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**GEOLOGICAL & GEOCHEMICAL REPORT**  
**ON THE**  
**MAHATTA PROPERTY, NORTHERN VANCOUVER ISLAND**

Nanaimo Mining Division, British Columbia  
 NTS 92L/5E  
 Latitude: 50° 27'N  
 Longitude: 127° 47'W

SUB-RECORDER  
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 VANCOUVER, B.C.

Prepared for  
**STOW RESOURCES LTD.**  
 Vancouver, B.C.

Prepared by  
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**GEOLOGICAL BRANCH**  
**ASSESSMENT REPORT**

22,166

December 9, 1991

KeeWatIn Engineering Inc.

## TABLE OF CONTENTS

	<u>Page No.</u>
1.0 SUMMARY .....	1
2.0 INTRODUCTION .....	2
2.1 Location and Access .....	2
2.2 Physiography and Climate .....	2
2.3 Property Status and Ownership .....	3
2.4 History of Exploration .....	3
2.5 Objectives of 1991 Work Program .....	4
3.0 GEOLOGY .....	5
3.1 Regional Geology .....	5
3.2 Property Geology .....	5
3.2.1 Rock Types .....	5
3.2.2 Metamorphism/Alteration .....	6
3.2.3 Structure .....	6
3.3 Mineralization .....	7
3.4 Economic Potential .....	7
4.0 EXPLORATION AND DEVELOPMENT .....	8
4.1 Prospecting and Geological Mapping .....	9
4.2 Geochemistry .....	9
4.2.1 Program .....	9
4.2.2 Results .....	10
5.0 CONCLUSIONS .....	11
6.0 RECOMMENDATIONS .....	12
7.0 REFERENCES .....	13

## LIST OF APPENDICES

APPENDIX I	Statement of Qualifications
APPENDIX II	Summary of Field Personnel
APPENDIX III	Statement of Expenditures
APPENDIX IV	Complete Geochemical Sampling Results and Sample Descriptions
APPENDIX V	Analytical Techniques

## LIST OF FIGURES

	<u>Following Page No</u>
Figure 1. Location Map .....	2
Figure 2. Claim Map .....	2
Figure 3. Simplified Geological Plan .....	5

## LIST OF TABLES

	<u>Page No</u>
Table 1. Claim Status .....	3

## LIST OF MAPS

	<u>In Pockets</u>
Map 1. Geology Plan .....	1:10,000
Map 2. Rock Sampling Plan .....	1:10,000
Map 3. Moss Mat, Stream Silt and Soil Sampling Plan .....	1:10,000

## 1.0 SUMMARY

The Mahatta Property (six claims, 120 units) is situated along the south shore of Quatsino Sound, approximately 13 km west of the town of Port Alice on northern Vancouver Island. Access to the claims is by logging road from Port Alice. The claims are owned 100% by Stow Resources Ltd. of Vancouver, B.C. The principle target on the property is porphyry Cu-Mo-Au mineralization similar to that at the Island Copper Deposit (280 million tons at 0.52% Cu, 0.017% Mo).

Moss mat and stream silt sampling was completed over the property. The previously known Les Showing was re-located and sampled. The geological setting of the mineralization was established.

Copper mineralization at the Les Showing is associated with an iron-rich basic volcanic breccia and does not appear to be related to a porphyry Cu-Mo mineralized system. Additional copper mineralization was located near the previously known Cleagh showing and off the east boundary of the Mahatta 6 claim. The geochemical program did not indicate any significant metal responses from these mineralized areas.

A gold moss mat geochemical anomaly occurs on the north boundary of the Mahatta 2 claim, but its significance is not known at this time.

A weak, widespread Mo anomaly occurs in soils and moss mats on the Mahatta 5 claim and may be related to a porphyry Cu-Mo mineralized source. This area is poorly exposed and grid soil geochemical surveys and magnetometer surveys are recommended to define specific exploration targets here.

## 2.0 INTRODUCTION

### 2.1 Location and Access

The Mahatta Property is located along the south shore of Quatsino Sound, approximately 13 km west of the town of Port Alice , B.C. (Figure 1).

NTS: 92L/5E

Latitude: 50° 27'N

Longitude: 127° 47'W

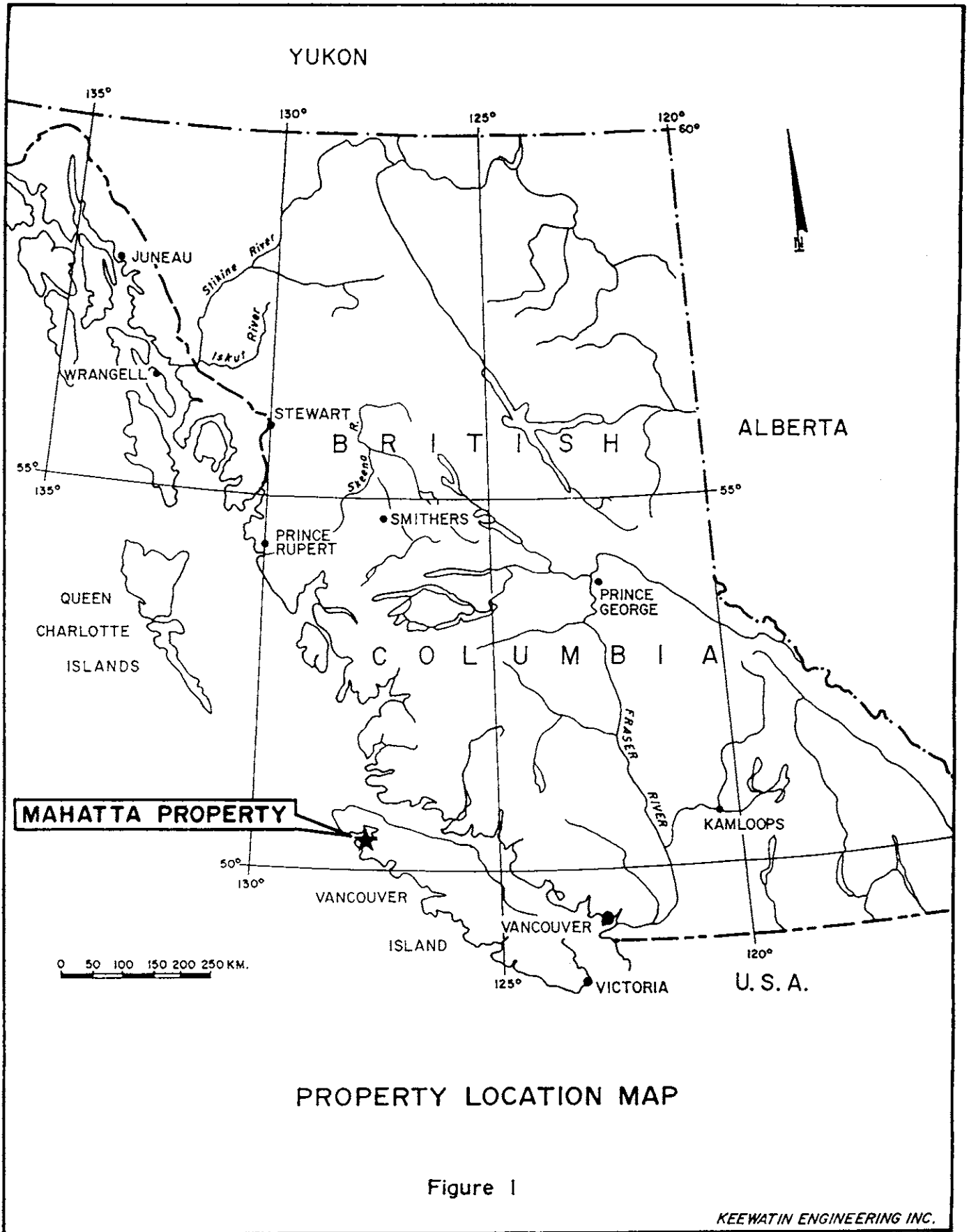
Access to the property is by an extensive system of logging roads which is connected to the main highway system at Port Alice. Much of the property is covered by thick second growth bush (overgrown clearcuts), and this makes foot access difficult off the existing logging roads.

### 2.2 Physiography and Climate

Climate in the area is mild and wet. Average mean precipitation is estimated to be in excess of 200 inches annually. Topography is moderate to gentle over most of the claim area. Some of the main stream valleys are steeply incised (e.g. Kewquodie Creek). The vegetation is characterized as west coast temperate rain forest.

