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District G	Geologist, Prince George		Off Confidential: 89.08.	10
ASSESSMENT	F REPORT 17989 MIN	NING DIVISION: Car	riboo	
CLAIM(S):	LAT 52 18 00 I UTM 10 5796643 6 NTS 093A07E Topper,Topper 4-5 S): World Cement Ind.	ONG 120 43 00 555697		
AUTHOR(S): REPORT YEA COMMODITIE	Symonds, D.F. AR: 1988, 38 Pages ES			
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	and argillites of the Qu silver occur in quartz s Galena and sphalerite ha significant multielement	weats and veins weats and veins weats and veins weats and set of the set of t	o. Trace values of gold within the sedimentary ro . Soil geochemistry show	and ocks. VS
	Geochemical HMIN 20 sample(s) ;AU SOIL 19 sample(s) ;AU	J,AG,PB,ZN,CU J,AG,PB,ZN,CU		
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Cro	TOPPERGOLD oked Lake Area, Car	PROPERTY iboo Minim	ng Division	
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	D.F. SYMONDS,	B.Sc. (Geo	ن ⊄ ۱.)	
Burton Consu 901-626 West Vancouver,	lting Inc. Pender Street B.C., V6B 1V9		November 8,	1988
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# **BURTON CONSULTING INC.**

1.0 INTRODUCTION

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This report has been written on behalf of Grand National Resources Inc. and World Cement Industries Inc. It describes field work, including soil profile analysis and heavy mineral analysis which was carried out on the Toppergold property, located in the Cariboo area near Crooked Lake, B.C., during July and August of 1988 under the direct supervision of the author.

A statement of costs incurred directly as a result of the 1988 work program is included.

Recommendations are made for further work on the property. This cost statement was prepared by a representative of Grand National Resources Inc. and supplied to Burton Consulting Inc.

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2.0 SUMMARY & CONCLUSIONS

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The Toppergold property, consisting of 9 metric claims totalling 100 units is located near Crooked Lake in the Cariboo area of British Columbia. The property is held by Grand National Resources Inc. and World Cement Industries Inc. of Vancouver, B.C. Access to the property is by road from 100 Mile House, B.C. northeasterly via the Canim Lake/Hendrix Lake/McKusky Creek road network, a total distance of approximately 140.0 kilometres.

Prior to 1984 there does not appear to have been any work recorded on the claim area. In 1984 and 1985, geochemical soil sampling, rock chip sampling and geological mapping were carried out. Three zones of geochemically anomalous copper, zinc and silver with accessory lead and gold values were outlined with an "apparent regional extent inferred to be greater than 3 kilometres". These zones were interpreted as reflecting a mineralized stratigraphic horizon within black phyllites of the Upper Triassic Quesnel River Group.

Mineralization on the property consists mainly of trace values of gold and silver in quartz sweats and veins occurring within sedimentary rocks of the Upper Triassic Quesnel River Group. Galena and sphalerite mineralization has been reported within the quartz material.

During the 1988 field season, soil profile studies and heavy mineral sampling were carried out. A total of 5 sites were selected as representing the centre of a major anomalous area from the 1985 gold soil geochemistry. Samples were taken down the profile and were analysed using two techniques. Part of the sample was ground to -150 mesh and analsyed(as a rock sample would be) and the other part was screened to -80 mesh and treated as a normal geochemical sample. Results indicated that the bulk of the gold found in the soil is in the coarser fraction, and that the total grind to -150 mesh and subsequent analysis technique should be employed in future.

A total of 20 heavy mineral samples were taken from creeks draining the claim area. These samples were taken using a portable suction dredge/sluice box set-up. The samples were split into coarse and fine fractions and analysed separately. Several of the fine fraction samples were highly anomalous in gold, indicating the potential for lode gold deposits in the claim area.

Recommendations are made for follow-up work further to the 1988 surveys. The area which has been examined by soil

profiles should be trenched and sampled using an excavator, in an attempt to determine the source of the gold in the soil. The anomalous drainages as detected by the heavy mineral sampling should be tested in more detail. Further heavy mineral sampling is needed in areas on the claims which have not yet been tested by any technique. This will provide a cost-effective method of prioratizing areas for follow-up work.

