ASSESSMENT REPORT

ON

TEST PITTING PROGRAM

FOR

TS 1-29 (YA42414-442) CLAIMS

$63^{o}12N$ $130^{o}11'W$

MAYO MINING DISTRICT - 105-0-1

JULY - AUGUST, 1981

R. STROSHEIN

MARCH 1982

091004

INDIAN and NORTHERN AFFAIRS

TRANSMITTAL FORM

M R File No
S.M.R. File No
Date Fwd. 31/3/82

FROM: Mining Recorder at ..... MAYO .....

TO: Supervising Mining Recorder at Whitehorse, Y.T.

FOR ACTION ARE:

- ☐ NEW APPL'N for PLACER LEASE to PROSPECT: Name:
- ☐ RENEWAL APPL'N PLACER LEASE to PROSPECT: Name: Lease No. .....
- ☐ AFFIDAVIT of EXPENDITURE on PLACER LEASE. Name. Lease No. .....
- ☐ ASSIGNMENT of PLACER LEASE No. .....
  From: To:
- ☐ GROUPING APPL'N UNDER SEC. 52(2) PLACER MINING ACT.
  Owner:
- ☐ DIAMOND DRILL LOGS:
  Claims: Claim sheet no:
- ☑ QUARTZ ASSESSMENT REPORT.
  Claims: "TS" 1-29 Claim sheet no. 105-O-1
  Type of report: TEST PITTING Submitted by: HUD. BAY EXP. & DEV. CO. LTD
  Cls. work performed on: $ Req. for ren. application

COPY FOR YOUR FILES

Signature

REPLY ACTION Date Ret.

CC GEOLOGY SECTION

091004

Signature

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LIST OF FIGURES

1. INTRODUCTION:

The TS 1-29 Claims were staked during the summer of 1980 by Hudson Bay Exploration and Development Company Limited. The claims are located adjacent the Tom claims in an area of extensive overburden cover. The area was staked to ensure coverage of the possible extension of the ore horizon from the Tom claims and to test the area as a possible location for a future townsite.

It is essential to assess the mineral exploration potential of the area prior to developments involving construction of permanent buildings. To test the soil conditions a program of test pitting was carried out during July and August 1981. Depths of overburden and bedrock material are important geological consideration.

A total of thirty test pits were completed using a Cat 235 backhoe capable of excavations to a depth of 5 metres. The program was carried out under contract to Thompson Geotechnical Consultants Limited of 2668 Palmerston Avenue, West Vancouver, B. C. V7V 2W6.

Thompson Geotechnical provided the supervision of the program and a member of the engineering staff was on site to conduct detail logging of soil and bedrock conditions encountered in each pit.

2. LOCATION AND ACCESS:

The TS 1-29 claims are located in the Macmillan Pass area of the Yukon Territory. The claim group is approximately 148 miles north of Ross River along the North Canol Road. Figure **2.**

The North Canol Road provides access to the eastern portion of the property. The claims boundard is within one kilometer of the Macmillan Pass airstrip north of the Macmillan River.

3. CLAIM OWNERSHIP: Figure 3

The claims are wholly owned by Hudson Bay Exploration and Development Company Limited. The group is comprised of 29 claims as follows:

TS 1-29 YA 42414 - 42442

4. TEST PITTING PROGRAM RESULTS:

The locations of the test pits are indicated on Figure 1. Detail logs of test pits are included in Appendix I.

The results of the program indicates that the area is commonly covered with overburden depths greater than five meters. Bedrock encountered in Pits 81-2, 5 & 6 is carbonaceous argillite which is equivalent to the hanging wall unit 3b argillites on the Tom property. The sand banded

siltstone located in test pit 81-9 represents the footwall units of 3a or possibly unit 1 on the Tom property.

Permafrost has been encountered at shallow depths at higher elevations in the area.

5. CONCLUSIONS AND RECOMMENDATIONS:

The relative depths of overburden combined with the presence of marshy ground in the lower areas and permafrost in the upper areas makes the use of geochemical exploration techniques ineffective.

The bedrock encountered in the several test pits suggest that the favourable ore horizon from the Tom property is located on the property.