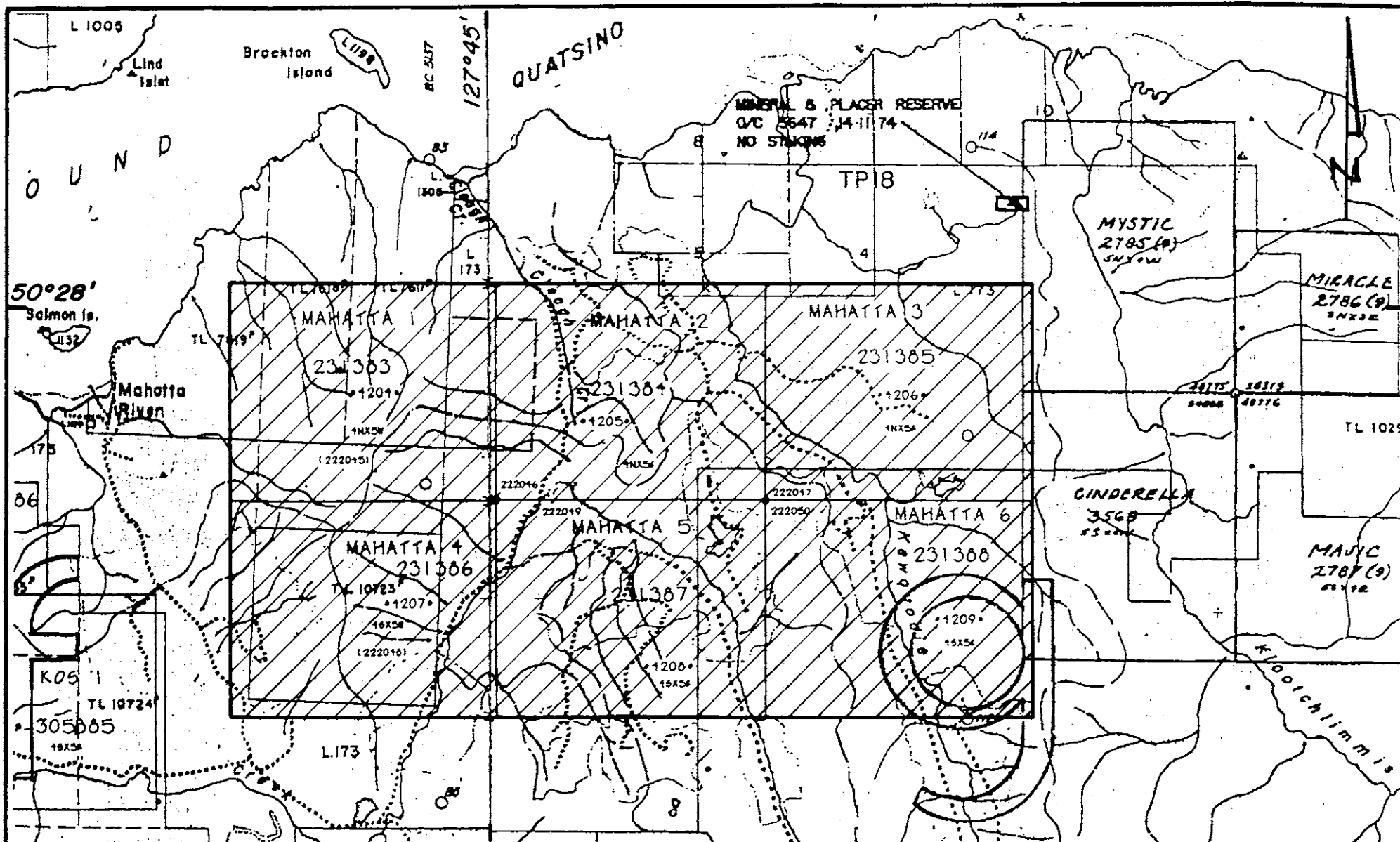
### 2.3 Property Status and Ownership

The Mahatta property is 100% owned by Stow Resources Ltd. of Vancouver, B.C. and consists of six claims totalling 120 units (Figure 2). The claims are located in the Nanaimo Mining Division.



PROPERTY LOCATION MAP

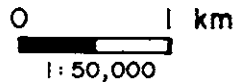
Figure 1



NTS 92L / 5

**MAHATTA PROPERTY  
CLAIM MAP**

Figure 2



Claim Name	No. of Units	Record No.	Record Date	Expiry Date
Mahatta 1	20	231383	May 6, 1991	May 6, 1992
Mahatta 2	20	231384	May 6, 1991	May 6, 1992
Mahatta 3	20	231385	May 5, 1991	May 5, 1992
Mahatta 4	20	231386	May 6, 1991	May 6, 1992
Mahatta 5	20	231387	May 6, 1991	May 6, 1992
Mahatta 6	20	231388	May 5, 1991	May 5, 1992

## 2.4 History of Exploration

Previous exploration programs have located two showings on the Mahatta property, the Les and Cleagh. The Les showing was discovered in 1968 on a newly constructed logging road. Stokes Exploration Management conducted the first exploration program in the Les Showing area in 1969 (Leighton, 1969). Reconnaissance silt and soil geochemical surveys, geological mapping, and air photo studies were completed. No anomalous geochemical responses were detected in soils around the Les Showing area.

A magnetometer survey was completed over the Les Showing area in 1972 and a series of open cuts were blasted to facilitate sampling of the showing (Dodson, 1972). No magnetic response was detected over the Les Showing itself, but a north-south magnetic high occurs over a silicified, pyritized intrusive contact zone to the northeast of the showing. Sampling results from the trenches are reported (Dodson, 1972) to be in a range of 0.15% to 0.6% Cu. No sampling plans or sample widths were noted in the available reference.

Regional exploration was conducted throughout the Mahatta River area in 1974 (Leighton, 1974) by British Newfoundland Exploration Ltd. The work consisted mainly of prospecting and reconnaissance geological mapping. The Cleagh showing is believed to have been discovered at that time.



The Cleagh showing is described as a chalcopyrite-molybdenite-sphalerite showing in a quartz vein and stockwork zone along the contact between basic lavas and a felsic breccia (Leighton, 1974). The showing location is not clear from the available references, but is believed to be on the eastern part of the present Mahatta 5 claim. No records of detailed work could be found for the area of the Cleagh Showing.

No records of subsequent exploration work were located for the period prior to the acquisition of the Mahatta property by Stow Resources Ltd.

## 2.5 Objectives of the 1991 Work Program

The objectives of the work program were as follows:

- To obtain complete moss mat geochemical sampling coverage of the property in order to identify the distribution of mineralization and locate specific targets for further exploration.
- To locate and examine previously described Cu-Mo mineralization. To determine the extent and grade of the mineralized zones.
- To establish the geological setting of the mineralization and the overall bedrock geology of the property.

## 3.0 GEOLOGY

### 3.1 Regional Geology

The Mahatta property lies within the Insular Belt of the Cordillera. The Upper Triassic Vancouver Group forms the base of the sequence in the area and consists of basalts and minor calcareous and clastic sediments. The overlying Lower Jurassic Bonanza Group volcanics consist of andesitic to rhyodacitic flows, tuff and breccia. The Bonanza volcanics are coeval with, or genetically related to granodiorite stocks of the Jurassic Island Intrusions.

The Island Copper deposit at Port Hardy is an island arc type porphyry Cu-Mo-Au deposit associated with the intrusion of a dyke-like body of rhyodacite into comagmatic basalts, andesites and pyroclastics of the Bonanza volcanics. Mineralization occurs both in the dyke and in altered volcanics flanking the dyke. Reserves were initially estimated at 280 million tons of 0.52% Cu and 0.017% Mo (Pirello, 1989).

## 3.2 Property Geology

### 3.2.1 Rock Types

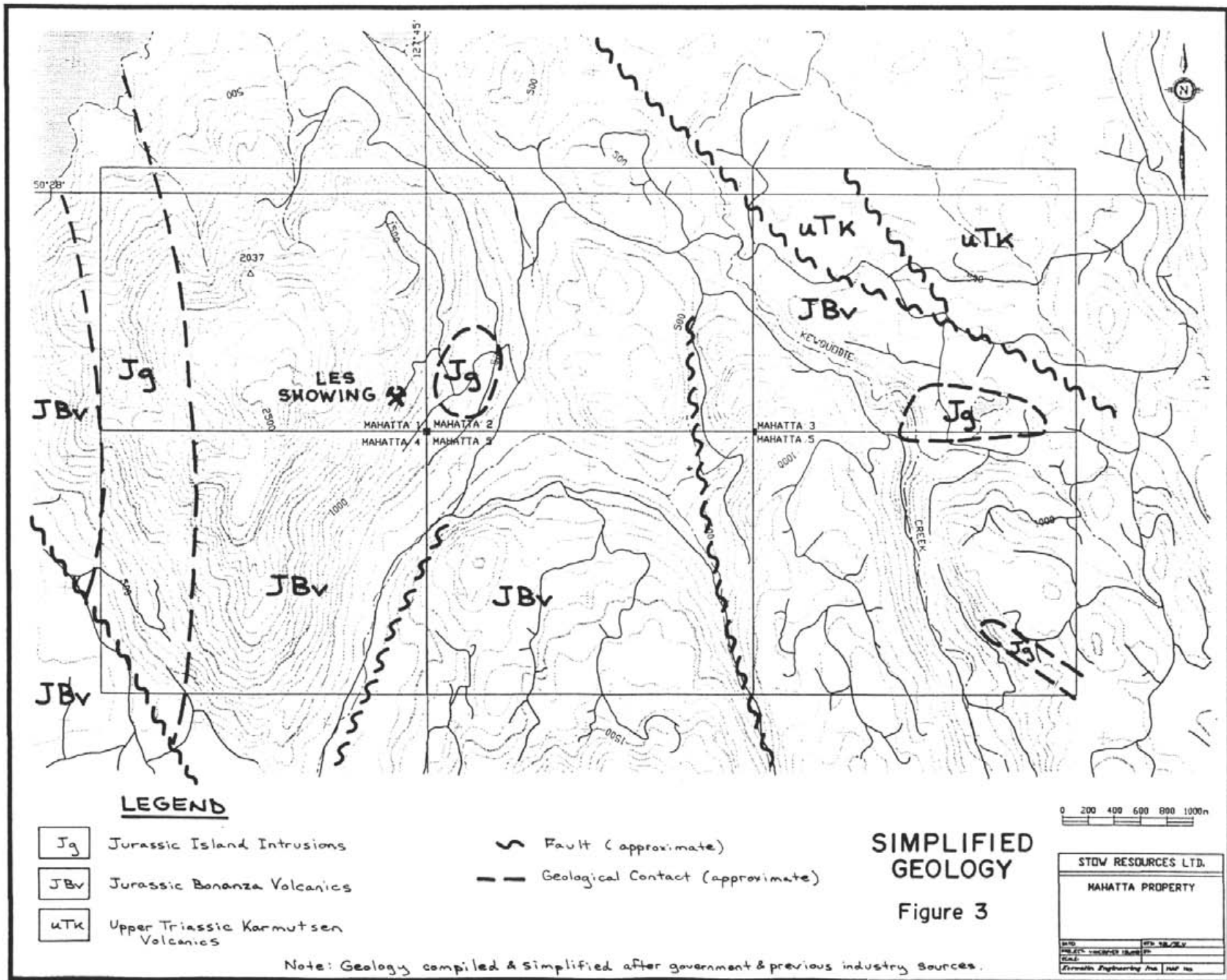
Previous regional mapping (Leighton, 1974) shows three distinct structural panels, each with different bedrock types (see Figure 3). The Bonanza volcanics on Mahatta 1, 2, 4 and 5 claims consist of a northeast striking sequence of basic lavas, acid tuffs and breccias, brecciated basic flows and lapilli tuffs. This panel is bounded on the east by a fault, just west of the Mahatta 5 and 6 boundary.

