLAIMS STAG 1 AND 2, MARY 1, WILLIAM 1, MAR 42, 66-69, 101-102, 104-113

Annual Work Approval Number: KAM 94-0300423-338 Mineral Exploration Reclamation Permit: MX-3-173

> Geographic Coordinates 51° 07' N 121° 51' W NTS Sheet 92 P/4 W

FILMED

Owner of Claims Stag 1 and 2, Mary 1, William 1, Mar 104, 110-112: B.M.C. Lime Derivatives Ltd. 215, 10451 Shellbridge Way, Richmond, B.C.

Owner of Claims Mar 42, 66-69, 101-102, 105-109, 113 Continental Lime Ltd. 215, 10451 Shellbridge Way Richmond, B.C. V6X 2W8

Operator: Continental Lime Ltd. 215, 10451 Shellbridge Way Richmond, B.C. V6X 2W8

Consultant: Halferdahl & Associates Ltd. 18, 10509 - 81 Avenue Edmonton, Alberta T6E 1X7

# GEOLOGICAL BRANCH ASSESSMENT REPORT



J. Dahrouge, B.Sc., P.Geol., and L.B. Halferdahl, Ph.D., P.Eng., P.Geol. 1994 11 07

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#### INTRODUCTION

As used in this report, the term "Kelly Lake limestone deposits" refers to deposits in a band of limestone about 19 km long by up to 4 km wide on the southwest side of the Marble Range of southwestern British Columbia. Most are within the first two mountain ridges on the southwest side of the Marble Range. Some of these limestone deposits had been held by the predecessors of B.M.C. Lime Derivatives Ltd. since the early 1970s. These and others were acquired by Continental Lime Ltd. in 1992 and 1993. Some 1001 samples were collected from them and analyzed in 1992 and 1993. In preparation for drilling two of the limestone deposits, one on the South Porcupine Ridge and the other on the Columbia Lime Ridge, the exploration in 1994 included flagging access trails to the proposed drillsites, collecting a few samples, observations on the geology, and improving a short stretch of the road up Porcupine Creek. The work was authorized by Continental Lime Ltd.

As the previous assessment reports (Halferdahl, 1992; Faragher and Halferdahl, 1993) include descriptions of the geographic setting and the geology, most of these subjects are not repeated here. New information bearing on these subjects is, however, included.

#### 1.1 GEOGRAPHIC SETTING

The Kelly Lake limestone deposits are in the Intermontane Belt of southwestern British Columbia about 230 km northeasterly from Vancouver and about 16 km west of the Town of Clinton (Fig. 1.1). From Clinton they are easily reached via the Kelly Lake and Jesmond roads, and other mostly unimproved roads. Two of these unimproved roads were originally constructed in the early 1970s for limestone exploration. Others have been built since for access to power lines of the British Columbia Hydro and Power Authority.

#### 1.2 PROPERTY

The claims listed in Table 1 are held as follows:

#### B.M.C. Lime Derivatives Ltd.

Stag 1-2 William 1 Mary 1 Mar 104 Mar 110-112

#### **Continental Lime Ltd.**

Mar 42 Mar 66-69 Mar 101-102 Mar 105-109 Mar 113.

1.

Claim Name	Tenure Number	Units/Claim	Record Date	Expected Expiry Date
Stag 1	208 888	20	1989 09 30	2001 09 30
Stag 2	208 889	20	1989 09 29	1996 09 29
William 1	208 932	12	1989 11 24	2001 11 24
Mary 1	208 933	12	1989 11 24	2000 11 24
Mar 42	309 898	1	1992 05 21	2000 05 21
Mar 66-67	310 968-69	1 each	1992 06 22	1999 06 22
Mar 68-69	310 970-71	1 each	1992 06 22	2000 06 22
Mar 101	321 061	4	1993 09 22	2000 09 22
Mar 102	321 062	20	1993 09 22	1997 09 22
Mar 104	320 198	12	1993 08 07	2004 08 07
Mar 105	321 063	20	1993 09 22	1999 09 22
Mar 106	321 064	18	1993 09 22	1999 09 22
Mar 107	321 065	12	1993 09 21	2000 09 21
Mar 108	321 066	15	1993 09 22	1997 09 22
Mar 109	321 067	20	1993 09 22	1998 09 22
Mar 110	320 199	18	1993 08 10	1997 08 10
Mar 111	320 200	15	1993 08 10	1997 08 10
Mar 112	320 201	20	1993 08 10	1997 08 10
Mar 113	321 068	6	1993 09 22	2000 09 22
	•	249		

