ASSESSMENT REPORT

Based on Bacterial Leaching
of Bulk Samples from the
Coquihalla Nickel Property

OWNER/OPERATOR

BORDER RESOURCES LTD.,
4547 West 5th Ave.,
Vancouver, B.C.
V6R 1S6

PROPERTY LOCATION

New Westminster M.D.
N.T.S. Grid 92H/6(E)

NORTH GROUP

49°29'00" N. Lat.
121°16'00" W. Long.

(17 claims)
G 1-2, GWH 2, N 22-27, 28FR, 29FR, TAX 51-56

REPORT COMPILED BY: P. Hall, BA

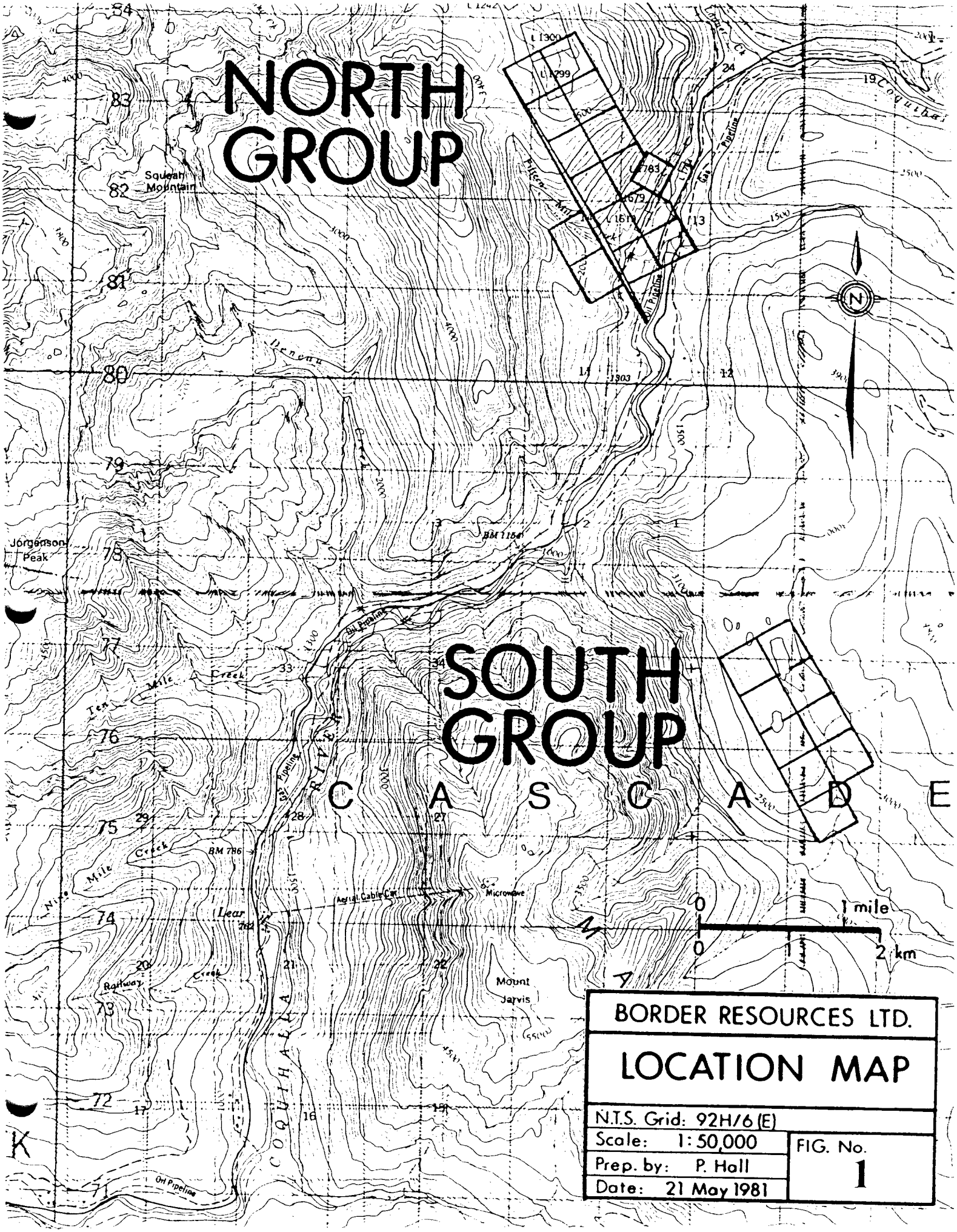
PROJECT SUPERVISED BY: G.W. Hornby, P.Eng.

COMPONENT REPORTS BY:

1) Sinar Enterprises Canada Inc.
2) Coastech Research Inc.