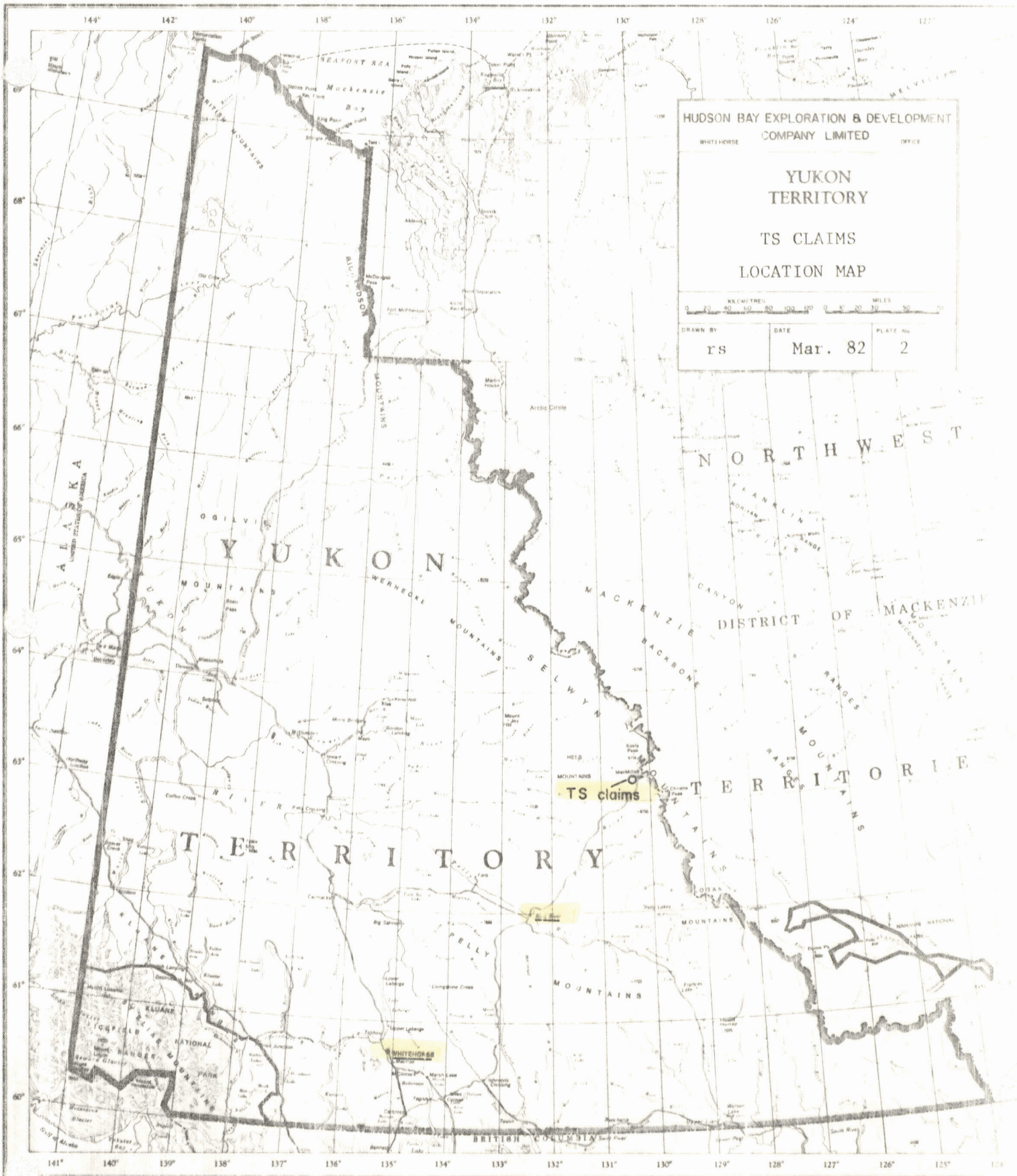
It is recommended to test various geophysical techniques in order to further explore the property. Surveys including magnetic and electromagnetic techniques could be useful exploration tools.