# TABLE 1.1: LIST OF MINERAL CLAIMS COVERING THE KELLY LAKE LIMESTONE DEPOSITS

#### 1.3 SUMMARY OF WORK DONE

Some 4.4 km of access trails to the proposed drillsites were flagged. A few observations contributed to the interpretation of the stratigraphy and geological structure. Two chip samples of limestone were collected within the claims. A short stretch of the road along Porcupine Creek was improved.

#### 1.4 FIELD OPERATIONS

The work was conducted during August, 1994 by a two-man crew based in a motel in Clinton. Transportation was mostly by a four-wheel drive vehicle with a helicopter used for some geological observations. Road improvements were contracted to an operator based in Clinton.

#### GEOLOGY

3

#### 2.1 STRATIGRAPHY AND STRUCTURE

The stratigraphic units previously described (Faragher and Halferdahl, 1993) have not been revised; they are listed in Table 2.1. The chief stratigraphic differences from the 1993 report are

STRATIGRAPHIC UNITS IN THE KELLY LAKE

LIMESTONE DEPOSITS

	Unit	· . ·	Maximum Thickness (m)
	D7		thin
• • •	C6		34
	N5		380 -
e.	C4		332 +
· · ·	N3		311 +
an a	C2		303 (?)
	) N1		not known

#### **TABLE 2.1**

the recognition of the lower part of Section B-24 as being part of unit C6, not unit C4. This anomalously thick section of unit C4 was indicated as suspect in the 1993 report. In 1994, additional outcrops or near outcrops serve to revise some of the previous geologic contacts (Fig. 2.2, 2.3, and 2.5), on maps in the previous assessment reports.

#### 2.1.1 Stratigraphy and Structure of Part of the Columbia Lime Ridge

Faragher and Halferdahl (1993) described a fault on the southwest side of the Columbia Lime Ridge (Fig. 2.2) and interpreted it as being responsible for the bulge of limestone observed below the peak on the Columbia Lime Ridge. Farther down the southwest side of the Columbia Lime Ridge within the bulge, at an elevation of about 1600 m limestones of unit C4 are separated from those of unit C6 by a band of unit N5 schists. Within unit N5 is a northwest trending topographic depression with a depression contour at one place. This depression is interpreted as a fault, which appears to cut the N5 schists obliquely, resulting in their stratigraphic thickness being less than 20 m just southeast of the depression contour, but no outcrops were observed there:

Unit	Thickness (m)
C6	>30½
Fault	· _
N5	~17½
C4	>332

2.

Southeast of this topographic depression unit C6 forms a small northwesterly trending ridge with a dip slope with an attitude of about 128°/26½° SW. This ridge appears to continue to the northwest for at least 1000 m, where it is partly covered. Beyond the covered interval it extends to outcrops near the legal corner post of claim Stag 1, where it has been previously assigned to unit C6 (Faragher and Halferdahl, 1993). Immediately north of the depression contour, schist in float is abundant. This indicates that unit N5 may be thicker to the north and northwest.

Approximately 150 m south of the depression contour a second less prominent depression separates the previously discussed northwesterly trending ridge from an easterly striking ridge. This linear depression intersects the main topographic depression at a point approximately 250 m southeast of the depression contour. From this point both features continue to the east. If the second depression represents a fault then it is probable that the limestone in the easterly trending ridge is a repeat of unit C6 (Fig. 2.3 and 2.4). In Fig. 2.4, the presence of unit N5 on the northeast side of the fault in the second depression has not been confirmed by outcrops.