INVOICE & DELIVERY DATE: May 29, 1989

REPORT SUBMISSION DATE: July 10, 1989



BORDER RESOURCES LTD.	
LOCATION MAP	
N.T.S. Grid: 92H/6(E)	
Scale: 1:50,000	FIG. No. 1
Prep. by: P. Hall	
Date: 21 May 1981	

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MAPS:

INTRODUCTION: (by P. Hall)

Work has been done on the Coquihalla property held by BORDER RESOURCES LTD. since 1969 when the claims were originally staked. Over the years, the original 153 claims have been reduced in number down to the present twenty-six key claims. These in turn are divided into two discontinuous groups. The NORTH Group (17 claims) is located on the North side of the Coquihalla River at Fifteen Mile Creek, while the SOUTH Group (9 claims) lies on the West slope above Sowaqua Creek some 5 km South of its junction with the Coquihalla River.

The value of the property lies in the presence of nickel-bearing sulphides along with Co, Fe and Cr concentrated in the serpentinized ultramafic host rock. The problem to date has been to devise an economic method to separate the microscopic needles of nickel from the serpentine.

Since 1981, metallurgical research has been conducted on the property by A-MIN-TECH RESEARCH LTD. of Vancouver and by the CANMET laboratory in Ottawa (D.E.M.R.). Various gravity flotation methods were investigated and were found to be too slow for practical use. Magnetic concentration separation did not work out.

Current metallurgical attention is focussed on biological (bacterial) leaching techniques.

A field trip was conducted on October 27-29, 1988, by the author and assisted by Dr. H. Von Hahn, with the purpose of collecting fresh sample material with particular interest in material from the area of original site #81-9 collected in 1981.

The two contained reports set out the results of this bioleaching research.

BORDER RESOURCES LTD.

COQUIHALLA PROPERTY

CLAIMS SCHEDULE
Date: 7 June 1989

New Westminster Mining Div.
NTS 92H/6

NORTH GROUP: (17 claims - 49°29'00"N/121°16'00"W)

CLAIM NAME:	RECORD NO:	ANNIVERSARY:	EXPIRY YEAR:
TAX 51-56	21629-34	May 26	1991
N 22-27,28FR,29FR	26333-40	July 13	1991
GWH 2	28025	July 19	1991
G 1-2	29430-31	July 26	1992

SOUTH GROUP: (9 claims - 49°26'00"N/121°14'00"W)

CLAIM NAME:	RECORD NO:	ANNIVERSARY:	EXPIRY YEAR:
EV 1-2	21703-04	May 22	1992
TOY 3-9	21601-07	May 26	1992

Accumulated credits in P.A.C. account = $1,602.00

SINAR ENTERPRISES CANADA INC.

Sinar Enterprises Canada Inc.

Suite ~~504~~ 303
134 Abbott Street
Vancouver, B.C.
Canada V6B 2K4

Telephone: (604) ~~687-7701~~ 263-0338
Telex: 04-54262 Aurorapac Vcr

89-05-15 BR-89-008

MEMORANDUM

To:
Mr. Geoffrey W. Hornby, P. Eng.,
President,
Border Resources Ltd.,
4547 West 5th Ave.,
Vancouver, B.C.,
V6R 1S6

From: H. von Hahn, Ph.D., P. Eng.

Subject: Bioleaching of Border Resources serpentine for nickel recovery.

FINAL REPORT: BIOLEACHING OF NICKEL ORES BY COASTECH RESEARCH INC.

Attached is the final report of Coastech Research Inc. (two copies) on the bioleaching testwork done in recent months on Site 9 and Site 2 samples of Border Resources serpentine, together with a cover letter and final invoice.

The following is a discussion of the results, and conclusions to be derived therefrom relative to the further development of the project.

Leaching Results:

Nickel: The nickel leaching results are essentially the same as already discussed in my Draft Report: MEMORANDUM BR-89-007, dated 89-03-21. After 51 days of leaching nickel extractions were 86.8% for -325 mesh ore, 74.9% for -16 mesh ore, and 63.9% for -1/4 inch ore. Biological activity contributes about 15% to the results, the balance coming from the reaction of the serpentine ore with sulfuric acid in the leach solution (-325 mesh tests).

These nickel extraction figures are substantially higher than what was achieved in the flotation testwork done a few years ago. The possibility of a heap-leaching operation suggests itself for treating this ore.

Cobalt, Chromium: Because of analytical problems, results for these elements have to be reassessed. The matter is to be taken up with the analytical laboratory for possible re-analysis.

Acid consumption: As indicated already in the Draft Report, consumption of sulfuric acid is considerable in all tests. An acidity of pH 1.8 to 2.0 is required to maintain optimum conditions for bacterial leaching. There is evidence that the acid consumption flattens out over time. Please see the graph in Figure 1, attached. The causes and significance of this flattening out have not been assessed yet; buildup of magnesium ions in the leach solutions could be a factor.