A second panel of Bonanza volcanics occurs on Mahatta 3 and 6, and is predominantly flow laminated acidic volcanics and ignimbrites.

The third structural panel is located in the northeast part of the property and consists of Karmutsen basalts (see Figure 3).

Several small diorite stocks intrude the Bonanza volcanics on the Mahatta claims (see Figure 3). Government geological maps also show a north-south elongated intrusion on the west edge of the claims.

The small stock to the northeast of the Les Showing consists of hornblende-albite diorite. Country rocks are massive, locally amygdaloidal andesitic flows and volcanic breccia. The breccia unit forms the host for the Les Showing and is a massive, apparently formational unit.



Light grey fragments average 2-3 inches in diameter in a darker grey matrix. The matrix is magnetite rich.

The diorite intrusion along the Mahatta 3-6 boundary is magnetite rich.

### 3.2.2 Metamorphism and Alteration

Volcanic rocks are mainly fresh and are relatively unaffected by regional metamorphism. Alteration occurs at the margins of intrusive plugs. At the diorite intrusion near the Les Showing there is a zone of silicified and pyritized rock from several hundred to 1,500 feet wide around the edge of the stock. Tourmaline, hematite and carbonate are developed in this alteration zone. Similar alteration has been noted around the other intrusions on the property.

### 3.2.3 Structure

The structural framework of the property as previously outlined by government and exploration mapping is shown on Figure 3. A major northwest oriented fault runs through the southwest corner of the claims. Northwest oriented faulting also occurs in the northeast corner of the claims along the contact between the Bonanza volcanics and the Karmutsen Formation.

A small plug of granodiorite in the southeast corner of the Mahatta 2 claim may be emplaced along a northeast trending fault on the Mahatta 4 claim.

### 3.3 Mineralization

Low grade copper mineralization occurs in a basic volcanic breccia at the Les Showing. Specular hematite, magnetite, pyrite, calcite and chalcopryrite occur as disseminations and discontinuous stringers in the breccia matrix. Chalcopryrite clots up to 0.5 cm in diameter were observed. Previous detailed work (Dodson, 1972) indicated a mineralized area of 500 ft. x 100 ft., but chalcopryrite content is quite variable and commonly absent in this area. It

is suggested that the mineralization is a primary component of a high iron-low sulfur flow breccia unit.

Chalcopyrite distribution is erratic and representative samples could not be taken due to the smooth outcrop face. Three selected grab samples were taken in 1991 from the best area of outcrop mineralization, results are as follows:

Sample No.	Cu (ppm)	Mo (ppm)	Au (ppb)	Zn (ppm)
91IM-168-R-131323	452	2	<5	25
131324	744	<1	<5	27
91AB-168-R-126038	0.047%	n.a.	n.a.	n.a.

This mineralization was observed over a 25 m section, extending to the edge of the outcrop.

The Cleagh Showing was previously described as a chalcopyrite-molybdenite-sphalerite showing in a quartz vein and stockwork zone along the contact between basic lavas and a felsic breccia (Leighton, 1974). Grab sample 91-AT-168-R-126209 may be near the old Cleagh Showing and returned 646 ppm Cu, <5 ppb Au, <1 ppm Mo and 19 ppm Zn. The sample was from a zone of chalcopyrite blebs and stringers associated with a 10° striking structure in a rhyodacite breccia near a basic volcanic contact. Minor amounts of chalcopyrite were observed over 70 m at this location.

Weak copper mineralization was located in float in a small stream approximately 1.4 km south of the Les Showing. Traces of malachite occur with pyrite stringers in a magnetic fine grained mafic volcanic. Consistent weak copper moss mat anomalies also occur. A local source of this mineralization is indicated, but no targets were located on a short prospecting-soil geochemical follow-up traverse.

Weak copper mineralization was also located in a volcanic breccia containing intrusive fragments immediately east of Mahatta 6. Two selected grab samples indicate the following grades:

Sample No.	Cu (ppm)	Mo (ppm)	Au (ppb)	Zn (ppm)
91-AB-168-R-126081	277	2	<5	36
91-AB-168-R-126096	246	<1	<5	70

### 3.4 Economic Potential

The primary exploration target on the Mahatta property is a porphyry Cu-Mo-Au deposit similar to that at the nearby Island Copper Mine.

The 1991 exploration program indicated a low economic potential for this type of deposit on the Mahatta property. The best known mineralization (at the Les Showing) appears to be a primary copper-enriched zone associated with an iron-rich mafic flow breccia.

A weak, sporadic, but widespread Mo anomaly occurs on the Mahatta 5 claim, in soils and in moss mats (see Map 3). Two small diorite stocks also occur in this area. The bedrock geology is poorly exposed here and porphyry style mineralization may be the source of the Mo anomaly. Although the target is at a grassroots stage and is ranked as "low priority", it is the best indication of porphyry style mineralization found by the 1991 prospecting and geochemical program.

## 4.0 EXPLORATION AND DEVELOPMENT

Stream silt/moss mat geochemical surveys and prospecting were conducted over all of the property accessible from the logging road systems. The work was done by truck from a Port Alice Base.

### 4.1 Prospecting and Geological Mapping

Prospecting and reconnaissance geological mapping was conducted over all the main outcrop exposures easily accessible by road. The Les Showing was re-located after several days of prospecting. The old logging roads are heavily overgrown, making the showings difficult to

locate. The Cleagh Showing was not re-located, although three man days of prospecting were conducted in the area and minor copper mineralization was discovered nearby.

The geological setting of the mineralization at the Les showing was defined and the size and grade of exposed mineralization was roughly estimated (see Sections 3.2 and 3.3 for a description of the geology and mineralization as defined by this work). Twenty-five rock samples were collected during the course of the prospecting and mapping program. These were all selected grab samples. All of the samples were analyzed by Bondar-Clegg and Company Ltd. for Au, Ag, Cu, Pb, Zn, As, Sb and Mo. The relevant analytical techniques are described in Appendix V. The sample locations were marked in the field with flagging and tyvek tags. The locations of all rock samples are shown on Map 2. Geological observations are shown on Map 1.

## 4.2 Geochemistry

### 4.2.1 Program

A total of 99 moss mat samples, 3 stream silt samples and 81 soil samples were collected on or immediately adjacent to the Mahatta property. Moss mat coverage was completed over the entire property. The samples were analyzed for Cu, Ag, Pb, Zn, Au, As, Sb and Mo by Bondar-Clegg and Company Ltd. Analytical techniques are described in Appendix V. The locations of all geochemical samples are shown on Map 3. Complete analytical results with sample descriptions are compiled in Appendix IV.

### 4.2.2 Results

Anomalous thresholds for Au, Cu, Mo and Zn were determined from a statistical analysis of a 556 sample regional moss mat and stream silt survey carried out in 1991 for Stow Resources Ltd. None of the elements in this survey showed classic two-population curves on cumulative frequency plots and threshold levels are assigned based on statistical parameters as follows:

THRESHOLDS FOR MOSS MAT SAMPLING		
Element	95th Percentile	Mean +2 Standard Deviations
Cu	86 ppm	104 ppm
Au	25 ppb	31.5 ppb
Mo	3 ppm	3.5 ppm
Zn	185 ppm	213 ppm

Anomalous values for the Mahatta property were taken using the 95th percentile threshold.

A weak, sporadic, but widespread molybdenum anomaly occurs on the Mahatta 5 claim in soils and in moss mats. Peak Mo values are 9 ppm in soils and 5 ppm in moss mats. There are no associated Cu, Au or Zn anomalies.

A weak but consistent copper moss mat anomaly occurs in a small stream 1.4 km south of the Les Showing. The peak copper value is 217 ppm and there are no supporting Au, Mo or Zn anomalies.

A gold moss mat anomaly occurs along the north boundary of the Mahatta 2 claim.

A single sample copper moss mat anomaly occurs along the south border of the Mahatta 5 claim, near the old Cleagh showing.

## 5.0 CONCLUSIONS

- The 1991 program of prospecting and geochemical sampling on the Mahatta property did not locate high priority exploration targets indicative of a large porphyry Cu-Mo-Au deposit similar to the nearby Island Copper Mine.
- The best mineralization located to date on the Mahatta property is the Les Showing. Sub-economic copper mineralization occurs over a +25 m section, but is apparently a primary copper zone, not related to porphyry type intrusive/alteration processes. The geochemical program does not suggest significant potential in the Les Showing area.



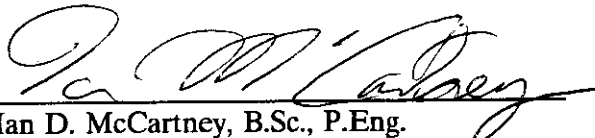
- Weak copper mineralization near the east boundary of the Mahatta 6 claim may be of a porphyry Cu-Mo association, but soil geochemical surveys do not suggest a significant copper source here.
- The Mo anomaly on the Mahatta 6 claim may be caused by a porphyry Cu-Mo type target, but no bedrock sources for this anomaly have been located. This is not considered to be a high priority target due to the low level of the Mo values and the lack of associated Cu-Au values.
- The significance of gold anomalies in two moss mat samples on the north boundary of the Mahatta 2 claim is not known at this time.