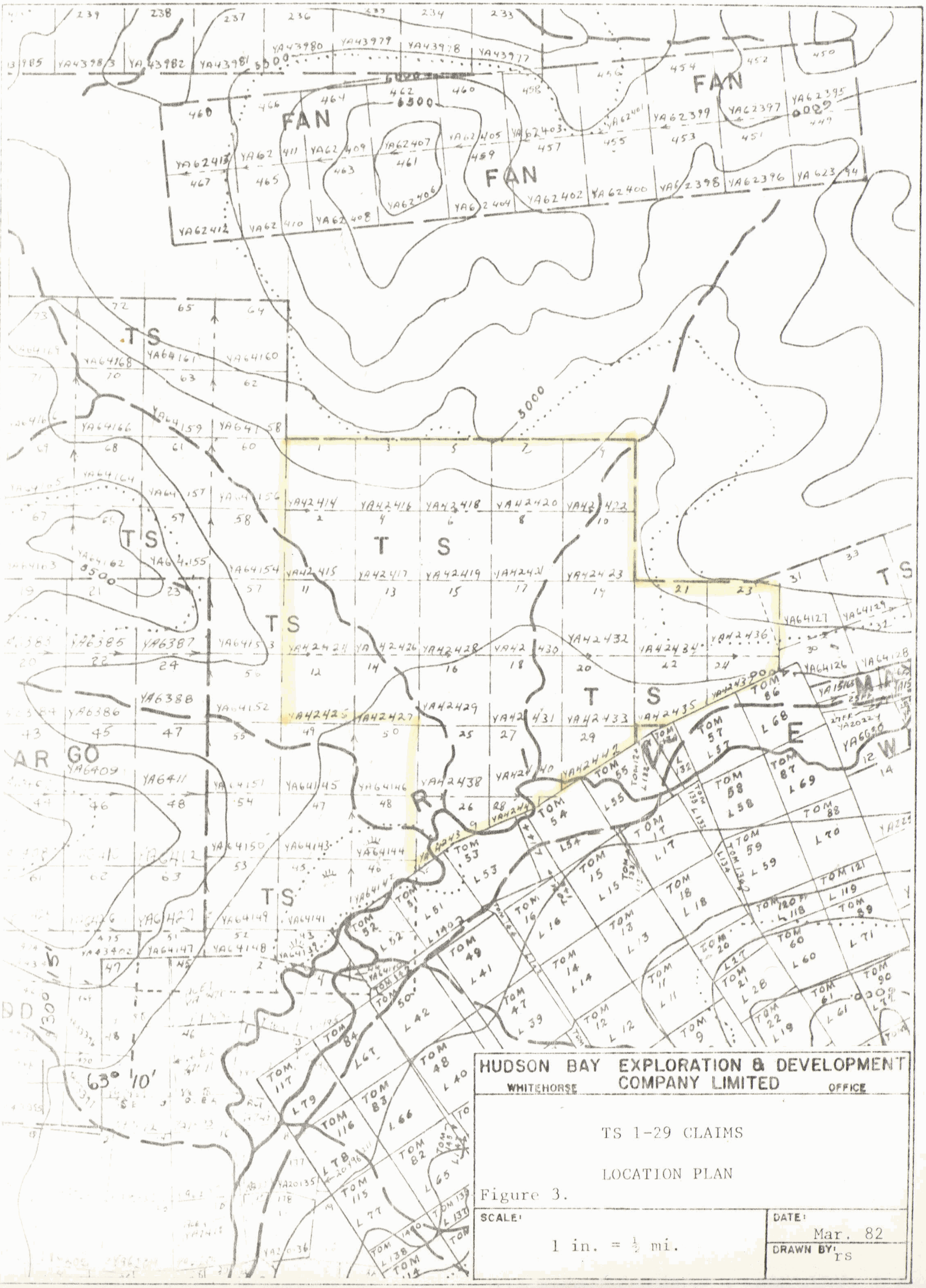
A magnetic survey could provide aid in structural interpretations and possibly locate high grade "feeder zones" if pyrrohtite is present.

It has also been suggested that a pulse EM survey may discriminate sulphide conductors in areas of generally carbonaceous surrounding rocks.

Robert Stroshein

R. Stroshein,
Senior Exploration
Geologist.

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ARGO
63° 10'
HUDSON BAY EXPLORATION & DEVELOPMENT
WHITEHORSE
COMPANY LIMITED
OFFICE
TS 1-29 CLAIMS
LOCATION PLAN
SCALE:
1 in. = ½ mi.
DATE:
Mar. 82
DRAWN BY:
rs
Figure 3.

APPENDIX I

DETAIL LOGS

TEST PITS 81-1 - 81-30

RECORD OF TEST PIT NO. 81-1

LOCATION: See Figure
DATE OF EXCAVATION: August 15, 1981
COORDINATES: 5+00 N , 20+00 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss cover.									
0.2	Loose to compact, brown, SILT, SAND AND GRAVEL with some cobbles. Larger particles are rounded and hard. Smaller particles are more angular and flaky.			1.0						
1.5	Loose to compact, black, weathered, med. to crs. SAND AND GRAVEL WITH COBBLES and occ. small bldrs. Some silty zones.			2.0 3.0 4.0						
4.6	END OF TEST PIT.			5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) No apparent sorting. No distinct stratification (ablation deposits).