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3.0 LOCATION & ACCESS

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The Toppergold property is located immediately north and east of Crooked Lake, a small lake roughly 10.0 kilometres in length which drains into the Horsefly River and eventually into the Quesnel River/Fraser River drainage(see Figure 3-1).

Access to the property is by road from 100 Mile House on Highway 97. The turnoff to Canim Lake is taken easterly to Eagle Creek on the north side of Canim Lake, a distance of approximately 60.0 kilometres. At Eagle Creek, the turnoff to the Boss Mountain Mine area near Hendrix Lake is taken northerly for a distance of approximately 75.0 kilometres along the Canim Lake/Hendrix Lake road and the McKusky Creek roadto the west end of Crooked Lake. Access to the western end of the property can be gained by using logging road "K", which leaves the McKusky Creek forest road approximately 7.0 kilometres northwest of Crooked Lake. An old fire access road provides seasonal access to the Tip claim and to the northern end of the Topper #1 to #4 claims.

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4.0 CLAIM INFORMATION

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The Toppergold property is located in the Cariboo Mining Division of British Columbia. The property is comprised of 9 metric claims totalling 120 units. The Topper Group consists of 8 mineral claims totalling 100 units. The 20 unit Jolly Jack mineral claim also forms part of the property. Claim information is as follows:

#### Topper Group

<u>_Claim_Name(#</u>	<u>units)</u>	<u>Record #</u>	<u>Record</u> Date	Expiry Date
Topper Topper #1 Topper #2 Topper #3 Topper #4 Topper #5	(16) (20) (12) (6) (18) (16)	4803 5097 5098 5099 7095 7229	22AUG83 22AUG83 22AUG83 22AUG83 22AUG83 15AUG85 28NOV85	22AUG90 ** 22AUG90 ** 22AUG90 ** 22AUG90 ** 22AUG90 ** 15AUG89 ** 28NOV90
Тір Тор	(8) (4)	6001 6774	19APR84 18MAR84	19APR90 18MAR90
TOTAL	100 unit	s *	* = Pending ac this	ceptance of report

#### <u>Ungrouped</u>

4803

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0011	.,			

**03MAY83** 

03MAY89

Claim information and location is shown in Figure 4-1.

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5.0 HISTORY & PREVIOUS WORK

Prior to the exploration programs carried out by Grand National Resources Inc. and World Cement Industries Inc. during 1984, there does not appear to have been any recorded work carried out on the claim area. During the 1984 and 1985 field seasons, geochemical surveys "B" including horizon soil sampling and rock chip sampling were carried out. Geological mapping at a scale of 1:25,000 was carried out. Three zones of geochemically anomalous copper, zinc, silver and accessory lead and gold values were outlined, with an "apparent regional extent inferred to be greater than 3 kilometres".

During 1984, a VLF-EM survey conducted on the Jolly Jack claim detected a number of anomalies. These anomalies were interpreted as relating to the graphitic nature of the phyllitic rocks in the area.

During 1985, geochemical surveys on the Topper Group were successful in extending and outlining a number of anomalous zones. Three broad zones have been located which have been called the West, Central and South anomalies. These zones are "defined by strongly anomalous geochemical silver, zinc and copper values with an accessory gold and lead association. The geochemical signature suggests a particular mineralized stratigraphic horizon within the underlying black phyllites. This would give the Topper property the potential to host a low-grade bulk-tonnage silver/base metal/gold deposit".

During 1986, geological mapping was carried out along road cuts and prominent ridges(1:2,500). Rock chip sampling of quartz sweats, veins and stockwork and all pyritic rocks along with further geochemical soil sampling and heavy mineral concentrate sampling five localities at was Anomalous levels of silver and gold were found completed. several sites thought to be underlain by "knotty" lititic rocks. The "West" zone as outlined during the at phyllititic rocks. 1985 sapling program was confirmed and extended for 500 metres to the northwest.