## 6.0 RECOMMENDATIONS

- Grid soil geochemistry and a magnetometer survey should be completed in the area of the Mo soil anomaly on the Mahatta 6 claim in order to define specific exploration targets.
- Detailed moss mat geochemistry should be conducted to pinpoint the source of the gold anomaly on the Mahatta 2 claim. Soil grid follow up may also be warranted.

Respectfully submitted,

**KEEWATIN ENGINEERING INC.**



Ian D. McCartney, B.Sc., P.Eng.

**7.0**    **REFERENCES**

- Cargill, D.G. (1976). Island Copper, in Porphyry Deposits of the Canadian Cordillera. C.I.M.M. Special Volume 15.
- Dodson, E.D. (1970). Report on the "Les" Group of Mineral Claims for Skaist Mines Ltd.
- Dodson, E.D. (1972). Report on the Les Group of Mineral Claims, Mahatta River, B.C. for Skaist Mines Ltd.
- Leighton, D.G. (1969). A Report on the "Les" Claim Group for Stokes Exploration Management Co. Ltd.
- Leighton, D.G. (1974). Report on Explorations in the Mahatta River Area for British Newfoundland Exploration Ltd.
- Perello, J. (1989). Porphyry Cu-Mo-Au Mineralization at Island Copper, Vancouver Island, B.C., Abs. for submission to G.A.C. Mineral Deposits Division Workshop, April 5, 1989.
- Stokes, R.B. and Leighton, D.G. (1970). Geological and Geochemical Report on the "Les" Claim Group, Skaist Mines Ltd. B.C. Assessment Report No. 2391.

**APPENDIX I**

**Statement of Qualifications**

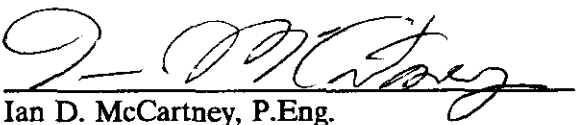
## STATEMENT OF QUALIFICATIONS

I, IAN DOUGLAS McCARTNEY, of 2242 Spruce Street in the City of Vancouver in the Province of British Columbia, do hereby certify that:

- 1) I am a graduate of Queens University, Kingston, Ontario with an Engineering Degree (B.Sc.) in Geology (1976).
- 2) I am a Member in good standing of the Association of Professional Engineers of the Province of British Columbia and a Member in good standing of the Institute of Mining and Metallurgy.
- 3) I am a consulting geologist with the firm of Keewatin Engineering Inc. with offices at Suite 800 - 900 West Hastings Street, Vancouver, British Columbia.
- 4) I am the author of the report entitled "Geological and Geochemical Report on the Tent Property, Northern Vancouver Island", dated December 9, 1991.
- 5) I directly supervised the exploration program carried out on the Mahatta property between January 25 and August 5, 1991.
- 6) I do not own or expect to receive any interest (direct, indirect or contingent) in the property described herein nor in the securities of Stow Resources Ltd. in respect of services rendered in the preparation of this report.

Dated in Vancouver, British Columbia this 9th day of December, A.D., 1991.

Respectfully submitted,

  
Ian D. McCartney, P.Eng.

## **APPENDIX II**

### **Summary of Field Personnel**

## SUMMARY OF FIELD PERSONNEL

R. Nichols	Project Supervisor	1 day
A. Birkeland	Project Geologist	10 days
I. McCartney	Geologist	10 days
A. Travis	Geologist	10 days
D. Krohman	Field Assistant	2 days
J. Leonard	Field Assistant	2 days
B. Whelan	Land Administrator	2 hours
T. Lee	Draftsperson	12 hours
M. Mees	Word Processor	10 hours

**APPENDIX III**

**Statement of Expenditures**

**STATEMENT OF EXPENDITURES**

**Pre-Field** **\$ 4,109.00**

**Field Program**

Personnel	\$10,395.00	
Camp Support	7,452.00	
Truck Rental	3,695.00	
Geochemical Analyses/Assays	2,790.00	
Miscellaneous	<u>548.00</u>	<b>\$24,880.00</b>

**Post-Field**

Personnel	\$1,600.00	
Drafting	420.00	
Word Processing	300.00	
Reproduction and Copying	<u>400.00</u>	<b><u>\$ 2,720.00</u></b>

**TOTAL EXPENDITURES:** **\$31,709.00**



**APPENDIX IV**

**Complete Geochemical Sampling Results and Sample Descriptions**

MAHATTA PROJECT (168) 1991 ASSAY AND GEOCHEM RESULTS  
 LL ROCK SAMPLES

SAMPLE IDENTIFIER	lab	LOCATION	DESCRIPTION	Cu %	*AU g/tonne	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Mo ppm
91 CK 168 R	125963 B	Km 13, J Main	Volc, SIL, py			-5	-0.2	1	8	27	-5	-5	-1
91 CK 168 R	125964 B	Km 13, J Main	FEL?, py			-5	-0.2	9	4	21	-5	-5	-1
1 CK 168 R	125965 B	Km 13, J Main	INT, py			-5	-0.2	2	3	10	-5	-5	1
91 AB 168 C	126038 M	LES Showing	Bas vol-bx, mag, hem, py, cpy 0.047										
91 AB 168 R	126081 B	W Kloochliminus Ck	vol-bx, DIO-AND-DAC, mag, cpy			-5	-0.2	277	7	36	-5	-5	2
1 AB 168 R	126096 B	W Kloochliminus Ck	vol-bx, DIO-AND-DAC, mag, cpy			-5	-0.2	246	5	70	-5	-5	-1
1 AT 168 R	126162 B	near LES Showing	Volc, SIL, py			-5	-0.2	5	5	5	14	-5	2
91 AT 168 R	126163 B	CLEAGH Showing area	f.g. tuff, 7-10% py			-5	-0.2	12	19	-1	18	-5	1
91 AT 168 R	126164 B	Mahatta 6, NW part	FEL, GOS, sh, frac, py			-5	-0.2	14	4	4	63	-5	4
1 AT 168 R	126207 B	Mahatta 3	INT, SIL, ALB			-5	-0.2	11	-2	6	-5	-5	-1
91 AT 168 R	126208 B	between Mahatta 5,6	RHY-DAC volc bx, py, frac			-5	-0.2	7	-2	45	-5	-5	1
91 AT 168 R	126209 B	20m from 126208	RHY-DAC volc bx, py, cpy, frac			-5	-0.2	646	-2	19	60	11	-1
1 AB 168 R	126210 B	Mahatta 6, NE part	DI-60, mag			-5	-0.2	14	2	20	-5	-5	1
91 IM 168 R	131323 B	LES Showing	Bas vol-bx, mag, hem, py, cpy 0.05			-5	-0.2	452	16	25	-5	-5	2
91 IM 168 R	131324 B	LES Showing	Bas vol-bx, mag, hem, py, cpy 0.09			-5	-0.2	744	11	27	-5	-5	-1
1 IM 168 R	131324 M	LES Showing	Bas vol-bx, mag, hem, py, cpy 0.088					1.5	902	8	25	1	1
1 IM 168 F	131369 B	SW of LES Showing	AND, py, mag			19	-0.2	16	10	101	-5	-5	-1
91 IM 168 F	131370 B	SW of LES Showing	AND, py, mag, mal			-5	-0.2	565	3	169	-5	-5	2
1 IM 168 F	131371 B	SW of LES Showing	AND, py, mag			6	-0.2	21	11	149	58	-5	1
1 AM 168 R	475923 M	80m S of LCP	albitized DI, py, frac	0.01			0.8	13	3	8	1	1	7
91 AM 168 R	475924 M	350m N of LES	altered volc, py, SIL, sh-flt	0.02			0.7	11	4	13	1	1	1
91 AM 168 R	475925 M	350m N of LES	altered volc, py, SIL, sh-flt	0.01			0.3	18	3	7	1	1	1
1 AM 168 R	475926 M	350m N of LES	altered volc, py, SIL, bx	0.01			0.3	13	1	14	1	1	1
91 AM 168 R	475927 M	300m N of LES	INT (DI?), py, alb,sh	0.03			0.1	13	4	6	1	1	1
91 AM 168 R	475928 M	LES Showing Area	AND, bx, mag, po, hem, bn	0.01			0.5	274	1	23	1	1	1

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MAHATTA PROJECT (168) 1991 ASSAY AND GEOCHEM RESULTS  
 ALL MOSS MAT, SILT AND SOIL SAMPLES