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-2

LOCATION: See Figure
DATE OF EXCAVATION: August 15, 1981
COORDINATES: 6+25 N , 17+50 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss and topsoil. Ash lens.									
0.2	Loose to compact, brown, highly weathered, silty, SAND GRAVEL COBBLES AND BLDRS. Boulders and cobbles are completly frost riven and disintigrate when moved. Stratum contains ice crystals and appears to be thawing.			1.0				1	Bg	Gr. size
2.0	Loose to compact, black, med. and crs. SAND WITH GRAVEL, some cobbles and occ. bldrs. Becomes siltier at depth. Stratum is cold but not frozen.			2.0 3.0						
3.9	BEDROCK. Weak, highly weathered argellite.			4.0						
4.7	END OF TEST PIT			5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) No apparent sorting. (Ablation deposits)

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-3

LOCATION: See Figure
DATE OF EXCAVATION: August 15, 1981
COORDINATES: 7+50 N , 15+00 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss and topsoil									
0.3	Loose, brown, red-brown, and grey SILTY GRAVEL with occ. cobbles and boulders. Cool but not frozen.			1.0						
2.5	Loose to compact, brown and gray, highly weathered, GRAVEL COBBLES AND BOULDERS with sand and silt.			2.0 3.0 4.0						
4.6	END OF TEST PIT			5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Deposits are unsorted and highly variable. (Ablation deposits)

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-4

LOCATION: See Figure
DATE OF EXCAVATION: August 15, 1981
COORDINATES: 10+00 N , 15+00 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Brown organic topsoil		▼							
0.4	COBBLES AND BOULDERS. Rounded, hard.			1.0						
1.4	Loose, grey, SILTY, crs. SAND AND GRAVEL with cobbles.			2.0						
3.0	END OF TEST PIT			3.0						
				4.0						
				5.0						
				6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Heavy seepage at 0.4 m.
2) Distinct stratification (Alluvial deposits).

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-4a

LOCATION: See Figure
DATE OF EXCAVATION: August 15, 1981
COORDINATES: 10+00 N , 14+50 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss and topsoil									
.25	Compact, black, interbedded, clean SANDS AND GRAVELS. Occ. silt lenses. Ferruginous staining from 1.8 to 3.1 m depth.		▼	1.0, 2.0, 3.0						
3.1	Firm, black CLAYEY SILT.			4.0						
4.6	END OF TEST PIT			5.0, 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Minor seepage at 3.1 m.
2) Distinct stratification (Alluvial deposits).

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-5

LOCATION: See Figure
DATE OF EXCAVATION: August 15, 1981
COORDINATES: 5+00 N , 15+00 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss and topsoil									
0.2	Firm, tan SILT with occ. large boulders									
0.7	North Side Loose to compact, brown, SILT SAND GRAVEL COBBLES AND BOULDERS. Unsorted. South Side Loose to compact, black, fine SAND with occ. silt lens. Stratified.		▼	1.0 2.0						
2.5	BEDROCK. Very hard, unweathered.			3.0 4.0 5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Moderate seepage at 2.5 m.
2) North side of pit (toe of slope) appears to lie in ablation deposits. South side lies in Macmillan River alluvium.

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-6

LOCATION: See Figure
DATE OF EXCAVATION: August 16, 1981
COORDINATES: 5+00 N , 12+50 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Topsoil									
0.3	Loose, black med. and crs. SAND AND FINE GRAVEL. Particles are angular and flaky. Contains silt and sandy silt lenses to 0.2 m thickness.		▼	1.0						
2.1	Compact, black, angular GRAVEL with some sand. Gravel is clean and comprised primarily of argellites.			2.0 3.0						
4.0	END OF TEST PIT			4.0 5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Heavy seepage at 1.7m.
2) Deposits are of sorted and stratified (outwash alluvium).

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-7

LOCATION: See Figure
DATE OF EXCAVATION: August 17, 1981
COORDINATES: 5+00 N , 12+50 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss cover									
0.2	Compact, brown SAND AND GRAVEL with a trace of silt and occ. cobbles. No apparent sorting. Larger particles are subangular to rounded, argellitic and clay coated			1.0						
1.5	Hard, cemented SAND GRAVEL COBBLES AND BOULDERS of various origins. Ferruginous staining.			2.0 3.0				1	Cs	
3.9	END OF TEST PIT.			4.0 5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Ferro conglomerates likely overlie bedrock. Highly weathered argellite exposed at crest of slope above creek.