..../2

The cost of acid consumed on the basis of the current test results would make a mining project uneconomic. This point is illustrated in Coastech's report with some appropriate figures. This means that the viability of an acid leaching process would hinge largely on the successful recovery and reuse of the acid. Further discussion of this point occurs under the next heading.

Magnesium: Assays done on the final leach solutions show considerable concentrations of magnesium ions in solution. The magnesium is present as the sulfate. The concentration levels are consistent with the amount of acid consumed. The presence of magnesium reflects the decomposition of serpentine by acid. The following equation describes this reaction:

$$\underset{\text{(antigorite)}}{Mg_6(Si_4O_{10})(OH)_8} + 6H_2SO_4 \rightarrow 6MgSO_4 + 4SiO_2 + 10H_2O$$

Magnesium sulfate can be precipitated from solution as the epsom salt, $MgSO_4.7H_2O$. Sulfuric acid could be recovered from it by thermal decomposition; the net reaction being essentially as follows:

$$MgSO_4 + H_2O \rightarrow MgO + H_2SO_4$$

Decomposition of $MgSO_4$ occurs at around 1100°C.

The MgO, also known as magnesia, accruing from the decomposition reaction, is a marketable product, used mainly in high temperature refractories in the metallurgical industry. The sale of magnesia would have to serve to pay for the cost of acid recovery.

Silica: Silica, SiO_2, is another decomposition product of serpentine; occurring probably as hydrous silica or silica gel. The present report does not include any evaluation of the amount and nature of silica produced during the leaching reaction; although two assays for possible silica in solution are still outstanding.

Silica does not have a high market value except in a high purity highly dispersed form, such as fumed silica. However, its possible recovery and upgrading should not be ignored in any process development.

Further development: The next step in the current project should involve column leaching tests with fine crushed material, say, -1/4 inch material, to establish steady state conditions by recirculation of solutions, determine precipitation characteristics of magnesium sulfate, recover nickel and cobalt as well as chromium, evaluate the effect of silica on leaching.

..../3

Border Resources

89-05-17

MEMORANDUM BR-89-008

In the context of the foregoing it is to be noted that considerable work has been done in past years on the leaching of serpentine asbestos tailings with various acids, including sulfuric acid. Such work has also included the leaching of asbestos tailings that exist in the Eastern Townships of Quebec, e.g., at Thetford Mines. However, no evidence of the use of bacterial leaching has been noted. This work on asbestos tailings, including any possible future contemplated work will have to be taken into consideration in the process development for the Border Resources deposit.

attachments: 1.

Signed: _____

H.E.A. von Hahn, Ph.D., P. Eng.

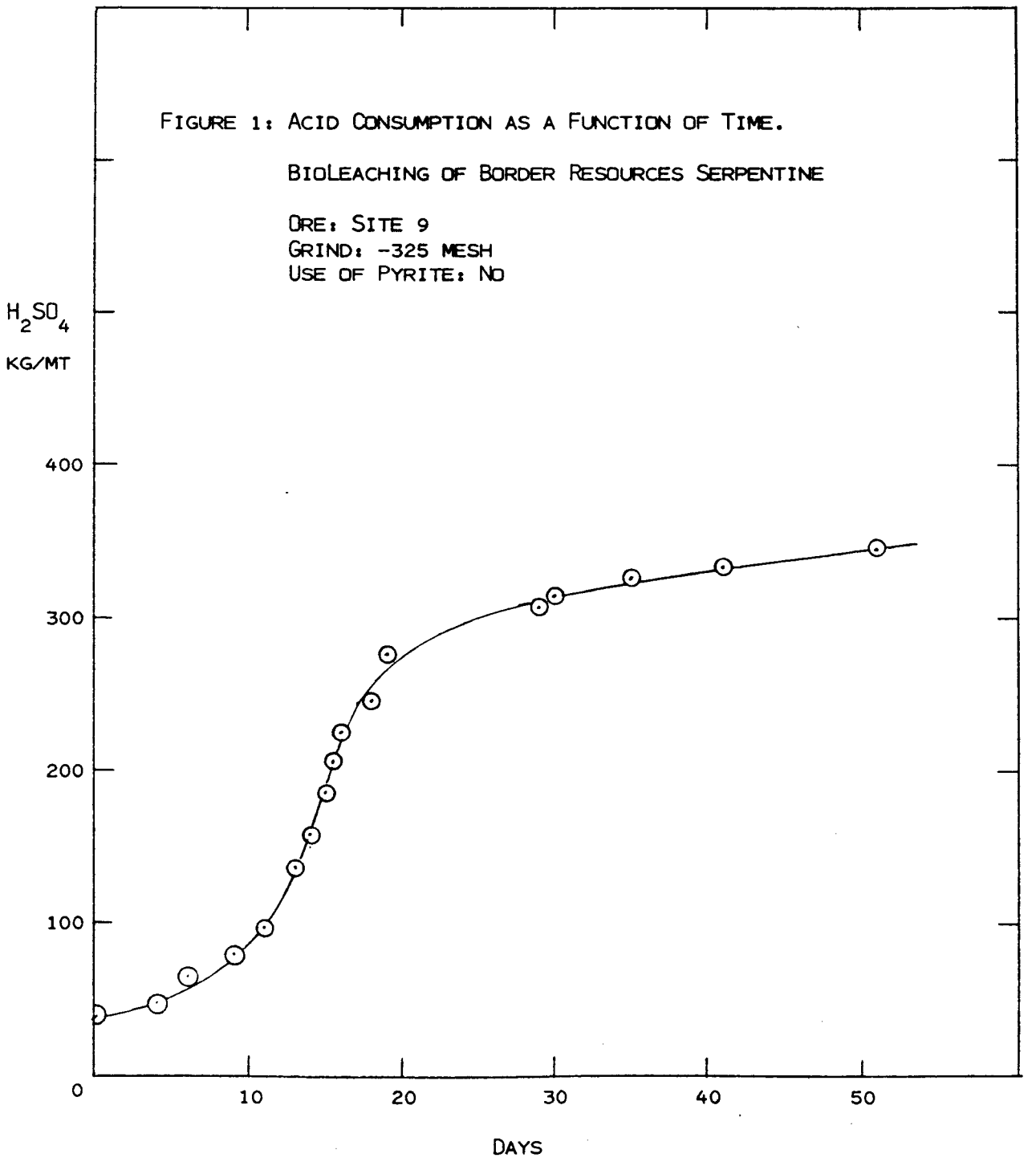
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
H. E. A. VON HAHN