Table 2.2 summarizes available data from nine samples including two collected in 1994 (9328-9329).

Sample*	Stratigraphic Thickness (m)	Dip	CaO (%)	MgO (%)	SiO <sub>2</sub> (%)	R₂O₃ (%)
Easterly Tr	ending Ridge	· · · · ·	· ·			
9202	31⁄2	38°	55.49	0.25	0.05	0.16
9201	7(?)	38°	55.45	0.25	0.05	0.14
9175	7(?)	38°	55.42	0.24	0.05	0.14
Covered	~35					
<u>Northweste</u>	orly Trending Ridge					
9329 <sub>тор</sub>	5	25°	55.26	0.13	0.43	0.32
9328	5²/ <sub>3</sub>	28°	55.29	0.13	0.49	0.32
9174	8½(?)	-	55.47	0.22	0.05	0.16
9173	8½(?)	-	55.43	0.21	0.05	0.16
9172 <sub>воттом</sub>	8½(?)	-	55.47	0.20	0.05	0.13
9171	4(?)	-	55.46	0.19	0.05	0.14

TABLE 2.2: SAMPLE DATA FROM UNIT C6 LIMESTONE ON PART OF THE COLUMBIA LIME RIDGE

\*Samples 9328 and 9174 may overlap and samples 9171 and 9172 may overlap.

#### 2.1.2 Structure of Quill Ridge

A major northwesterly striking fault (Trettin, 1980) is shown between Quill Creek and the base of unit C2 limestone on the southwestern flank of Quill Ridge and appears to extend southeasterly to a tributary of Two Mile Creek (Fig. 2.1). This fault is near the contact between unit N3 to the southwest and the limestones of unit C2. A subsidiary fault, a few hundred metres up-slope, parallels the major northwesterly striking fault.

Three, generally easterly striking, north dipping faults appear to cross Quill Ridge. The northernmost fault (Fig. 2.1) is interpreted as a thrust. A second fault is approximately 1100 m southeast along the ridge. The southernmost fault transects Quill Ridge at a point approximately 200 m southwest of sample Section A-5 (Fig. 2.1). This fault was not observed beyond unit C2.

A fault, which strikes north northeasterly is shown cutting Quill Ridge at a point about 500 m southeast of sample Section A-5 (Fig. 2.1). This fault coincides in part with a thrust mapped by Trettin (1980) and discussed in the next section. It may be traced along a tributary of Soues Creek and bounds unit C2 on the east. Other faults may be present.

#### 2.1.3 Structure of the Second Ridge - North of Porcupine Creek

Trettin (1980) interpreted part of the northeastern boundary of the Second Ridge north of Porcupine Creek as a southwestly dipping thrust fault. No evidence supporting the existence of this feature has been obtained.

Immediately north of Porcupine Creek the south end of the Second Ridge is transected by a series of northwest striking transcurrent faults that offset a complex series of small scale northwesterly plunging anticlines. These features are terminated by an easterly striking fault at a point on the crest of the Second Ridge approximately 1250 m north of Porcupine Creek.

About 2000 m north of the confluence of Porcupine and Steady Creeks a northwest trending, low-amplitude anticline parallels the crest of the Second Ridge. The southwestern limb of this anticline is terminated by the previously mentioned easterly striking fault.

#### 2.2 SAMPLING OF LIMESTONE

Four samples of limestone were chipped (Appendices 1 and 2) but only two (9328-9329) are within the property on claim Stag 2. The four samples have been adjusted in a manner similar to those in the 1993 report (Appendices 3 and 4). As indicated in Section 2.1.1, samples 9328 and 9329 are interpreted to belong to unit C6. It appears to be of excellent quality (Table 2.2). Samples 9326 and 9327 are from a ridge northeast of the Second Ridge (Fig. 2.2).

3.