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-8

LOCATION: See Figure
DATE OF EXCAVATION: August 16, 1981
COORDINATES: 10+00 N , 12+60 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.1	Moss cover									
	Loose to compact, grey, SILTY SAND AND GRAVEL with occ bldrs. to 1 m diameter.			1.0						
1.1	Loose to compact, ferruginous, oxidized SAND AND GRAVEL with a trace to some silt. No apparent sorting.			2.0						
2.0	Very dense, hard cemented grey SILT AND GRAVEL. Zones of ferruginous, cemented, oxidized sand and gravel.			3.0				1	Cs	
2.7	END OF TEST PIT			4.0						
				5.0						
				6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Moderate seepage at 1.1 m.

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-9

LOCATION: See Figure
DATE OF EXCAVATION: August 16, 1981
COORDINATES: 12+50 N , 12+50 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss cover									
0.2	Loose, brown, granulated, SILT with occ. gravel.			1.0						
1.4	BEDROCK. Grey, siltstone 1.4-2.m is highly fractured with open bedding. Fracture lines are infilled with grey silt. 2-2.0 m is more intact with tight bedding and fractures. 3.0-3.1 m is medium hard and massive.		▼	2.0						
3.1	END OF TEST PIT			3.0 4.0 5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1)Moderate seepage at 1.9 m.

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-10

LOCATION: See Figure
DATE OF EXCAVATION: August 16, 1981
COORDINATES: 15+00 N , 12+50 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss and topsoil									
0.2	Compact, grey, SILTY GRAVEL. Angular particles.		▼							
0.6	PERMAFROST. Frozen, grey silt with gravel. High ice content			1.0						
				2.0						
2.1	END OF TEST PIT			3.0						
				4.0						
				5.0						
				6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) West end of pit intersects stratum of loose angular gravel with some sand and trace of silt. (0.6-1.2 m) Heavy seepage flow.

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-11

LOCATION: See Figure
DATE OF EXCAVATION: August 16, 1981
COORDINATES: 15+00 N , 10+00 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
	Moss cover									
0.1	PERMAFROST. Frozen, grey silt with gravel. High ice content.			1.0						
				2.0						
				3.0						
				4.0						
				5.0						
				6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-12

LOCATION: See Figure
DATE OF EXCAVATION: August 17, 1981
COORDINATES: 12+50 N , 10+00 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss and topsoil									
0.3	Compact, grey, SILT SAND GRAVEL and occ. cobbles. Particles are very angular, argellites. Larger particles are very weak and break down with handling.			1.0 2.0				1	Bg	Gr. Size
3.2	BEDROCK. Hard intact, grey black argellite.			3.0						
3.5	END OF TEST PIT			4.0 5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) No apparent sorting (Ablation deposits).
2) Low to medium frost susceptability.

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-13

LOCATION: See Figure
DATE OF EXCAVATION: August 17, 1981
COORDINATES: 10+00 N , 10+00 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO.& LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss and topsoil									
0.2	Compact, brown, med. and crs. SAND AND FINE GRAVEL. Unsorted, clay coated particles. Cohesive.			1.0						
1.8	Compact, black, clean fine SAND with occ. tan silt lenses. Oblique stratification.			2.0 3.0						
3.5	Compact, brown, SAND AND GRAVEL with occ. cobbles.			4.0						
4.7	END OF TEST PIT			5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Local sorting and stratification (Ablation deposits).

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-14

LOCATION: See Figure
DATE OF EXCAVATION: August 17, 1981
COORDINATES: 17+50 N , 10+00 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss Cover									
0.3	Compact, brown, SILT SAND GRAVEL with occ. cobbles. Highly weathered, frost susceptable.			1.0 2.0						
2.7	Grey, silty, med. and crs. SAND AND GRAVEL. Cold, wet. Becoming siltier with depth.			3.0 4.0						
4.7	END OF TEST PIT			5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Seepage at 2.6 m depth.
2) Faint stratification parallel to slope (Colluvium or slopewash deposits).

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-15

LOCATION: See Figure
DATE OF EXCAVATION: August 17, 1981
COORDINATES: 5+00 N , 10+00 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Topsoil									
0.4	Compact, grey, GRAVEL with some sand. Rounded particles.			1.0						
2.1	Firm, grey black, SILT, SANDY SILT, SILTY SAND and PEATY SAND. Ferruginous staining from 2.1 to 2.6 m depth.		▼	2.0 3.0 4.0						
4.7	END OF TEST PIT			5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Moderate seepage at 2.2 m.
2) Surficial deposits (0.4 - 2.1 m) are sorted and horizontally stratified (Outwash or alluvial deposits).