.../4 Figure 1

Border Resources

89-05-17

MEMORANDUM BR-89-008



COASTECH RESEARCH INC.

BIOLEACHING OF NICKEL ORES

Project 89-4031

Prepared for

BORDER RESOURCES LIMITED
4547 West 5th Avenue
Vancouver, B.C.
V6R 1S6

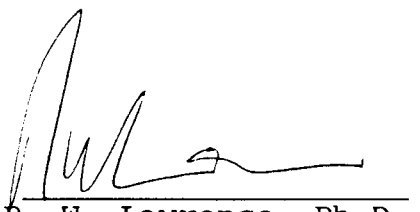
Attn: Mr. G. Hornby

May 8, 1989

BIOLEACHING OF NICKEL ORES

Prepared by

COASTECH RESEARCH INC.
80 Niobe Street
North Vancouver, B. C. V7J 2C9



R. W. Lawrence, Ph.D.
Vice President, Technical

P. B. Marchant, M.A.Sc.
President

SUMMARY

A laboratory test program has been carried out for Border Resources Limited to evaluate the bioleaching of two samples of nickel serpentine ore (Site 9 and Site 2). The principal findings and conclusions are as follows:

- The average head assays of Site 9 and Site 2 ores were 0.20% and 0.22% Ni respectively. Calculated head assays from the bioleach test mass balances were in close agreement.

- Bioleach shake flask tests on minus 1/4 inch, minus 16 mesh, and minus 325 mesh Site 9 ore gave nickel extractions of up to 86.7%. The addition of pyrite produced greater bacterial activity although extractions were not enhanced. Extractions in tests with no bacteria were around 69%.

- Bioleach tests on Site 2 ore with the addition of pyrite gave a nickel extraction of 74.2% compared with 65.3% for a test with no pyrite addition. Extraction with no bacteria were also around 65%.

- Sulphuric acid consumptions were high for all tests. For Site 9 ore consumptions were in the range300 to 360 kg/t. For Site 2 ore. consumptions were 340 to 410 kg/t. At current nickel prices, acid costs exceed the value of recoverable nickel

A summary of the results is shown overleaf.

BORDER RESOURCES
BIOLEACHING OF NICKEL ORE
SUMMARY

ORE	GRIND SIZE	PYRITE ADDITION	BACTERIA ADDED	NICKEL EXTRACTION (%) Solution Basis	NICKEL EXTRACTION (%) from Mass Balance
SITE 9	-1/4 inch	Yes	Yes	63.9	71.3
SITE 9	- 16 mesh	Yes	Yes	74.9	72.3
SITE 9	-325 mesh	No	Yes	86.8	78.4
SITE 9	-325 mesh	Yes	Yes	86.7	80.4
SITE 9	-325 mesh	No	No	69.2	62.5
SITE 9	-325 mesh	Yes	No	69.4	64.7
SITE 2	-325 mesh	No	Yes	65.3	70.4
SITE 2	-325 mesh	Yes	Yes	74.2	70.4
SITE 2	-325 mesh	No	No	64.8	67.2
SITE 2	-325 mesh	Yes	No	69.4	66.9

BIOLEACHING OF NICKEL ORES

1.0 TERMS OF REFERENCE

Following discussions between Dr. H. von Hahn, consultant to Border Resources, and Dr. R.W. Lawrence, Coastech Research Inc., in October, 1988, Coastech provided Border Resources with a schedule and cost estimate (letter from R.W. Lawrence to G. Hornby, October 4, 1988) to carry out a laboratory test program to evaluate the bioleaching of a nickel serpentine ore from a property located in British Columbia. The scope of the testwork was to carry out shake flask bioleach tests, with and without the addition of pyrite, and with and without the addition of bacteria, on various particle sizes up to 1/4 inch, as a preliminary evaluation prior to the possible execution of a heap leach evaluation test program.