#### FLAGGING OF ACCESS TRAILS TO DRILLSITES

In February 1994, we applied to the Ministry of Energy, Mines and Petroleum Resources for approval of a diamond drilling program. After many delays partly relating to the CORE hearings and report, and partly because the Ministry preferred shorter and steeper access trails than those originally proposed to the drillsites on the South Porcupine Ridge, we were issued Annual Work Approval Number KAM94-0300423-338, and obtained Mineral Exploration Reclamation Permit MX-3-173, dated August 23, 1994. Most of the access trails originally proposed for the South Porcupine Ridge were at gradients of 8 per cent or less so that they could be upgraded to haul roads in advance of quarrying, and hence result in less total disturbance. One of the requirements of Reclamation Permit MX-3-173 is that the access trails to the drillsites be flagged and checked by the B.C. Forest Service prior to construction. Hence, access trails totalling 4.4 km were flagged on the South Porcupine and Columbia Lime Ridges (Fig. 3.1 to 3.4). Most of that on the Columbia Lime Ridge is suitably located for upgrading to a haul road, but only 0.32 km of the 2.60 km flagged on the South Porcupine Ridge is so located. Reclamation Permit MX-3-173 was obtained too late in the season to allow construction of the access trails and the drilling.

#### 4. IMPROVEMENTS TO THE PORCUPINE CREEK ROAD

About 230 m of a very muddy and rutted section of the road along Porcupine Creek near its crossing of Porcupine Creek was improved (Fig. 3.2). This involved smoothing of the ruts and applying 10 to 15 cm of granular material obtained locally for a width of 4 m. This work was contracted to Sid's Construction Ltd. of Clinton, who used the following equipment:

Kenworth Tandem Dump Truck Freightliner Tandem Dump Truck JD310D Loader Backhoe JD455D Trackloader

The B.C. Forest Service in Clinton advised that no permits were needed to improve this short section of an existing road.

J.R. Dahrouge, B.Sc., P.Geol.

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Edmonton, Alberta 1994 11 07

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7

- Faragher, T., and Halferdahl, L.B. (1993) Geology and sampling in 1993 of the Kelly Lake limestone deposits, Marble Range, west of Clinton, British Columbia; B.C. Min. Energy, Mines Petr. Res. assessment report 23224, 19 p., 13 fig., 9 appendices.
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- Trettin, H.P. (1980) Permian rocks of the Cache Creek Group in the Marble Range, Clinton area, British Columbia; Geol. Surv. Can. Paper 79-17.

5.











#### **APPENDIX 1: DESCRIPTIONS OF ANALYZED CHIP SAMPLES**

Four rock samples representing about 24 m of limestone strata were obtained by collecting chips from outcrops perpendicular to bedding, where bedding was recognized. Where bedding was not visible, the chips were collected in directions of assumed bedding or down-slope with topography. Each sample consists of chips of roughly equal size at intervals of mostly 30 to 35 cm. The samples in the two sections start at the stratigraphic top of the section and end at the stratigraphically lowest part. Stratigraphic thicknesses based on measured attitudes of planar features interpreted as bedding or extrapolated attitudes are approximate only. Elevations reported are altimeter readings without corrections: altimeters were set at known elevations daily and fluctuations are expected with changes in barometric pressure.

Samples were collected from 2 numbered sections including one section on the Columbia Lime Ridge representing at least 10 m of strata, and one section from the Lone Ridge east of the Second Ridge representing at least 13 m of strata (Figure 2.2).

#### SECTION B-36 LONE RIDGE

Stratigraphic thicknesses are based on bedding attitudes taken from eastern edge of ridge crest, because the ridge forms part of a southerly plunging / trending anticline. Only the eastern limb was sampled.