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6.0 GEOLOGY

The Toppergold property has been mapped geologically at a scale of 1:25,000 (Kregosky, 1984-85). The Upper Triassic formation of the Quesnel River Group is shown as four distinct units on the property(see Figure 6-1). These four units are:

- 1) Phyllites
- 2) Calcareous argillites and argillites
- 3) Phyllites, slaty argillites and schist
- 4) Chlorite sericite schist

A dioritic intrusive of possible Triassic/Jurassic age has also been mapped on the property. These intrusive rocks are of interest as they are found to be associated with gold mineralization further north within the Quesnel Trough. The "QR" deposit of Dome Mines Ltd. contains over one million tons of ore grading 0.2 oz/ton gold. This ore occurs at the contact of an intensely propylitized package of basaltic calcareous fragmental volcanics and overlying sediments. Α quartz-poor diorite stock which outcrops nearby is thought to be the heat source for fluids ' responsible for remobilizing the gold.

At several locations on the property a "knotty" or "knobby" phyllitic unit has been observed. This unit is similar in appearance to the rock which hosts gold-bearing quartz on the Frasergold property to the east. The "knotty" texture is caused by iron oxide or iron carbonate-stained blebs or porphyroblasts.

Volcanic rock units on the property were observed both interbedded as thin beds with the sediments and as massive beds. Extreme alteration makes the identification of original rock types difficult.

Contacts between the various rock units on the property trend generally northwest.

Mineralization on the property consists mainly of trace values of gold and silver in quartz sweats and veins occurring within the phyllites and other sediments on the property. Large pyrite cubes and fine-grained disseminated pyrite can be found in some of the quartz sweats. Galena and sphalerite mineralization has been reported within the quartz material. Significant multielement geochemical anomalies on the property would indicate that considerable surface leaching and depletion has taken place, and that samples of fresh, unweathered mineralized material should provide better results.



7.0 GEOCHEMISTRY

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7.10 Soil Profiles

A total of 5 sites were selected from the 1985 gold geochemical map to be examined more closely. The locations of the soil profiles taken are shown in Figure 6-1. The purpose of this examination was to attempt to explain the high gold values in the soil. At each sample profile site, a large hole was dug as deeply as possible with a shovel and samples of each soil horizon were taken. Any rocks of interest found in the hole were taken for assay.

Each sample was placed in a gussetted kraft soil sample envelope and sent to Min-En Laboratories Ltd., 705 West 15th Street, North Vancouver, B.C. for analysis. The samples were split into two subsamples. One subsample was sieved to -80 mesh and the fine fraction was analysed. The other subsample was totally ground to -150 mesh and analysed. Both subsamples were analysed in a similar manner for gold, silver, lead, zinc and copper. Gold analysis was by fire assay with a wet atomic absorption finish and the silver, lead, zinc and copper analyses were acid digestion followed by multi-acid atomic absorption. Detection limits for the analyses of the two subsamples are as follows:

DETECTION LIMITS (-150 mesh total grind - treated as rock)

GOLD	-	0.01	gm/tonne	(10	ppb)
SILVER	-	0.1	gm/tonne	(0.1	ppm)
LEAD	-	0.01	8	(100	ppm)
ZINC		0.01	8	(100	ppm)
COPPER	-	0.001	18	(10	ppm)

#### DETECTION LIMITS (-80 mesh fraction)

GOLD - 5 ppb SILVER - 0.0 ppm LEAD - 0.1 ppm ZINC - 0.5 ppm COPPER - 1 ppm

The analytical results have been converted to common units for purposes of discussion(Gold - ppb, Silver - ppm, Copper - ppm, Lead - ppm, Zinc - ppm). Sample values at the detection limit are marked with an *.