In November, 1988, 6 ore samples from the deposit were received for selection of a suitable test material, to be based on head nickel assay. Two ores (Site 2 and Site 9) were selected for the test program, the scope of which was finalized in discussions between Dr. von Hahn and Dr. Lawrence in December, 1988.

This report presents the results of this test program carried out between December, 1988 and April, 1989.

2.0 EXPERIMENTAL

2.1 Samples

6 ore samples were received at Coastech on November 1, 1988. The ores were labelled as follows:

Site 9 (88/10/29)	2.65 kg
Site 4E (88/10/29)	1.24 kg
Site 4W (88/10/29)	1.04 kg
Site 2 (88/10/29)	2.18 kg
Site 1 (88/10/29)	1.52 kg
Sample D (88/10/27)	1.37 kg

Each sample was cone crushed and sub-sampled by riffling for duplicate assay, the results (mean values) of which were as follows:

ORE SAMPLE	Ni(T) %	Ni($S^{=}$) %	S(T) %
SITE 9	0.20	0.085	< 0.002
SITE 4E	0.20	0.015	< 0.006
SITE 4W	0.21	< 0.010	0.028
SITE 2	0.24	0.035	< 0.001
SITE 1	0.21	0.045	0.006
SAMPLE D	0.18	0.025	< 0.001

On the basis of the above assays, Site 9 and Site 2 ores were selected for the test program. Site 9 ore was prepared for the test program by crushing, pulverizing and rod-milling as required to produce (nominally) minus 1/4 inch, minus 16 mesh, and minus 325 mesh material. Site 2 material was crushed and rod-milled to minus 325 mesh. Further duplicate head assays of the ores gave the following results (mean values):

ORE SAMPLE	Ni %	Co %	S(T) %
SITE 9 (-16 mesh)	0.20	0.012	0.130
SITE 9 (-325 mesh)	0.22	0.012	0.115
SITE 2 (-325 mesh)	0.25	0.012	0.084

2.2 Bioleach Tests

Bioleach tests on both Site 9 ore (-1/4 inch, -16 mesh, and -325 mesh) and Site 2 ore (-325 mesh) were carried out using standard shake flask procedures. Tests were performed with and without the addition of pyrite (in duplicate), and with and without the addition of bacteria, as follows:

TEST #	ORE	MESH SIZE	PYRITE	BACTERIA
A100	Site 9	- ¼ inch	Yes	Yes
A101	Site 9	- 16 mesh	Yes	Yes
A102	Site 9	-325 mesh	No	Yes
A103	Site 9	-325 mesh	Yes	Yes
A102 C	Site 9	-325 mesh	No	No
A103 C	Site 9	-325 mesh	Yes	No
B100	Site 2	-325 mesh	No	Yes
B101	Site 2	-325 mesh	Yes	Yes
B100 C	Site 2	-325 mesh	No	No
B101 C	Site 2	-325 mesh	Yes	No

A high grade pyrite concentrate containing 88 % pyrite was added to the designated tests to give 5 % by weight of pyrite in the ore. Thymol was added to non-bacterial tests to prevent bacterial growth due to contamination. The tests were monitored periodically for pH and redox, and sampled for soluble nickel analysis. Sulphuric acid was added as required to maintain pH below 2.0. At the termination of the tests, the duplicate

pulps were combined and all test pulps were filtered and the solid residues washed, weighed and analyzed for Ni, Co, amd Mg.

2.3 Assays

Assays for Ni species, Co, and S in solids, and for Ni, Co, and Mg in bioleach solutions, were carried out by Chemex Laboratories, North Vancouver, B.C.

3.0 RESULTS AND DISCUSSION

The results of the bioleach tests are presented in Appendix 1. These provide details of the redox and soluble nickel values from test sampling, including nickel extractions based on soluble nickel and head assay, and final sulphuric acid consumptions; final bioleachate composition; and final mass balances showing nickel extractions and calculated head assays.

Considerable quantities of sulphuric acid were required throughout the tests to maintain pH below 2.0, particularly in the early stages. Final consumptions were in the range 300 to 360 kg H_2SO_4 /tonne for Site 9 ore, and 340 to 410 kg/t for Site 2 ore.