Sample	Sample Orientation	Bedding Attitude	Sample Slope	Measured Length (m)	Horizontal Length (m)	Stratigraphic Thickness (m)
9327	<b>-</b> .	115°/37°NE	38°	~10	_	5½
9326	228°	-	42°	<u>~11</u>	-	_~8_
	<u> </u>	<u> </u>		21		13½

Sample	Stratigraphic Thickness(m)	Description
9327	5½	<u>limestone</u> , light- to medium-grey weathered, medium- to dark-grey fresh, cryptocrystalline, beds generally greater than 1 m, abundant calcite veinlets up to 1 cm in width, abundant calcite blebs and irregular masses up to 10 cm in width, up to 1% chert stringers, attitude of bedding 115%37°NE
9326	~8	limestone, light- to medium-grey weathered, medium- to dark-grey fresh, cryptocrystalline, beds generally greater than 1 m, abundant calcite veinlets up to 1 cm in width, abundant calcite blebs and irregular masses up to 10 cm in width, rare chert stringers to ½ mm in width and 50 mm in length, trace rust on fracture surfaces, attitude of bedding 030°/11°NE, elevation at sample base 6220'

## PART OF SECTION B-24 COLUMBIA LIME - WEST RIDGE

Sample	Sample Orientation	Bedding Attitude	Sample Slope	Measured Length (m)	Horizontal Length (m)	Stratigraphic Thickness (m)
9329	-	120°/25°SW		-	-	. 5
9328	134°	136°/28°SW	21°	~11	-	<u>5²/</u> 3
						10²/ <sub>3</sub>
Sample	Stratigraphic Thickness(m)	Description		· · · · · · · · · · · · · · · · · · ·		
9329	5	limestone, gro whitish calcite stain on joint bedding 120%	ey weather e stringers surfaces, a /25°SW	ed, light-grey t to 1 cm in wid attitude of joint	fresh, cryptocr th, minor brow s 085°/52°SE,	ystalline, few vnish-orange attitude of
-	1½	covered				
9328	5 ²/ <sub>3</sub>	limestone, lig fresh, cryptoc lower 2½ m w 136%/28°SW	ht-grey to I rystalline, vith chert s	ight-buff weatl thick-bedded t tringers to 2 m	nered, white to o massive, ve nm, attitude of	b light-grey ary fractured, bedding

Stratigraphic thicknesses are based on bedding attitudes from the ridge crest.

# APPENDIX 2: ANALYTICAL REPORTS FOR WHOLE ROCK ANALYSES FROM ACME ANALYTICAL LABORATORIES LTD.

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		leinz (	AI 203	Fe203	MaD	CoO	No20	r20 Ti	02 P20	5 MmO	Cr203	Re	Ni	Sr		<u> </u>	Nb	Sc	LOI	SUM			
		*	*	%	%	<u>%</u>	%	%	*	x x	<u>x</u>	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	*			
	9326	1.20	.35	.07	.26 5	54.08	.02 <	.05 .	02.2	7 <.01	<.002	151	404	258	<10	<10	<10	<2	42.9	99.28 99.55			
	9327 9328	.87	.26	<.05 <.05	.30 :	55.46	.01	.06 <.	01 .2	2 <.01 2 .01	.002	37	18	130	10	<10	<10	<2	43.4	99.86			
	9329	.44	. 24	<.05	.13 5	55.42	.01 <	.05 <.	01 .0	3.01	.003	41	37	152	41	<10	<10	<2	43.5	99.85			
	KE 9529	.43	.21	<.05	.13 -	.02	.01 <	.05 <.		2 <.01	<.002	43	30	.147		<u> </u>	<u> </u>	~	43.4	100.00		····	
200 GRAM S	AMPLES ARE F	USED W	ITH 1.	2 GRAM	OF	1802 A	ND ARE	DISSO	LVED I	N 100	MLS 5%	HNO3.	Ba I	S SUM	AS Ba	aSO4	AND O	THER	METAL	S ARE SU	JM AS O	(IDES.	
- SAMPLE TY	PE: LIMESTON	IE	Sample	s begi	nning	'RE'	are du	plicat	e samp	les.			0	P		•							
							Λ	•	la.				(	L.									
ATE RECEIVED:	AUG 26 199	94 DA	ATE R	EPOR	t ma	ILED	): Mu	Sy 31	174	1	SIGNE	D BY	·	$\sim$	$\cdots$	1.D.T	OYE,	C.LEO	NG, J	.WANG; C	ERTIFIE	D B.C.	ASSAYER
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## APPENDIX 3: DETERMINED, ADJUSTED, AND PREFERRED ANALYSES FOR CaO AND LOI IN THE 1994 SAMPLES

Adjusted values are calculated for 4 samples collected from the Kelly Lake deposits during 1994. The preferred values for CaO and LOI have been substituted for the determined value in Appendix 4.