SAMPLE IDENTIFIER	lab code	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Mo ppm
91 AB 168 M	3047 B	-5	-0.2	9	6	147	17	-5	2
91 AB 168 M	3048 B	-5	-0.2	6	3	152	5	-5	1
91 AT 168 M	3102 B	-5	-0.2	7	6	34	12	-5	2
91 AT 168 M	3103 B	-5	-0.2	7	6	36	-5	-5	-1
91 AT 168 M	3104 B	-5	-0.2	11	6	54	8	-5	-1
91 AT 168 M	3105 B	-5	-0.2	13	7	82	-5	-5	-1
91 AT 168 M	3106 B	-5	-0.2	11	6	76	7	-5	-1
91 AT 168 M	3107 B	-5	-0.2	15	4	29	6	-5	3
91 AT 168 M	3108 B	-5	-0.2	14	4	53	12	-5	2
91 AT 168 M	3109 B	14	-0.2	16	3	76	7	-5	1
91 AT 168 M	3110 B	-5	-0.2	9	-2	22	-5	-5	-1
91 AT 168 M	3111 B	-5	-0.2	10	2	28	-5	-5	1
91 AT 168 M	3112 B	-5	-0.2	31	2	61	-5	-5	-1
91 AT 168 M	3113 B	-5	-0.2	8	3	44	-5	-5	-1
91 AT 168 M	3114 B	-5	-0.2	9	4	58	-5	-5	1
91 AT 168 M	3115 B	-5	-0.2	10	5	78	12	-5	2
91 AT 168 M	3116 B	-5	-0.2	3	3	49	-5	-5	-1
91 AT 168 M	3117 B	-5	-0.2	11	2	31	7	-5	1
91 AT 168 M	3118 B	-5	-0.2	6	-2	45	-5	-5	-1
91 AT 168 M	3137 B	-5	-0.2	33	-2	77	-5	-5	2
91 AT 168 M	3174 B	-5	-0.2	15	-2	51	-5	-5	-1
91 AT 168 M	3175 B	-5	-0.2	10	-2	37	-5	-5	-1
91 AT 168 M	3176 B	-5	-0.2	33	4	82	8	-5	1
91 AT 168 M	3177 B	-5	-0.2	34	-2	74	-5	-5	-1
91 AT 168 M	3178 B	-5	-0.2	11	4	34	-5	-5	-1
91 AT 168 M	3179 B	-5	-0.2	13	10	49	13	-5	4
91 AT 168 M	3180 B	-5	-0.2	39	3	72	-5	-5	1
91 AT 168 M	3181 B	-5	-0.2	37	-2	72	-5	-5	-1
91 AT 168 M	3182 B	-5	-0.2	11	5	118	-5	-5	2
91 AT 168 M	3183 B	6	-0.2	6	6	98	-5	-5	2
91 AT 168 M	3184 B	-5	-0.2	6	-2	20	-5	-5	1
91 AT 168 M	3185 B	-5	-0.2	15	7	63	11	-5	-1
91 AT 168 M	3186 B	164	-0.2	22	-2	50	-5	-5	-1
91 AT 168 M	3187 B	-5	-0.2	22	-2	36	-5	-5	-1
91 AT 168 M	3188 B	-5	-0.2	8	4	61	9	-5	-1
91 AT 168 M	3189 B	15	-0.2	21	3	82	12	8	-1
91 AT 168 M	3190 B	8	-0.2	8	9	71	17	-5	-1
91 AT 168 M	3191 B	8	-0.2	10	7	92	-5	-5	-1
91 AT 168 M	3192 B	-5	-0.2	22	-2	65	5	-5	-1
91 AT 168 M	3193 B	-5	-0.2	20	4	92	-5	-5	-1
91 AT 168 M	3194 B	-5	-0.2	15	3	104	-5	-5	-1
91 AT 168 M	3195 B	-5	-0.2	42	4	83	-5	-5	-1
91 AT 168 M	3196 B	-5	-0.2	57	4	87	6	-5	-1
91 AT 168 M	3197 B	-5	-0.2	17	4	93	-5	-5	-1
91 AT 168 M	3198 B	-5	-0.2	12	-2	56	-5	-5	-1
91 AT 168 M	3199 B	-5	-0.2	117	4	63	8	-5	-1
91 IM 168 M	3230 B	-5	-0.2	11	-2	50	6	-5	-1
91 IM 168 M	3231 B	-5	-0.2	8	-2	50	7	-5	-1
91 IM 168 M	3238 B	-5	-0.2	25	4	74	6	-5	2
91 IM 168 M	3239 B	-5	-0.2	37	4	96	12	-5	2
91 IM 168 M	3240 B	-5	-0.2	20	-2	50	-5	-5	-1

MAHATTA PROJECT (168) 1991 ASSAY AND GEOCHEM RESULTS  
 ALL MOSS MAT, SILT AND SOIL SAMPLES

SAMPLE IDENTIFIER	lab code	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Mo ppm
91 IM 168 M	3241 B	-5	-0.2	15	4	39	33	-5	1
91 IM 168 M	3242 B	-5	-0.2	12	-2	38	-5	-5	1
91 IM 168 M	3243 B	-5	-0.2	12	3	37	11	-5	1
91 IM 168 M	3244 B	-5	-0.2	14	-2	38	-5	-5	-1
91 IM 168 M	3245 B	-5	-0.2	18	-2	41	-5	-5	-1
91 IM 168 M	3246 B	38	-0.2	17	-2	35	-5	-5	-1
91 IM 168 M	3247 B	-5	-0.2	9	6	135	16	-5	2
91 IM 168 M	3248 B	-5	-0.2	19	2	45	-5	-5	-1
91 IM 168 M	3249 B	-5	-0.2	22	5	113	-5	-5	-1
91 IM 168 M	3260 B	-5	-0.2	27	5	55	9	-5	-1
91 IM 168 M	3261 B	-5	-0.2	99	6	110	15	-5	1
91 IM 168 M	3262 B	-5	-0.2	29	4	94	12	-5	1
91 IM 168 M	3263 B	-5	-0.2	21	3	88	-5	-5	-1
91 IM 168 M	3265 B	-5	-0.2	28	3	66	8	-5	-1
91 IM 168 M	3266 B	-5	-0.2	39	-2	73	-5	-5	-1
91 IM 168 M	3270 B	-5	0.6	41	12	79	42	12	4
91 JL 168 M	3326 B	-5	-0.2	18	7	91	9	-5	-1
91 JL 168 M	3327 B	-5	-0.2	19	9	76	8	-5	-1
91 JL 168 M	3328 B	-5	-0.2	12	6	58	31	-5	-1
91 JL 168 M	3329 B	6	-0.2	9	5	34	13	-5	-1
91 JL 168 M	3330 B	6	-0.2	8	5	36	11	-5	-1
91 JL 168 M	3332 B	-5	-0.2	7	5	34	9	-5	2
91 DK 168 M	3414 B	-5	-0.2	16	-2	48	-5	-5	-1
91 DK 168 M	3415 B	-5	-0.2	14	5	53	14	-5	2
91 DK 168 M	3445 B	-5	-0.2	37	-2	77	-5	-5	-1
91 DK 168 M	3446 B	-5	-0.2	7	7	49	-5	-5	5
91 IM 168 M	3625 B	-5	-0.2	24	8	136	-5	-5	-1
91 IM 168 M	3626 B	-5	-0.2	165	8	141	7	-5	-1
91 IM 168 M	3627 B	-5	-0.2	217	8	139	7	-5	-1
91 IM 168 S	3628 B	-5	0.4	-1	7	60	40	-5	2
91 IM 168 S	3629 B	-5	-0.2	-1	9	57	-5	-5	4
91 IM 168 M	3630 B	IS	-0.2	17	6	66	7	-5	-1
91 IM 168 S	3631 B	-5	-0.2	-1	-2	50	5	-5	-1
91 IM 168 S	3632 B	-5	-0.2	-1	4	58	7	-5	-1
91 IM 168 S	3633 B	-5	-0.2	-1	8	85	-5	-5	-1
91 IM 168 S	3634 B	-5	-0.2	-1	-2	50	-5	-5	-1
91 IM 168 S	3635 B	-5	-0.2	-1	12	55	-5	-5	-1
91 IM 168 S	3636 B	-5	-0.2	-1	7	53	-5	-5	-1
91 IM 168 S	3637 B	-5	-0.2	-1	8	77	-5	-5	-1
91 IM 168 S	3638 B	-5	-0.2	-1	4	52	-5	-5	-1
91 IM 168 S	3639 B	-5	-0.2	-1	4	52	-5	-5	-1
91 IM 168 M	3640 B	-5	-0.2	21	6	112	-5	-5	-1
91 AT 168 M	3715 B	-5	-0.2	9	2	86	-5	-5	-1
91 AT 168 M	3716 B	-5	-0.2	41	3	77	-5	-5	-1
91 AT 168 M	3717 B	-5	-0.2	6	5	64	-5	-5	-1
91 AT 168 M	3718 B	7	-0.2	16	4	94	-5	-5	-1
91 AT 168 M	3719 B	11	-0.2	9	7	112	-5	-5	-1
91 AT 168 S	3720 B	-5	-0.2	2	4	22	36	-5	5
91 AT 168 M	3721 B	-5	-0.2	3	3	94	17	-5	3
91 AT 168 M	3723 B	10	-0.2	7	8	84	-5	-5	1
91 AT 168 M	3724 B	-5	-0.2	6	4	74	10	-5	2