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-16

LOCATION: See Figure
DATE OF EXCAVATION: August 17, 1981
COORDINATES: 5+00 N , 7+50 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss and topsoil									
0.2	Clean, black, crs. SAND AND GRAVEL Stratified. Rounded particles.			1.0						
				2.0						
2.2	Compact, black SAND GRAVEL AND COBBLES with trace silt.			3.0						
				4.0						
4.8	END OF TEST PIT		▼	5.0						
				6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Seepage at 4.8 m.
2) Distinct sorting and stratification (Outwash or alluvial deposits)

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-17

LOCATION: See Figure
DATE OF EXCAVATION: August 17, 1981
COORDINATES: 7+50 N , 7+50 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss and peat		▼							
0.4	Soft, grey, SILTY SAND AND SANDY SILT with some cobbles and bldrs.			1.0						
2.7	END OF TEST PIT			2.0 3.0 4.0 5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Pit located adjacent to creek.
2) Seepage at 0.2 m.

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-18

LOCATION: See Figure
DATE OF EXCAVATION: August 17, 1981
COORDINATES: 10+00 N , 7+50 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss cover									
0.3	Loose to compact, brown and black, clean SAND AND FINE GRAVEL. Minor stratification evident.			1.0						
1.3	Compact, grey brown, SAND GRAVEL AND COBBLES. Rounded granitic particles.			2.0 3.0 4.0						
4.2	END OF TEST PIT			5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Deposit comprised primarily of clean, hard granitic particles. Distinct sorting and stratification (outwash deposits).

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-19

LOCATION: See Figure
DATE OF EXCAVATION: August 17, 1981
COORDINATES: 12+50 N , 7+50 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss cover									
0.2	Compact, brown. med. and crs. SAND, GRAVEL and some cobbles. Weathered particles. Tr. silt.			1.0						
1.2	Compact, red brown, clean, med. and crs. SAND, GRAVEL and some cobbles.			2.0						
2.3	Black clean med. SAND.			3.0						
4.2	END OF TEST PIT			4.0 5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Distinct sorting and stratification (outwash deposits).

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-20

LOCATION: See Figure
DATE OF EXCAVATION: August 17, 1981
COORDINATES: 15+00 N , 7+50 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss cover									
0.2	Brown, SAND AND GRAVEL with silt. Weathered.									
0.7	Black, fine SAND AND SILTY SAND.			1.0						
1.9	Loose to compact, light brown and grey, SILT SAND GRAVEL COBBLES AND BOULDERS. Particles are typically angular and unsorted.			2.0 3.0 4.0						
4.8	END OF TEST PIT			5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Bedrock exposed in canyon wall below crest of slope.

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-21

LOCATION: See Figure
DATE OF EXCAVATION: August 17, 1981
COORDINATES: 15+00 N , 5+15 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss cover.									
0.2	Loose, light brown, CLAYEY SILT with sand and gravel, some cobbles and occ. boldrs. Becoming denser and coarser with depth. Warm, moist.			1.0 2.0 3.0						
3.3	Dense, hard, black, partly cemented SILT AND FINE GRAVEL.									
3.5	BEDROCK. Black argellite.									
3.7	END OF TEST PIT			4.0 5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Surficial deposits are unsorted and have a till like composition.

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-22

LOCATION: See Figure
DATE OF EXCAVATION: August 17, 1981
COORDINATES: 12+50 N , 5+00 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss cover.									
0.3	Soft, grey brown, SILT. Moist to wet.									
0.4	PERMAFROST. Frozen grey SILT with gravel. High ice content.			1.0						
				2.0						
				3.0						
				4.0						
				5.0						
				6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-23

LOCATION: See Figure
DATE OF EXCAVATION: August 18, 1981
COORDINATES: 2+50 N , 5+00 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Brown, silty, topsoil and moss.									
0.7	Loose, black-brown, GRAVEL with crs sand. Particles are rounded and subrounded and silt coated.			1.0						
2.8	Soft, brown, SILT and SANDY SILT with tr. organics. Some sandy lenses.			2.0 3.0 4.0 5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) No seepage encountered.
2) Granular deposits are sorted and stratified. (Alluvial deposits)

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-24

LOCATION: See Figure
DATE OF EXCAVATION: August 18, 1981
COORDINATES: 6+25 N , 6+25 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss and topsoil.									
0.6	Grey, med. and crs. SAND with some fine gravel. Med. clean. Sorted and stratified parallel to slope.			1.0						
2.2	Black, fine and med., SAND with gravel and occ. cobbles. Oxidized lens at 2.4 to 2.5 m.		▼	2.0						
3.6	Brown SAND. Oxidized and partly cemented.			3.0						
3.8	Compact, black, SILT and GRAVEL. Gravel particles are angular and argellitic.			4.0						
5.4	END OF TEST PIT			5.0						
				6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Moderate seepage from perched water table at 2.4 m depth.
2) Distinct sorting and stratification parallel to slope (outwash deposits).