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Analytical profile results	results follow:	are	shown	in	Appendix	I.	The	soil
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Original Grid Designation: 500N 550E Original Site Depth(Est.): 6 - 10 cm. Local Slope: 15⁰ to North Original Geochemical Value(Gold - ppb): 55

#	HORIZ.	FR.ANAL.	AU(ppb)	AG(ppm)	)Cu(ppm)	Pb(ppm)	<u>)Zn(ppm)</u>
88-1-3	L A _{rr}	-150	120	2.1	40	*100	200
88-1-3	L AH	-80	5	2.3	44	14	128
88-1-2	2 C	-150	70	3.8	50	*100	200
88-1-2	2 C	-80	5	2.3	58	17	137
88-1-3	3 C	-150	40	2.7	70	*100	200
88-1-3	3 C	-80	10	1.9	57	23	146
88-1-	4 C	-150	60	2.4	60	*100	300
88-1-	4 C	-80	5	2.6	77	18	175

* = detection limit
whole sample pulverized to -150 mesh



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Original Grid Designation: 400N 750E Original Site Depth(Est.): 10 - 15 cm. Local Slope: 10⁰ to North Original Geochemical Value(Gold - ppb): 55

#	HORIZ.	FR.ANAL.	AU(ppb)	AG(ppm)	)Cu(ppm)	Pb(ppm	)Zn(ppm)
88-2-1	А _Н	-150	80	2.3	40	*100	*100
88-2-1	AH	-80	5	1.8	18	11	49
88-2-2	A	-150	30	1.8	20	*100	*100
88-2-2	А	-80	5	1.4	15	9	42
88-2-3	В	-150	10	2.5	40	*100	200
88-2-3	В	-80	5	1.7	27	12	63
88-2-4	В	-150	20	2.6	60	*100	200
88-2-4	В	-80	5	1.8	45	16	103
88-2-5	С	-150	40	4.3	80	*100	*100
88-2-5	С	-80	100	3.1	58	14	110

* = detection limit

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whole sample pulverized to -150 mesh



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Original Grid Designation: 400N 750E Original Site Depth(Est.) 10 cm. Local Slope: 5° to Northeast Original Geochemical Value(Gold - ppb): n.a.

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<u> </u>	HORIZ.	FR.ANAL.	AU(ppb)	AG(ppm	)Cu(ppm)	Pb(ppm)	)Zn(ppm)
88-3-1		qtz. rock	*10	0.4	*10	200	*100
88-3-2	A	-150	50	4.6	50	*100	*100
88-3-2	A	-80	5	4.2	37	13	101
88-3-3	В	-150	30	1.9	30	*100	*100
88-3-3	В	-80	10	0.7	17	8	56

* = detection limit
whole sample pulverized to -150 mesh



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Grid Location: 95 m. grid south from soil profile 88-3 Original Site Depth(Est.): 8 - 10 cm. Local Slope: 3⁰ to Northeast Original Geochemical Value(Gold - ppb): 275

#	HORIZ.	FR.ANAL.	AU(ppb)	AG(ppm	)Cu(ppm)	Pb (pp)	m)Zn(ppm)
88-4-1	L	qtz. rock	*10	0.3	*10	*100	*100
88-4-2	2 A	-150	40	2.0	20	*100	200
88-4-2	2 A	-80	20	1.3	15	15	57
88-4-3	3 B	-150	30	3.6	50	*100	*100
88-1-3	BB	-80	5	2.5	44	16	122

* = detection limit
whole sample pulverized to -150 mesh



Figure 7-ID

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Grid Location: 85 m. @ 115⁰ from soil profile 88-4 Original Site Depth(Est.): 15 cm. Local Slope: 13⁰ to Northeast Original Geochemical Value(Gold - ppb): 45

#H	ORIZ.	FR.ANAL.	AU(ppb)	AG(ppm	)Cu(ppm)	Pb(ppm	)Zn(ppm)
88-5-1		qtz. rock	20	1.7	10	200	*100
88-5-2	A	-150	120	3.2	40	*100	*100
88-5-2	A	-80	5	1.5	37	19	95
88-5-3	B/C	-150	100	3.7	110	*100	200
88-5-3	B/C	-80	10	2.6	85	32	245

* = detection limit
whole sample pulverized to -150 mesh



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The arithmetic average of 16 soil samples ground to -150 mesh and analysed for gold is 54 ppb whereas the arithmetic average of the same 16 soil samples screened to -80 mesh and analysed for gold is only 13 ppb. Only one of the -80 mesh fraction analyses was higher than the corresponding -150 mesh total grind and analysis. The fact that the most significant proportion of the gold values detected by geochemical soil sampling comes from the coarser than +80 mesh fraction could indicate that the source of the gold is largely either placer or that there is a source of lode gold nearby. The coarse gold is more likely to have derived from a "mineralized shoot" been rather than representing the background value of a favourable ore horizon.