MAHATTA PROJECT (168) 1991 ASSAY AND GEOCHEM RESULTS  
 ALL MOSS MAT, SILT AND SOIL SAMPLES

SAMPLE IDENTIFIER	lab code	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Mo ppm
91 AT 168 M	3725 B	8	-0.2	3	5	52	30	-5	5
91 AT 168 S	3726 B	-5	-0.2	5	13	35	26	-5	2
91 AT 168 L	3727 B	-5	-0.2	4	-2	81	14	-5	2
91 AT 168 S	3728 B	-5	-0.2	2	-2	43	11	-5	4
91 AT 168 S	3729 B	-5	-0.2	2	3	44	12	-5	6
91 AT 168 S	3730 B	-5	-0.2	3	4	55	14	-5	6
91 AT 168 S	3731 B	-5	-0.2	4	13	108	28	-5	5
91 AT 168 S	3732 B	-5	-0.2	11	10	91	16	-5	4
91 AT 168 S	3733 B	-5	-0.2	5	12	63	9	-5	3
91 AT 168 S	3734 B	-5	-0.2	5	4	44	20	-5	6
91 AT 168 S	3735 B	-5	-0.2	6	3	33	12	-5	3
91 AT 168 S	3736 B	-5	-0.2	10	3	31	10	-5	4
91 AT 168 S	3737 B	-5	-0.2	12	5	32	-5	-5	1
91 AT 168 S	3738 B	-5	-0.2	11	-2	34	-5	-5	2
91 AT 168 S	3739 B	-5	-0.2	10	2	30	-5	-5	2
91 AT 168 S	3740 B	-5	-0.2	14	-2	28	6	-5	2
91 AT 168 M	3741 B	-5	-0.2	15	2	40	-5	-5	-1
91 AT 168 S	3742 B	-5	-0.2	7	-2	27	-5	-5	-1
91 AT 168 S	3743 B	-5	-0.2	12	6	32	6	-5	9
91 AT 168 M	3744 B	-5	-0.2	10	-2	30	-5	-5	-1
91 AT 168 M	3745 B	-5	-0.2	8	2	84	-5	-5	-1
91 AT 168 S	3746 B	-5	-0.2	9	-2	23	-5	-5	-1
91 AT 168 S	3747 B	-5	-0.2	6	-2	26	9	-5	-1
91 AT 168 M	3753 B	-5	-0.2	31	-2	99	11	-5	-1
91 AT 168 M	3754 B	11	-0.2	28	-2	95	-5	-5	-1
91 AT 168 M	3755 B	-5	-0.2	46	-2	87	6	-5	-1
91 AT 168 L	3756 B	-5	-0.2	21	-2	102	13	-5	2
91 AT 168 L	3757 B	-5	-0.2	32	2	89	16	-5	1
91 AT 168 M	3758 B	-5	-0.2	42	-2	84	15	-5	-1
91 AT 168 M	3759 B	-5	-0.2	31	-2	88	-5	-5	-1
91 AT 168 M	3760 B	12	-0.2	17	2	76	-5	-5	-1
91 AT 168 M	3761 B	-5	-0.2	20	-2	70	9	-5	-1
91 AT 168 S	3800 B	-5	-0.2	8	9	72	9	-5	2
91 AT 168 S	3801 B	-5	-0.2	7	5	48	-5	-5	2
91 AT 168 S	3802 B	-5	-0.2	12	4	55	9	-5	2
91 AT 168 S	3803 B	-5	-0.2	12	5	46	5	-5	2
91 AT 168 S	3804 B	-5	-0.2	-1	-2	26	-5	-5	1
91 AT 168 S	3805 B	-5	-0.2	7	4	43	-5	-5	1
91 AT 168 S	3806 B	-5	-0.2	12	-2	40	-5	-5	2
91 AT 168 S	3807 B	-5	-0.2	8	-2	40	-5	-5	2
91 AT 168 S	3808 B	-5	-0.2	12	-2	35	-5	-5	-1
91 AT 168 S	3809 B	-5	-0.2	11	-2	32	11	-5	2
91 AT 168 S	3810 B	-5	-0.2	9	-2	29	-5	-5	1
91 AT 168 S	3811 B	-5	-0.2	7	-2	38	-5	-5	1
91 AT 168 S	3812 B	-5	-0.2	16	2	50	15	-5	2
91 AT 168 S	3813 B	-5	-0.2	1	9	41	-5	-5	2
91 AT 168 S	3814 B	-5	-0.2	2	4	104	11	-5	1
91 AT 168 S	3815 B	-5	-0.2	3	-2	29	8	-5	-1
91 AT 168 S	3816 B	-5	-0.2	14	-2	32	10	-5	3
91 AT 168 S	3817 B	-5	-0.2	8	-2	39	-5	-5	2
91 AT 168 S	3818 B	-5	-0.2	1	-2	20	-5	-5	2

MAHATTA PROJECT (168) 1991 ASSAY AND GEOCHEM RESULTS  
 ALL MOSS MAT, SILT AND SOIL SAMPLES

SAMPLE IDENTIFIER	lab code	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Mo ppm
91 AT 168 S	3819 B	-5	-0.2	-1	6	14	-5	-5	-1
91 AT 168 S	3820 B	-5	-0.2	4	2	22	-5	-5	2
91 AT 168 S	3821 B	-5	-0.2	4	3	38	19	-5	1
91 AT 168 S	3822 B	-5	-0.2	4	-2	29	12	-5	2
91 AT 168 S	3823 B	-5	-0.2	24	4	43	8	-5	2
91 AT 168 S	3824 B	-5	-0.2	4	2	27	12	-5	4
91 AT 168 S	3825 B	-5	-0.2	4	5	35	-5	-5	3
91 AT 168 S	3826 B	-5	-0.2	19	2	56	16	-5	2
91 AT 168 S	3827 B	-5	-0.2	10	3	33	6	-5	2
91 AT 168 S	3828 B	-5	-0.2	49	10	96	13	-5	1
91 AT 168 S	3829 B	-5	-0.2	3	4	29	-5	-5	-1
91 AT 168 S	3830 B	-5	-0.2	2	5	16	-5	-5	1
91 AT 168 S	3831 B	-5	-0.2	11	2	44	6	-5	1
91 AT 168 S	3832 B	6	-0.2	7	7	36	7	-5	2
91 AT 168 S	3833 B	-5	-0.2	10	3	38	-5	-5	2
91 AT 168 S	3834 B	10	-0.2	1	4	47	-5	-5	-1
91 AT 168 S	3835 B	-5	-0.2	13	-2	45	26	-5	5
91 AT 168 S	3836 B	-5	-0.2	6	2	28	-5	-5	2
91 AT 168 S	3837 B	-5	-0.2	-1	-2	24	-5	-5	1
91 AT 168 S	3838 B	-5	-0.2	3	-2	31	-5	-5	2
91 AT 168 S	3839 B	-5	-0.2	-1	-2	16	-5	-5	1
91 AT 168 S	3840 B	-5	-0.2	-1	-2	18	-5	-5	2
91 AT 168 S	3841 B	7	-0.2	2	5	25	-5	-5	2
91 AT 168 S	3842 B	-5	-0.2	6	5	33	-5	-5	2
91 AT 168 S	3843 B	-5	-0.2	19	4	57	-5	-5	2
91 AT 168 S	3844 B	-5	-0.2	8	6	30	-5	-5	2
91 AT 168 S	3845 B	-5	-0.2	14	6	35	-5	-5	2
91 AT 168 S	3846 B	-5	-0.2	13	-2	40	9	-5	1
91 AT 168 S	3847 B	-5	-0.2	6	7	32	-5	-5	3
91 AT 168 S	3848 B	-5	-0.2	9	7	39	6	-5	2
91 AT 168 S	3849 B	-5	-0.2	18	5	55	-5	-5	3
91 AT 168 S	3850 B	-5	-0.2	13	9	46	9	-5	2

1686CH.WK1

# KEVA... E... NEERING INC

## ROCK SAMPLES

Project: MAHATTA  
 Area (Grid): \_\_\_\_\_  
 Collectors: MUIRHEAD

Results Plotted By: \_\_\_\_\_  
 Map: \_\_\_\_\_ NTS: \_\_\_\_\_  
 Date: MAY 5 1991 Surface  Underground

SAMPLE NUMBER	LOCATION	NOTES	REP. SAMPLE NUMBER	SAMPLE TYPE (LENGTH)					ROCK TYPE	SAMPLE DESCRIPTION	MAP SHEET
				GRAB	CHIP	CHANNEL	CORE	FLOAT			
A-001B-004	ROAD BANK CUT		475923	✓					ALBITE INTRUSIVE.	P/± Cpy TO 5% IN ALBITIZED DIORITE INTRUSIVE. APPARENTLY FRACTURE CONTROLLED NO OBVIOUS PREFERRED DIRECTION ZONE ≈ 3m X 1.5m.	
A-001R-005	S. BANK MASTOR CK		475924	✓					ALBITE VOLCANICS	EXPOSED IN BANK APPROX 23m X 4m BLEACHED/SILIC. 1/2 SHEAR/FIT AVG 10-20% SILICIDES SAME FATE (BOUNDING) TO SE+0% P/± TR-1.5% Cpy ZONE TRENDS 200°/80° N.W.	
A-001R-006	"	"	475925	✓					"	AS ABOVE. NORTH END	
A-001R-007	"	"	475926	✓					"	APPARENT EAST WALL CONTACT TO ABOVE VERY SILIC MODERATELY BLEACHED 2-4% FINE DISS P/± TR-1% Cpy VOLK BY NARROW 43m MIN ZONE	
A-001R-008	60m. SOUTH ON ROAD FROM A-005		475927	✓					INT. DIORITE?	SMALL 4.3m SHEAR IN V. ALBITIZED DIORITE. 7-9% P/ (TR Cpy?) + TOURMALINE IN WALL ROCK	
A-001R-009	AT PLOTTED "VER" LOCATION - ERUPT MAP.		475928	✓					ANDESITE	STRONGLY WEATHERED VOLK BY CLUSTERS 2-3% P/4% TR. GRAY TO BLACK TO PA 2-4%, 1-3% SPEC. WHEN CURSED BLENDED P. TR-0.5% P/± TR-0.5% TR/ HAl. FINE VESICULAR SECTIONS TO OTZ/KARP/ SPEC. HEM FILL.	

