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-25

LOCATION: See Figure
DATE OF EXCAVATION: August 18, 1981
COORDINATES: 7+50 N , 5+00 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Brown silty TOPSOIL									
0.45	Very loose, grey and brown, SILT SAND AND GRAVEL. Occ. pockets of black, fine sand. Particles are weathered, angular and sub-angular.		▼	1.0 2.0						
2.2	Loose, grey, silty GRAVEL with sand. Angular particles.			3.0						
3.0	END OF TEST PIT			4.0 5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Heavy seepage at 1.6 depth.

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-26

LOCATION: See Figure
DATE OF EXCAVATION: August 18, 1981
COORDINATES: 8+75 N , 3+75 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss cover									
0.3	Grey brown, SILT AND GRAVEL with some sand.									
0.5	PERMAFROST. Frozen, grey brown, silt and gravel with some sand. High ice content. Coarse particles are shaly and angular.			1.0						
0.8	END OF TEST PIT			2.0						
				3.0						
				4.0						
				5.0						
				6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-27

LOCATION: See Figure
DATE OF EXCAVATION: August 18, 1981
COORDINATES: 6+87.5 N , 4+37.5 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss cover.									
0.1	Brown, granulated SILT with tr. to some clay.			1.0						
1.2	Compact, grey SAND with lenses of silt and occ. gravel.									
1.5	Grey, fine GRAVEL with sand. Stratified.			2.0						
2.6	Compact to dense, grey brown, SILT SAND AND GRAVEL. Till like.			3.0						
3.4	Dense, black, SILT with some fine sand and some angular gravel. Till like.			4.0						
4.5										
4.6	Very hard, cemented, brown SAND AND GRAVEL with some silt. Ferruginous staining. Porous - high void ratio.			5.0						
	END OF TEST PIT			6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Distinct sorting and stratification (outwash-lacustarine deposits).

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-28

LOCATION: See Figure
DATE OF EXCAVATION: August 18, 1981
COORDINATES: 6+25 N , 3+75 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss cover.									
0.2	Clean, grown, fine, med. and crs. SAND AND FINE GRAVEL. Interlayed. Horizontal stratification.			1.0						
1.1	PERMAFROST. Frozen, tan silt with gravel. Till like. High ice content.									
1.8	END OF TEST PIT.			2.0 3.0 4.0 5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) Surficial materials may be related to surficial materials encountered in T.P. 81-27.

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-29

LOCATION: See Figure
DATE OF EXCAVATION: August 18, 1981
COORDINATES: 10+00 N , 16+25 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss cover.									
0.2	Loose to compact, brown SAND AND GRAVEL with occ. cobbles and tr. to some silt. Unsorted, angular, shaly particles. Becoming denser and siltier at 4 m±. Pockets and lenses of grey material of same composition.			1.0 2.0 3.0 4.0						
4.7	END OF TEST PIT.			5.0 6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) No apparent sorting. Minor evidence of colour banding with southward dip. (Ablation deposits).

THOMPSON GEOTECHNICAL

RECORD OF TEST PIT NO. 81-30

LOCATION: See Figure
DATE OF EXCAVATION: August 18, 1981
COORDINATES: 7+50 N , 18+25 E
METHOD OF EXCAVATION: Cat 235 Backhoe
GRID SYSTEM/DATUM: Local (Townsite) / Geodetic

SOIL PROFILE					IN SITU TESTS			SAMPLES		
ELEV. / DEPTH (m)	DESCRIPTION	STRAT. PLOT	GROUND WATER	SCALE	LOCATION	TEST	TEST RESULTS	NO. & LOC.	TYPE	LAB TESTING
	GROUND SURFACE			0.0						
0.0	Moss cover.									
0.2	Compact to dense, grey SILT SAND AND GRAVEL with occ. cobbles. Silt content varies. Upper 0.2 to 0.9 m is brown and weathered. Cool to cold, moist.			1.0 2.0 3.0 4.0 5.0				1	Bg	Gr. size
5.2	END OF TEST PIT.			6.0						

VERTICAL SCALE: 1:40

PROJ. NO. 80008 DATE: Mar/82

NOTES

1) No sorting or stratification (ablation deposits).

THOMPSON GEOTECHNICAL

APPENDIX II

The expenditures to conduct the test pitting program prior to August 25, 1981, totalled $12,125.09. This figure was provided by Mr. Brian Thompson of Thompson Geotechnical Consultants Limited in the attached letter dated September 29, 1981.