### **ICP Analyses by Acme**

2

(100) = 000 (D00)
Pref) = LOI (Det'd)
ł

LOI - CO<sub>2</sub> EQ  $\leq$  0.00 and CaO (LOI)  $\leq$  CaO (Imp)

CaO (Pref) = CaO (LOI)

LOI (Pref) = LOI (LOI)

For samples with repeat analyses

 $CaO (Pref) = [CaO_{ORIGINAL} (LOI) + CaO_{REPEAT} (LOI)] / 2$ 

LOI (Pref) = [  $LOI_{ORIGINAL}$  (LOI) +  $LOI_{REPEAT}$  (LOI)] / 2

Sample	Code	Code	Code	LOI -		Ca	0%			1	LOI%	
· · ·		CO2 EQ	Det'd	LOI	Imp	Pref	Det'd	LOI	Imp	Pref		
9326	1	0.45	54.08	54.69	54.62	54.08	42.90	43.14	43.08	42.90		
9327	1	0.33	54.50	54.86	54.81	54.50	43.20	43.36	43.33	43.20		
9328	2	-0.25	55.46	55.29	55.31	55.29	43.40	43.71	43.73	43.71		
9329	2	-Ö.11	55.42	55.27	55.29	55.25	43.50	43.70	43.71	43.69		
RE 9329	2	-0.53	55.82	55.24	55.31	-	.43.40	43.68	43.73	-		
•												

₽

## APPENDIX 4: DETERMINED AND PREFERRED CONCENTRATIONS OF CHEMICAL CONSTITUENTS IN THE 1994 SAMPLES

All values are as determined except for CaO, LOI, and SUM where an adjustment has been applied.

<b>k.</b> %	%	%	%	9/	~										
				/0	%	%	%	%	%	%	ppm	ppm	ppm	%	%
54.50	0.30	0.87	0.26	< 0.05	0.01	0.06	< 0.01	0.22	< 0.01	0.002	153	245	< 148	43.20	99.55
54.08	0.26	1.20	0.35	0.07	0.02	< 0.05	0.02	0.27	< 0.01	< 0.002	151	258	< 436	42.90	99.32
Ridge															
55.25	0.13	0.44	0.23	< 0.05	0.01	< 0.05	< 0.01	0.03	0.01	0.002	42	151	< 96	43.69	99.92
55.29	0.13	0.49	0.22	< 0.05	0.04	< 0.05	0.02	0.02	0.01	0.003	37	130	< 50	43.71	100.05
	54.50 54.08 <b>Ridge</b> 55.25 55.29	54.50       0.30         54.08       0.26         Ridge       55.25       0.13         55.29       0.13	54.50       0.30       0.87         54.08       0.26       1.20         Ridge         55.25       0.13       0.44         55.29       0.13       0.49	54.50       0.30       0.87       0.26         54.08       0.26       1.20       0.35         Ridge         55.25       0.13       0.44       0.23         55.29       0.13       0.49       0.22	54.50       0.30       0.87       0.26       < 0.05	54.50       0.30       0.87       0.26       < 0.05	54.50       0.30       0.87       0.26       < 0.05       0.01       0.06         54.08       0.26       1.20       0.35       0.07       0.02       < 0.05	54.50       0.30       0.87       0.26       < 0.05	54.50       0.30       0.87       0.26       < 0.05       0.01       0.06       < 0.01       0.22         54.08       0.26       1.20       0.35       0.07       0.02       < 0.05	54.50       0.30       0.87       0.26       < 0.05       0.01       0.06       < 0.01       0.22       < 0.01         54.08       0.26       1.20       0.35       0.07       0.02       < 0.05	54.50       0.30       0.87       0.26       < 0.05       0.01       0.06       < 0.01       0.22       < 0.01       0.002         54.08       0.26       1.20       0.35       0.07       0.02       < 0.05	54.50       0.30       0.87       0.26       < 0.05	54.50       0.30       0.87       0.26       < 0.05       0.01       0.06       < 0.01       0.22       < 0.01       0.002       153       245         54.08       0.26       1.20       0.35       0.07       0.02       < 0.05	54.50       0.30       0.87       0.26       < 0.05	54.50       0.30       0.87       0.26       < 0.05       0.01       0.06       < 0.01       0.22       < 0.01       0.002       153       245       < 148       43.20         54.08       0.26       1.20       0.35       0.07       0.02       < 0.05