The values obtained for silver, lead, zinc and copper from the -80 mesh analysis and the -150 mesh total grind analysis appear to be fairly uniform, considering the difference in detection limits between the analytical techniques used on the two fractions.

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2.0 Heavy Mineral Sampling

Heavy mineral sampling was carried out at 19 sites on and around the claim area in an attempt to trace the source of the anomalous gold values detected by previous geochemical surveys. Sampling locations and results are shown in Figure 7-2 and the results are also shown in Appendix II.

A portable sluice box and pump/suction dredge were used to sample active drainages at a nominal 500 metre spacing. The sluice box was set up on the creek bank so that no reject material from the box would be put back in the creek. The suction hose was used to pick up stream deposits in a localized(usually  $6.0 \text{ m}^2$ ) area. The method concentrates on picking up material from natural "traps" such as underneath stream boulders, in cracks and on inside curves in the stream.

About one hour is required at each sample site(once the site is reached) to dredge and sluice approximately 0.5  $m^3$  to 0.75  $m^3$  of material. The material which is trapped by the fine riffles and the matting in the sluice box is washed carefully into a large heavy poly bag, allowed to settle. Most of the water can then be poured off.

The samples were sent to Chemex Laboratories Ltd., 212 Brooksbank Ave., North Vancouver, B.C., V7J 2C1 where they were processed as follows:

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The detection limits for heavy mineral sample analysis were as follows:

Gold - 5 ppb Copper - 1 ppm Lead - 1 ppm Zinc - 1 ppm Silver - 0.2 ppm

#### Results of Heavy Mineral Stream Sampling

The arithmetic average value for 20 gold samples in the fine fraction was 942 ppb. The arithmetic average value for the corresponding coarse fraction was 342 ppb. The fine fraction most probably reflects gold being shed from a lode deposit whereas the few high values in the coarse fraction would indicate gold from a placer trap.

The creek(known locally as "Spin" Creek) which cuts through the Topper #5 claim has 8 samples with gold values greater than 500 ppb in the fine fraction. There are 2 high samples in the coarse fraction(Spin #1 & Spin #2) that most likely reflect placer traps. The single sample taken at the bottom of Cosmoskey Creek is anomalous(1710 ppb) in the fine fraction. Two of the samples taken on the creek draining the Topper #4 claim are anomalous in the fine fraction.

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8.0 DISCUSSION & RECOMMENDATIONS

Results from the analysis of several soil profiles taken over areas previously sampled on the property and found to be anomalous geochemically indicate that any further geochemical analyses carried out should be done on a -150 mesh grind of the total sample. This will ensure that coarser gold is not missed in the samples. The areas which have been profiled should be tested using an excavator to find the source of the gold mineralization.

Analysis of heavy mineral samples taken on creeks draining the claim area indicate several anomalous values in the fine fractions as analysed for gold. These results indicate the potential for lode gold mineralization in these areas. Further heavy mineral sampling should be carried out with respect to these anomalous areas, to more closely define areas for for more detailed follow-up work. The untested portions of the claim block should also be tested using the heavy mineral sampling technique as a vehicle for prioratizing further exploration areas and targets.

# **BURTON CONSULTING INC.**

9.0 COST BREAKDOWN

The following cost breakdown was prepared by а representative from of National Resources Inc. Grand information supplied in part by Burton Consulting Inc.