# KEEWATIN ENGINEERING INC.

## STREAM SEDIMENTS

Project: Mahatta (168)  
 Area (Grid): \_\_\_\_\_  
 Collectors: IAN M<sup>c</sup>Cartney (IM)

Results Plotted By: \_\_\_\_\_  
 Map: \_\_\_\_\_ N.T.S.: \_\_\_\_\_  
 Date: \_\_\_\_\_

Sample Number	NOTES	SEDIMENT DATA					STREAM DATA					SPRING	DRY GULLY					
		Gravel	Sand	Silt	Clay	Organic	Bank	Active	Width	Depth	Velocity							
2 July 91	Near Les Showings								22'	1"	Shallow							
M-M-3230	Sandy mat, 10m above road. From rx in centre of stream. Near Les Showings					60%			22'	2"	Shallow							
M-M-3231	Good mat from bldrs and outcrop ledge in centre of stream					Bldrs/Bedrock			22'	2"	Shallow							
6 JULY 91	East of Les, Mahatta 5.2																	
M-M-3238	Main stem. Bottom of Cleagh road. Good Mat from tops of bldrs.		✓						8-20'	2'	Shallow							
M-3239	Good mat from tops of small bldrs near bank.		✓						2-8'	DRY	Shallow							
M-3240			✓	✓					2-8'	DRY	Shallow							
M-3241	Good mat from bldrs.		✓						2-8'	DRY	Shallow							
M-3242	Sample from 6 bldrs, over 10-20m. No bank contamination		✓						2-8'	DRY	Shallow							
M-3243	Fine sand-silt in mat from branch debris. Poor site. Only organic mud and moss in stream bed.			✓	✓	HIGH			2-8'	DRY	Shallow							
M-3244	From decomposed trees in middle of stream. Good sand/silt in moss mat		✓	✓					2-8'	DRY	Shallow							
M-3245	Good mat from tops of bldrs.		✓	✓	✓				2-8'	1"	Shallow							
M-3246	From bldrs over 50m length. Poor mat development. Minor wood moss taken.		✓	✓	✓				2-8'	DRY	Moderate							
M-3247	Good mat from steep rock face, at small waterfall.		✓	✓	✓				8-20'	DRY	Shallow							
M-3248	Main stream at Cleagh Depot. Good mat from boulders.		✓	✓					8-20'	1'	Shallow							
7 JULY 91	Main Haul Road																	
M-3249	30m above rd. Good mat from tops of bldrs.		✓	✓	✓				2-8'	DRY	Shallow							
M-3260	150m above rd. Good mat from top of bldrs.			✓	✓				2-8'	DRY	Moderate							
M-3261	160m above rd. Good mat from top of lge bldr.			✓	✓				2-8'	DRY	Shallow							
M-3262	20m above rd. Good mat from top ledge.			✓	✓				22'	1"	Moderate							
M-3263	20m above rd. Good mat from top of lge bldr.		✓	✓	✓	✓			2-8'	6"	Shallow							
M-3265	15m from rd. Good mat from top of bldrs			✓	✓	✓			2-8'	DRY	Shallow							
M-3266	150m up from S. end of airstrip. Good mat from lge bldrs.			✓	✓				8-20'	DRY	Shallow							
M-3270	From bedrock ledge on side of stream. Good mat.		✓	✓	✓				9-20'	2'	Shallow							
1 Aug 91	Anomaly Following SW of Les Showings																	
M-3625	Organic poorly developed mat from boulders contains some sands lge boulders and gravel in stream.			✓	✓	✓			2-8'	DRY	Shallow							
M-3626	From top and backs of lge bldrs in centre of stream. 125m west from Cu anomaly sample M-M-3261			✓	✓	✓			2-8'	DRY	Moderate							





# KEEWATIN ENGINEERING INC.

## STREAM SEDIMENTS

Project: MAHATTA  
 Area (Grid): "CLEASH" AREA  
 Collectors: TRAVIS

Results Plotted By: AT  
 Map: \_\_\_\_\_ N.T.S.: 924/5  
 Date: June 26-27/91

Sample Number	NOTES	SEDIMENT DATA					STREAM DATA					SPRING	DRY GULLY	Quantity	
		Gravel	Sand	Silt	Clay	Organic	Bank	Active	Width	Depth	Velocity				
91AT168M-3102	UPSTREAM, SOUTH OF "Cleash Shading" (reported location)	75	15	10			✓	<2'	<1"	S					F
91AT168M-3103	Downslope from Cleash, prominent structure	75	25				✓	2-8'	2"	M					F
91AT168M-3104	100m downslope of road junction, creek then runs down old road bed where it's goss. exposure	75	25				✓	2-8'	2"	M					G
91AT168M-3105	~100m down road from M-3104. o/c of dark green-black volc. (basics)	50	50				✓	2-8'	2"	M					G
91AT168M-3106	~600m up road from junction with mainline. Rock sample 126163 also taken in creek "Cleash Area"	80	20				✓	2-8'	2"	M					G
91AT168M-3107	Lower road "Cleash Area" (~1.4km from mainline) Float of Basics + Basics. o/c nearby of flow laminated spiculated goss. DRY-DAY	80	20				✓	<2'	DRY	M					F
91AT168M-3108	~950m up lower road from junction with mainline, goss. shear up creek	80	20				✓	2-8'	1"	M					F
91AT168M-3109	~1350m up lower road from junction with mainline, float dk green volc.	80	20				overrun channel	2-8'	DRY	?					F

# KEEWATIN ENGINEERING INC.

## STREAM SEDIMENTS

Project: Mahatta  
 Area (Grid): "Kenquodie Creek + Dick Lake"  
 Collectors: TRAVIS

Results Plotted By: AT  
 Map: \_\_\_\_\_ N.T.S.: 92 4/5  
 Date: JUNE 29/91

Sample Number	NOTES	SEDIMENT DATA					STREAM DATA					SPRING	DRY GULLY
		Gravel	Sand	Silt	Clay	Organic	Bank	Active	Width	Depth	Velocity		
91A168M- 310	SOUTH OF DICK LAKE BRIDGE WASHED OUT FENSICS = DIORITES MAPPED IN AREA	85	10	5			✓		28' < 1"	S			
91A168M- 311	BELOW ROAD AND BRIDGE, DRAINING "DICK" LAKE No silt noted. IMPURE MATERIAL IN AREA	75	10	5			✓		< 2' 1"	S			
91A168M- 312	Kenquodie Creek ~ 75m upstream of bridge where mainline crosses	65	25	10			✓		8-20' 6"	M			
91A168M- 313 (Rock)	Along main west side of Kenquodie Creek near southern portion of Mahatta 5	85	15				✓		28' < 1"	M			
91A168M- 314 (Rock)	~200m north of 91A168M-313	80	15	5			✓		28' < 1"	M			
91A168M- 315	NEAR IGNEOUS/INTRUSIVE CONTACT, PROPERTY FILES SHOW MOLT ANOMALY IN AREA	90	7	3			✓		< 2' < 1"	M			
91A168M- 316	SOUTH MAHATTA 5 AREA UPSLOPE OF M3313 + M3314 MAFIC VOLCANICS (MTRCH), FLOWS ON BEDROCK ONLY SEDIMENT IN MOSS MAT (SAND)						✓		28' < 1"	F			
91A168M- 317	Main near Mahatta 5 + 3 common boundary Poor sample (but only one for miles)	50	25	25			✓		< 2' dry	?M	✓		
91A168M- 318	EASTERN SIDE OF MAHATTA 2 Poor sample (Bank dilution again only one for miles)	80	15	5			✓		< 2' < 1"	M			

# KEEWATIN ENGINEERING INC.

## STREAM SEDIMENTS

Project: Makatta 168

*Moss mt*

Results Plotted By: \_\_\_\_\_

Area (Grid): \_\_\_\_\_

Map: \_\_\_\_\_ N.T.S.: \_\_\_\_\_

Collectors: A. BIRKELAND

Date: \_\_\_\_\_

Sample Number	NOTES	SEDIMENT DATA					STREAM DATA					SPRING	DRY GULLY
		Gravel	Sand	Silt	Clay	Organic	Bank	Active	Width	Depth	Velocity		
07/07/91 QIAB167 M 3047	<i>Lithology</i> Best Yvonne Linn Quartzite Sand		✓	✓		Mix			-2'	1'	shallow		
QIAB168 M 3048	" QFP, QFP Bx; Marginal Bx + quartzite + silt (falsil)		✓	✓		Mix			2-4'	1.5'	shallow		
07/08/91 QIAB168 M 3049	Quartzite Sand Race Altered QFP, Di, Silt Py Rock (Bx?) Foliated Hill Di		✓	✓		Mix			-2'	1'	shallow		
QIAB169 M 3050	" QFP: QFP Bx Marginal Bx and quartzite falsil + silt		✓	✓		Mix			-2'	1'	shallow		





# KEEWATIN ENGINEERING INC.

## STREAM SEDIMENTS

Project: Mahatta

Results Plotted By: AT

Area (Grid): \_\_\_\_\_

Map: \_\_\_\_\_ N.T.S.: 92 L/5

Collectors: TRAVIS

Date: July 16 - July 18

Sample Number <small>July 16/91</small>	NOTES	SEDIMENT DATA					STREAM DATA					SPRING	DRY GULLY					
		Gravel	Sand	Silt	Clay	Organic	Bank	Active	Width	Depth	Velocity							
11AT16B4-3185	ABOVE WATERTANK ON "CLEUGH MAIN"			✓	✓	✓		✓	8-20'	2"	F							
M-3186	Main Cleugh Creek		✓	✓	✓	✓		✓	8-20'	3"	S							
M-3187	opposite 3186 on small dry creek		✓	✓	✓	✓		✓	2-8'	Dry	M							
M-3188	Upstream of M 3185 (same creek)		✓	✓	✓	✓		✓	2-8'	2"	M							
M-3189	N Mahatta 1		✓	✓	✓			✓	2-8'	1"	M							
M-3190	" "		✓	✓	✓			✓	2-8'	<1"	M							
M-3191	" "		✓	✓	✓	✓		✓	<2'	<1"	M							
M-3192	trachyandesite porphyry dr in creek		✓	✓				✓	8-20'	2"	M							
July 17/91																		
11AT16B4-3193	South Mahatta 5+6, East of "Cassin Occurrence"		✓	✓	✓	✓		✓	8-20'	1"	M							
M-3194			✓	✓	✓	✓		✓	2-8'	<1"	F							
M-3195	Main creek, mass mat choked with sand		✓					✓	20-60'	3"	M							
M-3196	Main creek, mass mat choked with sand		✓					✓	20-60'	3"	M							
M-3197	South Mahatta 5+6		✓	✓				✓	2-8'	<1"	M							
M-3198	" "		✓	✓	✓			✓	2-8'	<1"	F							
M-3199	" "		✓	✓	✓			✓	8-20'	On	M							
South Mahatta 5+6																		
11AT16B4-3215	downstream of where possible structure crosses creek		✓	✓	✓	✓		✓	8-20'	1"	M							
M-3216	downstream of (py min 2N) (115m upstream)		✓	✓				✓	20-60'	3"	M							
M-3217	near bottom of logging cut			✓	✓	✓		✓	2-8'	<1"	M							
July 18/91																		
11AT16B4-3218	Swamp, very poor, maybe contaminated from road, NE Mahatta 5		✓	✓	✓	✓		✓	8-20'	2'	SLOW							
M-3219	SE Mahatta 2		✓	✓	✓			✓	2-8'	<1"	M							
M-3221	Nw Mahatta 6		✓	✓	✓	✓		✓	<2'	<<1"	F							
M-3223	Upstream of Darcy's Sample M-3246, West Mahatta 6		✓	✓	✓	✓		✓	2-8'	<<1"	M							
M-3224	Nw Mahatta 6		✓	✓	✓	✓		✓	2-8'	<1"	S							
M-3225	Ignimbrite outcrop NW Mahatta 6			✓	✓			✓	2-8'	<1"	F							
* Note 3220 a Silt, 3222 NOT TAKEN																		