\*Others: This category is the sum of Nb, Ni, Sc, Y, and Zr as determined.

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# **APPENDIX 5: ITEMIZED COST STATEMENT**

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a) <u>Personnel</u> J.R. Dahrouge, geologist

	11 _2 13	days days days	field work b report prepa @	etween Au aration \$375.00	ugust 8 and 18, 1994	\$4,875.00		
	L. B. Halfe	rdahl, geol	logical engine	eer			· .	
	11  12	days day days	field work b report prep @	etween Au aration \$585.00	ugust 8 and 18, 1994	4 \$7,020.00		· · ·
	W. McGuir	e, draftsm	an					
	12	hours 12	preparing n hours	naps for re @	sport \$32.00	\$384.00	\$12,279.00	
b)	Food and	Accomm	odation					
	20	man-day: 20	s in motel an man-days	d restaura @	nts \$50.60	\$1,012.00	\$1,012.00	
c)	Transport	<u>ation</u>						
	Helicopter:	2 220	hours litres	œ	\$722.25 \$0.64	\$1,444.50 \$141.24		
	Airfares:	Edmontor 2	n-Kamloops-I @	Edmonton \$475.00	(B.C. Part Only)	\$950.00		
	Vehicle Re	ental:	4x4 and fue	el		\$734.74		
	Express:		Equipment			\$25.68	\$3,296.16	
d)	<b>Instrumen</b> Level:	i <mark>t Rental</mark> 2	weeks	Q	\$37.45	\$74.90	\$74.90	
e)	Not Applic	<u>able</u>						
f)	<u>Analyses</u> 2	samples   2	prepared and samples	l analyzed @	for 18 constituents \$20.54	\$41.08	\$41.08	. · ·
g)	<u>Report Pre</u>	<mark>eparation</mark> typing, re	production, a	ssembly		\$208.00	\$208.00	

h)	<u>Other</u>			•
-	•	Long distance telephone charges	\$15.83	
		Contract work on upgrading 230 m of road	\$1,070.00	
		Topographic map	\$9.34	
				\$1,095.17
	Sub-Tot	al:		\$18,006.31
	Less wo	ork not on claims:	,	\$500.00
	Total:		·	\$17,506.31

### **APPENDIX 6: QUALIFICATIONS**

J.R. Dahrouge obtained degrees in geology and computing science from the University of Alberta, Edmonton in 1988 and 1994, respectively. He has four years of experience in mining exploration. He is registered as P. Geol. in the Association of Professional Engineers, Geologists, and Geophysicists of Alberta.

The work described in the report was under the supervision of L.B. Halferdahl, who obtained degrees in geological engineering and geology from Queen's University, Kingston, Ontario, and The Johns Hopkins University, Baltimore, Maryland. He has more than 35 years experience as a practising engineer and geologist in research and mining exploration, including consulting since 1969. He is a member of the Canadian Institute of Mining and Metallurgy, and is registered as P. Eng. and P. Geol. in the Association of Professional Engineers, Geologists, and Geophysicists of Alberta, and registered as P. Eng. in the Association of Professional Engineers and Geoscientists of British Columbia.