# **GRAND NATIONAL RESOURCES INC.**

Suite 905 - 626 West Pender Street, Vancouver, B.C. Canada V6B 1V9 Telephone (604) 682-5648 Fax (604) 682-5649

TOPPERGOLD PROPERTY DIVISION/HORSEFLY B.C. CARIBOO MINING STAEMENT OF EXPENSES: Break down of expenses incurred in carrying out work on the Topper, Topper 5-Top-Tip Claims from July 21 to August 2,1988. Personel: Supervisor; Alex Burton P.Eng., geologist 2 days \$450.00 \$1,500.00 per day Report and drafting \$600.00 Field Geologist: D.F. (Doug) Symonds, B.Sc., \$300.00 per day 2,100.00 7 days 1,800.00 ⇐ Assaying and analyses \$150.00 per day 1,950.00 13 days Field manager: 1,300.00 13 days Field assistant: \$100.00 per day Board and room at \$70.00 per day 32/mandays 2,240.00 Truck rental 13 days at \$100.00 per day 1,300.00 700.00 Truck rental 7 days at \$100.00 per day 400.00 Mobilization and demobilization  $1,800.00 \leftarrow$ Assaying and analyses Dredging Edipment 2 weeks at \$300.00 per week 600.00 50.00 Field supplies \$ 15,740.00

# **BURTON CONSULTING INC.**

10.0 CERTIFICATE

I, Douglas Frederick Symonds, of 10081 - 120th Street, Surrey, B.C. do certify that:

1. I am a geologist and a graduate of the University of British Columbia (B.Sc. (Geol.), 1972).

2. I have practised my profession in Canada and the United States since 1972.

3. I have based this report on field work carried out under my direct supervision during July and August, 1988.

4. I have no personal interest, directly or indirectly in the property or securities of Grand National Resources Inc. or World Cement Industries Inc., nor do I expect to receive any such interest, directly or indirectly in any such property or securities.

Dated this 8th day of November, 1988 in Vapçouver, B.C.

DOUGLAS F. SYMONDS, B.SC. (Geol.) Geologist

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SPECIALISTS IN MINERAL ENVIRONMENTS	TIMMINS OFFICE: 33 EAST IROQUOIS ROAD P.O. BOX 867 TIMMINS, ONTARIO CANADA P4N 7G7 TELEPHONE: (705) 264-9996
Analytical Rep	oort
Pompany: EURTON CONSULTING poject: CARIBOO CROCKED LK. Attention: D. SYMONDS	File:8-1074 Date:AUGUST 10788 Type:RDCK ASSAY
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Samples: Sieved to mesh	c) mese ¹ / · · · · · · · · · · · · · · · · · · ·
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TIMMINS OFFICE: 33 EAST IROQUOIS ROAD P.O. BOX 867 TIMMINS, ONTARIO CANADA P4N 7G7 TELEPHONE. (705) 264-9996

<u>Certificate of ASSAY</u>

Company:BURTON CONSULTING INC. Foject:CARIBGO CROOKED LAKE.

File:8-1074/P1 Date:AUG 9/88 Type:SU1L ASSAY

bereby certify the following results for samples submitted.

Lamp a.	CU	PB	7 N	AG	AG	AU	AU
	%	X	%	GZTENNE	DZ / TON	GZTONNE	OZ/TON
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	. 004 . 005 . 007 . 006 . 010	.01 .01 .01 .01 .01	. 02 . 02 . 02 . 03 . 01	2,1 3,9 2,7 2,4 3,9	0.06 0.11 0.08 0.07 0.11	.12 .07 .04 .06	0.004 0.002 0.001 0.002 0.001
8021	.004	01	.01	2.3	0.07	.08	0.002
9822	.002	.01	.01	1.8	0.05	.03	0.001
823	.004	.01	.02	2.5	0.07	.01	0.001
8824	.004	.01	.02	2.4	0.08	.02	0.001
8825	.006	.01	.01	4.3	10.13	.04	0.001
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Certified by

MIN-EN CAELRATORIES LTD.



LABORATORIES LTD.