For Site 9 ore, nickel extractions up to 86.7% were obtained. Extractions were higher for the finer ore size. The addition of pyrite did not appear enhance extraction for this ore at -325 mesh, although the higher redox values with pyrite addition suggests a higher level of bacterial activity. The control tests (no bacteria) gave lower extractions around 69% indicating that the addition of bacteria had a beneficial effect.

For Site 2 ore, the highest nickel extraction of 74.2% was obtained with pyrite addition. Without pyrite, the extraction value was 65.3% which is very similar to the extractions obtained in the control tests.

For both ore types, calculated head values correlate well with the assayed head values. Correspondingly, extractions based on solution assays or on mass balance are in close agreement.

At current nickel prices ($6.70/lb, LME), the recoverable nickel (0.20 % Ni, 80% extraction) would be around $24 per tonne. Acid consumption alone would cost around $35 per tonne ($100/t acid, 350 kg/t consumption). On this basis, the processing of the ore in an acidic process would not appear to be viable.

APPENDIX 1

BIOLEACH RESULTS

BORDER RESOURCES
BIOLEACHING OF NICKEL ORE
SITE 9 ORE

TEST	TIME (days)	REDOX (mV)	Ni in SOLUTION (mg/L)	Ni EXTRACTION (%)	ACID CONSUMPTION (kg/t)
SITE 9	13	442	125	34.4	
-1/4 inch	18	417	220	61.1	
+ pyrite	29	457	152	43.5	
	41	464	184	53.1	
	51	551	220	63.9	335
SITE 9	13	455	140	38.5	
-16 mesh	18	419	180	50.2	
+ pyrite	29	473	192	54.4	
	41	503	176	51.0	
	51	450	260	74.9	360
SITE 9	13	470	200	55.0	
-325 mesh	18	443	230	64.3	
no pyrite	29	449	240	68.2	
	41	500	192	56.2	
	51	509	300	86.8	365
SITE 9	13	464	180	49.5	
-325 mesh	18	438	210	58.7	
+ pyrite	29	435	192	54.8	
	41	571	256	73.3	
	51	559	300	86.7	340
SITE 9	13	474	110	30.3	
CONTROL	18	429	170	47.3	
-325 mesh	29	441	184	52.0	
no pyrite	41	403	184	52.9	
+ thymol	51	378	240	69.2	315
SITE 9	13	474	110	30.3	
CONTROL	18	429	160	44.6	
-325 mesh	29	439	192	54.2	
+ pyrite	41	387	208	59.5	
+ thymol	51	362	240	69.4	301

BORDER RESOURCES
BIOLEACHING OF NICKEL ORE
SITE 2 ORE

TEST	TIME (days)	REDOX (mV)	Ni in SOLUTION (mg/L)	Ni EXTRACTION (%)	ACID CONSUMPTION (kg/t)
SITE 2	13	470	120	26.4	
-325 mesh	18	454	260	57.7	
no pyrite	29	446	248	56.1	
	41	422	288	65.9	
	51	510	280	65.3	390
SITE 2	13	470	140	30.8	
-325 mesh	18	442	270	60.0	
+ pyrite	29	445	256	58.0	
	41	384	288	66.0	
	51	477	320	74.2	411
SITE 2	13	474	110	24.2	
CONTROL	18	425	230	51.0	
-325 mesh	29	441	240	54.2	
no pyrite	41	382	208	48.1	
+ thymol	51	359	280	64.8	344
SITE 2	13	474	110	24.2	
CONTROL	18	425	240	53.2	
-325 mesh	29	441	280	63.0	
+ pyrite	41	376	208	48.3	
+ thymol	51	355	300	69.4	346

BORDER RESOURCES
BIOLEACHING OF NICKEL ORE
FINAL BIOLEACHATE COMPOSITION

ORE	TEST CONDITIONS			SOLUTION ASSAY		
	GRIND	PYRITE	BACTERIA	Co (mg/L)	Cr (mg/L)	Mg (g/L)
SITE 9	-1/4 inch	Yes	Yes	< 8	< 10	21.0
	-16 mesh	Yes	Yes	< 8	< 10	35.0
	-325 mesh	No	Yes	< 8	< 10	28.0
	-325 mesh	Yes	Yes	< 8	< 10	13.3
	-325 mesh	No	No	< 8	< 10	5.7
	-325 mesh	Yes	No	< 8	< 10	21.0
SITE 2	-325 mesh	No	Yes	< 8	< 10	10.9
	-325 mesh	Yes	Yes	< 8	< 10	15.1
	-325 mesh	No	No	< 8	< 10	8.7
	-325 mesh,	Yes	No	< 8	< 10	22.0