![](_page_26_Picture_0.jpeg)

N5 PiOGF CG FF CG CG FF CG CG FF CG CG CG CG CG CG CG CG CG CG CG CG CG	$N3 = 23$ $N3 = 23$ $C2 = 23$ $B-23$ $B-23$ $B_{23}$ $B_$	MAP 11 7000 6700 N1 FC2	GEOLOGICAL BRANCH ASSESSMENT REPORT
LEGEND Tertiary ?	SYMBOLS	<sup>8037.</sup> 44 c 10	REVISIONSBYDATEBYDATELBH1993.12LBH1994.10
D7 Intrusions Upper Permian Cache Creek Group Marble Canyon Formation C6 Southwest Carbonate N5 Argillite, siltstone, conglomerate, schist	Geological boundary (approximate, assumed)Rock-chip sample with sample/section hiFault (approximate, assumed) $$	mber $c - 12$	CONTINENTAL LIME LTD. HALFERDAHL & ASSOCIATES LTD. EDMONTON, ALBERTA
C4       First Ridge Carbonate         N3       Schist (sch), tuff and agglomerate (v), limestone and argillite (s), greenstone (g)         C2       Second Ridge Carbonate         N1       Volcanics	Anticlinal axis (arrow indicates plunge)	2 BL HERITSH	Fig 2.5 Geology and Samples, Sheet C KELLY LAKE AREA, B. C.
	3. Contour interval is 100 ft.	OLUMEI A GINE EXT.	0 100 200 300 400 500 m

SCALE: 1:5000

1992.08

LBH

![](_page_27_Picture_0.jpeg)

# SYMBOLS

394 S - 770

-5200

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₽.10

Creek

Rock-chip sample with sample/section number B-16
Claim post (2 post, 4 post) o 🛛
Claim line – – – –
Main road
Access road, trail
Diamond drillhole
Power line

\_\_\_\_\_

![](_page_27_Figure_4.jpeg)

BY

LBH

LBH

REVISIONS

DATE BY DATE BY DATE

300

SCALE: 1: 5000

200

500 m

1992.08

400

and argillite (s), greenstone (g)

ROAD

\_\_\_

/A-4

C4

NOTES:

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Base map prepared from enlargement of part of 1 : 50 000 92P/4 topographic map.
 Geology modified after Trettin (1980).
 Contour interval is 100 ft.

![](_page_28_Picture_0.jpeg)

![](_page_28_Figure_6.jpeg)

![](_page_29_Picture_0.jpeg)

TWO

4400

<u>م</u>ک

A QY

LEGEND

Intrusions

Volcanics

Marble Canyon Formation

Southwest Carbonate

First Ridge Carbonate

Second Ridge Carbonate

Argillite, siltstone, conglomerate, schist

Schist (sch), tuff and agglomerate (v), limestone and argillite (s), greenstone (g)

Cache Creek Group

Tertiary ?

Upper Permian

D7

C6

N5

C4

N3

C2

N1

# SYMBOLS

	Rock-chip sample with sample/section number	8526
	Claim post (2 post, 4 post)	◎ ⊡
	Claim line	
~ 70° ~	Main road	
30°	Access road, trail	
	Diamond drillhole	0 <del>73-5</del>
	Power line	•

# NOTES.

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Geological boundary (approximate, assumed) ......

Schistosity, cleavage, foliation (inclined, vertical)

Fault (approximate, assumed) .

Bedding (horizontal, inclined, vertical) .

Planar feature / joint (inclined, vertical)

Synclinal axis (arrow indicates plunge) .

Anticlinal axis (arrow indicates plunge) .

Base map prepared from enlargement of part of 1 : 50 000 92P/4 topographic map.
 Geology modified after Trettin (1980).
 Contour interval is 100 ft.

![](_page_30_Figure_0.jpeg)

![](_page_31_Picture_0.jpeg)