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SPECIALISTS IN MINERAL ENVIRONMENTS CIEMPED ASSAGES + ACAMENTS CIEMPED VANCOUVER OFFICE: 705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2 TELEPHONE (604) 980-5814 OR (604) 988-4524 TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE: 33 EAST IROQUOIS ROAD P.O. BOX 867 TIMMINS, ONTARIO CANADA P4N 7G7 TELEPHONE: (705) 264-9996

# <u>Certificate of GEOCHEM</u>

Company:BURTON CONSULTING INC. foject:CARIBOD CROOKED LAKE. attention:DOUG SYMONDS

File:9-1074/P1 Date:AUG 9/88 Type:SOIL GEOCHEM

hereby certify the following results for samples submitted.

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MIN-EN CABORATORIES LTD.

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LABORATORIES LTD.
SPECIALISTS IN MINFRAL EN

SPECIALISTS IN MINFRAL ENVIRONMENTS

VANCOUVER OFFICE: 705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2 TELEPHONE (604) 980-5814 OR (604) 988-4524 TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE: 33 EAST IROQUOIS ROAD P.O. BOX 867 TIMMINS, ONTARIO CANADA P4N 7G7 TELEPHONE: (705) 264-9996

<u>Certificate of ASSAY</u>

Company: BURTON CONSULTING File:8-1074/P1 roject:CARIBOD-CROCKED LK. Date:JULY B0/88 Hutention:D.SYMONDS Type:ROCK ASSAY bereby certify the following rotatis for samples submitted. ample CU Γ'ŀ ΖŔ, 66  $\triangle$ (5) AU AU umber χ. n, 1- COUNNE DIZTON GZTONNE • •• OZ/TON 18--3--1 . 001 . O?? . O I 0.01 .O1 0.001 8-4.1 .001 . O .  $_{1}(O)$  $O_{n} \stackrel{\circ}{\hookrightarrow}$ 0.01 .01 0.001 /8--5-1 . OO L . O 1 .01 1.7 0.05 . OC 0.001 ı . 637511186 BV MIN-EN LAMORATORIES LTD.



APPENDIX II

# **BURTON CONSULTING INC.**

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Chemex Labs Ltd.

PHONE (604) 984-0221

To : GRAND NATIONAL RESOURCES INC.

905 - 626 W. PENDER ST. VANCOUVER, BC V6B IV9 Project : TOPPER Comments: ATTN: PETER WISHART &: BURTON CONSULTING

> **Page No. :1 Tot. Pages:1 Date :25-AUG-88 Invoice #:I-8820895 P.O. # :NONE

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# Chemex Chemex Labs Ltd Ltd .

112 BROOKSBANK AVE., NORTH VANCOUVER, BRITISH COLLMBIA, CANADA V7J-2C1 PHONE (604) 984-0221

To: GRAND NATIONAL RESOURCES INC.

905 - 626 W. PENDER ST. VANCOUVER, BC V6B IV9 Project : TOPEER Comments: ATTN: PETER WISHART CC: BURTON CONSULTING

**Page No. :1 Tot. Pages:1 Date : 8-SEP-33 Invoice #:1-8821976 P.O. # :NONE

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PHONE (604) 984-0121

To: GRAND NATIONAL RESOURCES INC.

Project : TOPPEER Comments: ATTN: PETER WISHART CC: BURTON CONSULTING 905 - 626 W. PENDER ST. VANCOUVER, BC V6B 1V9

**Page No. :1 Tot. Pages:1 Date :23-AUG-88 Invoice #:I-8820894 P.O. # :NONE

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REFERENCES

Kreegosky, 1. R.;"Geochemical Report on the Topper Group"; Private (Assessment) Report on behalf of Grand National Resources Inc. & World Cement Industries Inc.; September 6, 1985

2. Borovic, I.; "Report on the Mineral Exploration of Jolly Jack-Topper Properties"; Private Report on behalf of Grand National Resources Inc.; August 30, 1984.

3. Borovic, I.; "Report on the Mineral Exploration of the Topper and Kero Projects"; Private Report on behalf of Grand National Resources Inc.; August 18, 1987.

4. Freeze, J.C.; "Report on the Topper Property"; Private Report on behalf of World Cement Industries Inc.; May 5, 1987.

BURTON CONSULTING INC.