BORDER RESOURCES
BIOLEACHING OF NICKEL ORE
FINAL MASS BALANCE

ORE	TEST CONDITIONS			FINAL WEIGHT (g)	RESIDUE ASSAY (% Ni)	CALC HEAD (% Ni)	Ni EXTRACTION (%)
	GRIND	PYRITE	BACTERIA				
SITE 9	-1/4 inch	Yes	Yes	7.35	0.07	0.179	71.3
	-16 mesh	Yes	Yes	8.20	0.07	0.207	72.3
	-325 mesh	No	Yes	7.95	0.06	0.221	78.4
	-325 mesh	Yes	Yes	8.45	0.05	0.216	80.4
	-325 mesh	No	No	8.30	0.10	0.222	62.5
	-325 mesh	Yes	No	8.40	0.09	0.214	64.7
SITE 2	-325 mesh	No	Yes	7.30	0.10	0.247	70.4
	-325 mesh	Yes	Yes	8.10	0.09	0.247	70.4
	-325 mesh	No	No	7.70	0.11	0.258	67.2
	-325 mesh,	Yes	No	8.60	0.10	0.260	66.9

CONCLUSIONS AND RECOMMENDATIONS
(P. Hall)

1. Bacterial leaching improves nickel extraction by at least 15% over earlier flotation procedures.
2. The high rate of consumption of sulphuric acid in the tests is a major cost factor.
3. The success of bacterial leaching for Coquihalla nickel at current World nickel prices is linked to the economic recovery of the spent sulphuric acid used in the process.
4. Research into this recovery technology is recommended.

STATEMENT OF COSTS

FIELDWORK:	
2 days - sample collection/surveying	
P. Hall - prospector - @ $150./day	$300.00
H. von Hahn - assistant - @ $100./day	200.00
Meals & consumables	35.22
Transportation: crew truck Vancouver - Fifteen Mile Creek 4 X 184 km X 25½¢/km	187.68
Camera film & developing	18.91
MAP DRAFTING:	
Promap Drafting Ltd. invoice	276.58
BIOLEACH RESEARCH PROGRAMME:	
SINAR ENTERPRISES CANADA INC.	
Invoices - 17-10-88	300.00
- 16-3-89	1,029.27
- 13-4-89	1,016.70
- 29-5-89	692.11
COASTECH RESEARCH INC.	
Invoices - 16-3-89	1,830.04
- 13-4-89	1,790.20
- 29-5-89	1,790.20
- 29-5-89	1,076.75
ADMINISTRATION:	
Report assembly and filing	
P. Hall - 2 days office @ $250./day	500.00
Stationery, report binders & printing	22.00
COST OF PROJECT =	$11,065.66

BIBLIOGRAPHY

Britton Research Limited - Concentration Tests on Samples of Nickel-Bearing Material. May 7, 1971

Chamberlain, J.A. - Nickel Distribution in the Coquihalla Ultramafic Belt. August 30, 1969

- Geological Report - Coquihalla Property. May 2, 1971

- Nickel Distribution in the Coquihalla Ultramafic Complex. August 28, 1971

- Geochemical Programme, Coquihalla Property. September 2, 1972

Hall, P. - Assessment Report - Based on Costs of Sample Collection for Metallurgical Research by A-MIN-TECH RESEARCH LTD. of Vancouver. May 22, 1981

- Assessment Report - Based on Costs of Bulk Sampling and Metallurgical Research by A-MIN-TECH RESEARCH LTD. of Vancouver. May 21, 1982

- Assessment Report - Based on Costs of Bulk Sampling for CANMET Metallurgical Research. July 27, 1982

- Assessment Report - Based on Metallurgical Research by CANMET (DEMR) on Bulk Samples from the Coquihalla Nickel Property. May 15, 1984

- Assessment Report - Based on the 1987 Geological Field Survey. August 20, 1987

- Assessment Report - Based on Bacterial Leaching for Nickel Recovery by GIANT BAY BIOTECH INC. May 30, 1988

- Assessment Report - Based on Bacterial Leaching Reports by SINAR ENTERPRISES CANADA INC. and COASTECH RESEARCH INC. June 15, 1989

Sinclair, A.J. - Mineralogy of a Composite Sample - Coquihalla Ultramafic Complex. July 12, 1976

STATEMENT OF AUTHOR'S QUALIFICATIONS

I, Peter S. Hall, of the City of Vancouver, British Columbia, do hereby declare that:

1) I am a graduate of:-

   a) The University of British Columbia in Resource Geography; and,

   b) The B.C. & Yukon Chamber of Mines Prospecting School (1972); and,

   c) The B.C. & Yukon Chamber of Mines Placer Mining Programme (1988); and,

2) I have worked in the B.C. Mining Industry at mineral exploration and land management since 1969; and,

3) I participated in the fieldwork referenced in this report and do hereby attest that the costs quoted for it are both reasonable and correct.