GEOTECHNICAL CONSULTANTS LTD.
THOMPSON

September 29, 1981

Hudson Bay Exploration and Development Co. Ltd.
100 - 10 Burns Road
Whitehorse, Yukon

ATTENTION: Mr. Robert Stroshein
Senior Geologist

RE: CLAIMS ASSESSMENT WORK
T.S. CLAIM GROUP
MACMILLAN PASS, YUKON

Dear Sir:

Further to our discussion of Sept. 8, 1981, we have prepared a summary of the costs involved in engineering studies on the T. S. Claim Group in Macmillan Pass. It is understood that these costs will be considered for a claims assessment report for the period August 25, 1980 to August 25, 1981.

STUDY PROGRAM

The work to date on the T.S. Claims has involved an engineering study to evaluate the feasibility of development of the area for a townsite for the Tom Project. The work has included detailed ground reconnaissance and mapping of surficial conditions, topographic mapping from aerial photography and an extensive test pitting program to evaluate soil and bedrock conditions. The detailed reconnaissance and topographic mapping was carried out in the fall of 1980 and the test pitting program and additional surface mapping was carried out in the summer of 1981.

The test pitting program included machine excavation of some 30 test pits to depths of up to 6 meters. The soil and bedrock conditions encountered in each test pit were logged in detail by a member of our engineering staff and representative samples were obtained for laboratory classification and testing purposes. Where bedrock was encountered, additional samples were obtained for further evaluation by Hudson Bay geologists.

2668 Palmerston Avenue, West Vancouver, B.C., Canada V7V 2W6 (604) 926-7656

A final report on the work in the proposed townsite will be submitted in early 1982 as part of a comprehensive engineering report on various geotechnical aspects of the Tom Project.

STUDY COSTS

The costs of the above work, for the 1980-81 period are summarized following. The subtotals shown for the engineering reconnaissance and test pit programs include all of the costs incurred in mobilization to and from the site and the costs of work on the site itself. The subtotal shown for the topographic mapping program includes the costs for mapping only. The costs incurred in the provision of ground control and obtaining aerial photos are not included, as this work was carried out prior to August 25, 1980.

. Preliminary Engineering Reconnaissance and Surface Mapping	$ 840.00
. Topographic Mapping	$ 1838.33
. Test Pitting and Detailed Surface Mapping	$12,125.09
TOTAL	$14,803.42

We trust the above provides the information you require at this time. Should you have any questions or require further details, please do not hesitate to contact us.

Sincerely.

THOMPSON GEOTECHNICAL CONSULTANTS LTD.

Brian E. Thompson, P. Eng.

BET/cs

80008

APPENDIX III

ROBERT W. STROSHEIN

ADDRESS 181 Alsek,
Whitehorse, Yukon Territory.
Y1A 4L8

EDUCATION: B. Sc. (Geological Engineering) from
University of Saskatchewan
Graduated in 1973

EMPLOYMENT: 1973 - 1982 Hudson Bay Exploration & Development Co. Ltd.

Flin Flon Office 1973 - 1975
Drill Geologist - field supervisor of diamond drill projects Northern Manitoba and Saskatchewan.

Whitehorse Office
Project Geologist 1975-1980 - field supervisor of geological mapping, geophysical, geochemical and prospecting programs in the Yukon Territory. Included report preparation and assessment.

Senior Exploration Geologist - 1981 - planning, monitoring and assessing exploration projects conducted in the Yukon Territory.

LOCATION OF TEST PITS 091004 FIGURE 1
PROPOSED TOWNSITE AREA

439,000E 440,000 441,000E

7,008,000 N

7,007,000 N

7,006,000 N

TS 2 TS 4 TS 6 TS 8 TS 10

TS 11 TS 13 TS 15 TS 17 TS 19 TS 21 TS 23

TS 12 TS 14 TS 16 TS 18 TS 20 TS 22 TS 24

TS 25 TS 27 TS 29

TS 26 TS 28

81-21 81-20 81-11 81-10

81-22 81-19 81-12 81-9

81-18 81-13 81-8 81-4 81-29

81-26

81-25 81-17 81-14 81-7 81-3 81-30

81-27

81-28 81-24 81-2

81-16 81-15 81-6 81-5 81-1

81-23

LEGEND

LOCATION OF 1981 TEST PITS

CANOL ROAD

MACMILLAN No. 3 BRIDGE

MACMILLAN RIVER

CANOL ROAD

AIRSTRIP

TOM ACCESS ROAD

SCALE: 1:5000

THOMPSON GEOTECHNICAL CONSULTANTS LTD