# KEEWATIN ENGINEERING INC.

## STREAM SEDIMENTS

Results Plotted By: AT

Project: Mahatta

Area (Grid): \_\_\_\_\_

Map: \_\_\_\_\_ N.T.S.: \_\_\_\_\_

Collectors: TRAVIS

Date: JUL 19 21

Sample Number <small>July 19/21</small>	NOTES	SEDIMENT DATA					STREAM DATA					SPRING	DRY GULLY
		Gravel	Sand	Silt	Clay	Organic	Bank	Active	Width	Depth	Velocity		
7101681-3727	slide area, tufts of grass with gravel → silt Mahatta Cr	✓	✓	✓			✓	20'	Dry	F			
H-3741	moss mat, 15m up creek from road NE Mahatta		✓	✓	✓		✓	<2'	<<1"	S			
<u>July 21/21</u>													
7101681-3752	Sw Mahatta Corner Mahatta Cr		✓	✓		✓	✓	2-8'	1"	M			
M-3754	" "		✓	✓		✓	✓	8-20'	1"	M			
M-3755	" "			✓	✓		✓	8'	2"	M			
L-3756	" "	✓	✓	✓			✓	6'	1"	M			
L-3757	" "	✓	✓	✓			✓	60'	Dry	M			
M-3758	" "		✓	✓			✓	6'	1"	M			
M-3759	" "		✓	✓	✓		✓	15'	<1"	M			
M-3760	X (low) = no?		✓	✓			✓	10'	Dry	M			
M-3761	" "		✓	✓		✓	✓	8'	Dry	M			





# KEEWATIN ENGINEERING INC.

## SOIL SAMPLES

Project: Mahatta  
 Area (Grid): EAST Mahatta 6  
 Collectors: TRAVIS

Results Plotted By: AT  
 Map: \_\_\_\_\_ N.T.S.: 924/5  
 Date: July 19/41

Sample Number	Sample Location		Notes	Topography				Vegetation				Soil Data							
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Good	Horizon Poor	Parent Drift	Material Bedrock
91871685-3726			Soil near top of wash out, ignimbrite?		N					✓			B	Shmp				✓	RE
L-3727		see stream sediments																	
S-3728		0+45	END OF ROAD		W					✓			B					✓	OB
S-3729		1+25	Rocky soil		W					✓			B					✓	RE
S-3730		2+00			W					✓			B					✓	MS
S-3731		2+80	Rocky		W					✓			B					✓	MP
S-3732		3+30			W					✓			B					✓	MX
S-3733		3+80			W					✓			B					✓	MB
S-3734		4+30			W					✓			B					✓	RE
S-3735		4+80			W					✓			B					✓	RS
S-3736		5+15			N					✓			B					✓	VE
S-3737		5+65			N					✓			B					✓	RE
S-3738		6+15			N					✓			B					?	RE
S-3739		8+15			N					✓			B					?	ME
S-3740		9+25			N					✓			B					✓	MB
H-3741		see stream sediments																	
S-3742		10+35			NE					✓			B					✓	MB
S-3743		10+85	More like a talus sample		NE					✓			B					✓	WE
S-3744			Intrusive r/c nearby		W					✓			B					✓	LE
S-3747			"		W					✓			B					✓	LE

# KEEWATIN ENGINEERING INC.

## SOIL SAMPLES

Project: Mahetta

Results Plotted By: C

Area (Grid): \_\_\_\_\_

Map: \_\_\_\_\_ N.T.S.: 9245

Collectors: TRAVIS

Date: July 23/91

Sample Number	Sample Location		Notes	Topography				Vegetation				Soil Data								
	Distance Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Good	Horizon Development	Parent	Material	Colour
S-3800	0+00				SE					✓	✓			B	60					RB
S-3801	0+60				SE					✓	✓			B	60					MB
S-3802	1+00				SE					✓	✓			B	30					MB
S-3803	1+50				SE					✓	✓			B	30					MB
S-3804	2+00				SE					✓	✓			B	25					LRR
S-3805	2+50				SE					✓	✓			B	20					MB
S-3806	3+00				E					✓	✓			B	20					MRR
S-3808	3+50				E					✓	✓			B	15					MRE
S-3809	4+20				E					✓	✓			B	25					MB
S-3809	4+50				E					✓	✓			B	20					MB
S-3810	5+00				E					✓	✓			B	20					MB
S-3811	5+50				NE					✓	✓			B	15					MB
S-3812	6+05				NE					✓	✓			B	20					ME
S-3813	6+50				NE					✓	✓			C	20					GG
S-3814	6+65		Talus fines		NE					✓	✓				?					LB
S-3815	7+00				NE					✓	✓			B	20					GB
S-3816	7+65				NE					✓	✓			C	15					GB
S-3817	8+10				NE					✓	✓			B	25					LRR
S-3818	8+60				NE					✓	✓			B/C	20					MB
S-3819	9+10				N					✓	✓			C	30					GI
S-3820	9+50				N					✓	✓			B	30					LRL
S-3821	10+00				NW					✓	✓			B	15					LRE
S-3822	10+50				NW					✓	✓			B	20					LRR
S-3823	11+00				NW					✓	✓			B	30					LRA
S-3824	11+50				NW					✓	✓			B	25					MC
S-3825	12+00				NW					✓	✓			B	10					RL
S-3826	12+50		Bottom of A resting on fill		NW					✓	✓			A	35					DB
S-3828	13+00				NW					✓	✓			B	25					MB

# KEEWATIN ENGINEERING INC.

## SOIL SAMPLES

Project: Mahatta

Results Plotted By: \_\_\_\_\_

Area (Grid): \_\_\_\_\_

Map: \_\_\_\_\_ N.T.S.: 9245

Collectors: TRAVIS

Date: July 23/91

Sample Number	Sample Location		Notes	Topography				Vegetation				Soil Data							
	Dist. Lat	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Good	Horizon Development Poor	Parent Drift	Material Bedrock
Q1AT185-2828	13150		TALUS FINES	X	NW				✓	✓				?					LB
S-3829	14115			X	NE				✓	✓			B	10					LB
S-3830	14170		Bottom of A above till	X	NW				✓	✓			A	25					DB
S-3831	15125			X	NE				✓	✓			B	15					RE
S-3832	15175			X	NE				✓	✓			A	20					RB
S-3833	15195			X	NE				✓	✓			B	15					RE
S-3834	16140			X	NE				✓	✓			Atc	15					Gr
S-3835	16195		Outside of Bend (west side)	X	SE				✓	✓			B	35					RE
S-3836	17175			X	SE				✓	✓			B	?					RE
S-3837	18113			X	SW				✓	✓			C	15					GB
S-3838	18149			X	SW				✓	✓			C	10					GB
S-3839	19105			X	NW				✓	✓			Atc	30					GB
S-3840	19152			X	NW				✓	✓			C	35					RE
S-3841	20100			X	NW				✓	✓			BK	20					GC
S-3842	20145			X	NE				✓	✓			B	25					RE
S-3843	20180			X	NE				✓	✓			B	?					RB
S-3844	21110			X	SE				✓	✓			B	35					RB
S-3845	21154			X	SE				✓	✓			B	40					RB
S-3846	21197			X	SE				✓	✓			B	20					M...
S-3847	22160			X	SE				✓	✓			B	15					LA...
S-3848	22197			X	SE				✓	✓			B	20					H&R...
S-3849	23150			X	SE				✓	✓			B	20					RB
S-3850	23195			X	SE				✓	✓			B	15					RB

# KEEWATIN ENGINEERING INC.

## SOIL SAMPLES

Project: MAHATTA (168)

Results Plotted By: \_\_\_\_\_

Area (Grid): \_\_\_\_\_

Map: \_\_\_\_\_ N.T.S.: 92L/5

Collectors: IAN M<sup>c</sup>CARTNEY (IM)

Date: \_\_\_\_\_

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data							
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Good	Horizon Poor	Parent Drift	Bedrock Material	Colour
IM 3628	SW of Les	Showing	Orange brown B Horizon, Steep Talus & cobbles blocks in area of sample.					✓						1'	✓					
IM 3629	"	"	Reddish brown B Horizon. Some organic in sample. Steep				4 Moly	✓						1 1/2'	✓					
IM 3631	"	"	Orange brown B Horizon, low organic, Steep.					✓						1 1/2'	✓					
IM 3632	"	"	Orange brown B Horizon, Steep					✓						1 1/2'	✓					
IM 3633	"	"	Brown-bk mixed soil with small angular talus frags throughout. Steep					✓						1 1/2'	✓					
IM-3634	"	"	Orange brown. Good protic, moderate slope.					✓						1'	✓					
IM-3635	"	"	Bright orange bn B-Horizon. Steep					✓						1'	✓					
IM-3636	"	"	Orange bn B-Horizon. Some organic mixed into sample.					✓						1 1/2'	✓					
IM-3637	"	"	Orange bn. B-Horizon. Angular volc rock frags. Steep slope.					✓						1'	✓					
IM-3638	"	"	Orange brown B-Horizon. Moderate slope					✓						1 1/2'	✓					
IM-3639	"	"	"					✓						1 1/2'	✓					