Signed at Vancouver, B.C.
this 15th day of June 1989

P. Hall

Peter S. Hall, BA

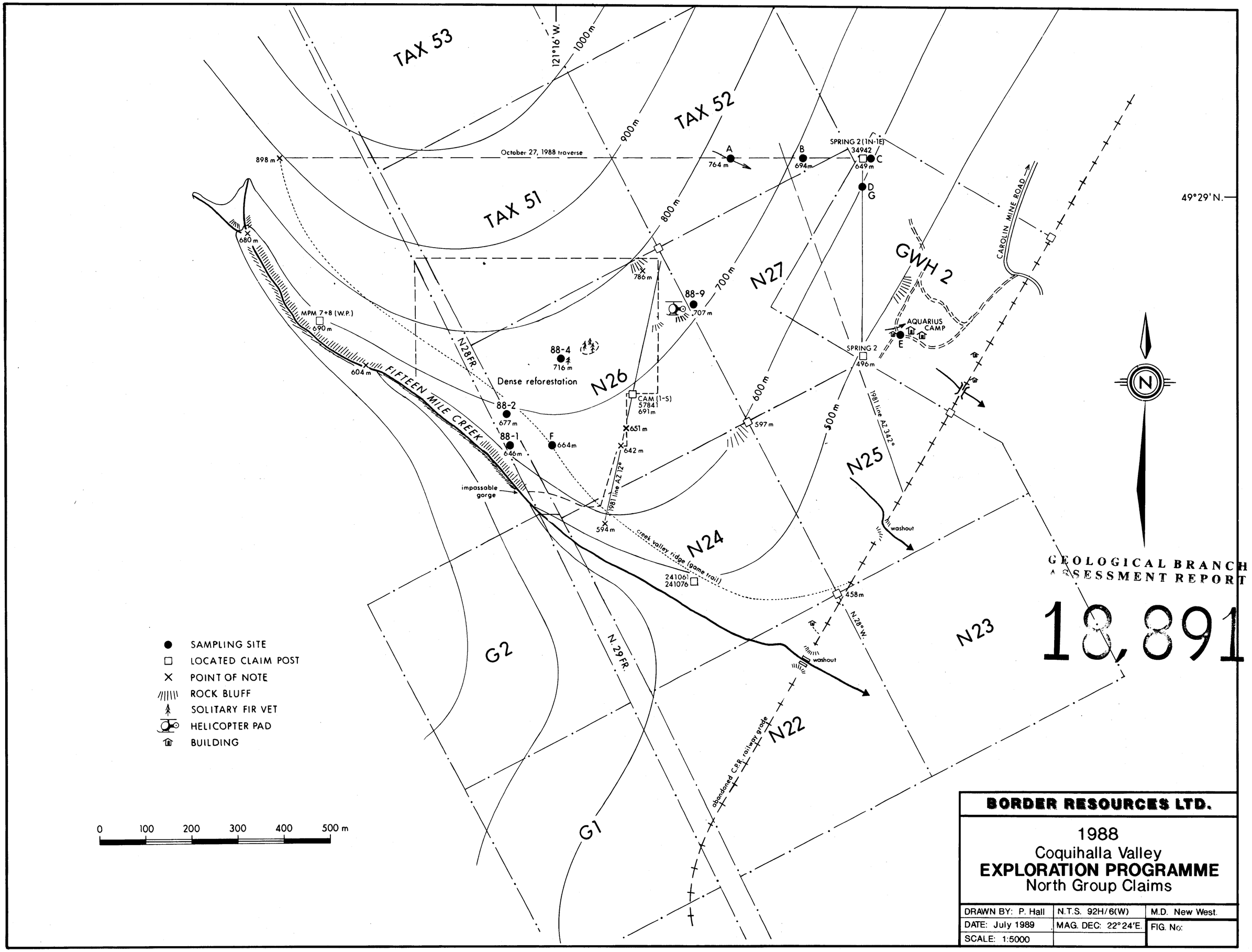
STATEMENT OF SUPERVISOR'S QUALIFICATIONS

I, Geoffrey W. Hornby, of Vancouver, British Columbia, do hereby state and declare as follows:-

1. I am a consulting geological engineer.
2. I am a graduate of the University of British Columbia with a BSc. in Geology (1953).
3. I am a registered professional engineer in the Province of British Columbia.
4. I have, on behalf of Border Resources Ltd., supervised and directed the work described and contained within this report and I am familiar with the contents of it.
5. I hereby certify that the costs charged pertaining to the work of this report and amounting to the sum of $11,065.66 is reasonable and correct.

Signed at Vancouver, B.C.
on this 23 day of June, 1989.

G.W. Hornby, P.Eng.



BORDER RESOURCES LTD.

1988
Coquihalla Valley
EXPLORATION PROGRAMME
North Group Claims

DRAWN BY: P. Hall	N.T.S. 92H/6(W)	M.D. New West.
DATE: July 1989	MAG. DEC: 22°24'E.	FIG. No:
SCALE: 1:5000		