

019440

JUNE. 1 - Mast, R.V., Green, Lightfoot, B. II,
H.P.

Proceeded to Twin Lakes

(mile 71 on Whitehorse - Carmacks Road), where we unloaded our equipment from Jeeps.

Bill proceeded to Little Buffalo Lake Cache & helped Hel. pilot load and move equipment to

Twin Lakes. Divided equipment from L.B.L. (Empress & Mast).

Bill & Vogwill went with Helic.

to locate campsite. Helicopter 5 loads to bring equip in.

The 4 of us proceeded to move equipment to campsite (300 yards) & set up tents. Had to leave half of equip at drop point overnight.

June 2

Completed camp set up & radio set up. Talked to Mast at Whitehorse. Dug meat pit.

Found spring for water supply.

Looked at air photos etc. Hope to start traversing tomorrow P.M.

June 3

L. Bill to put claim tags on AC 1-12, but he apparently had to walk 2-3 miles south to find baseline, so he probably put tags on wrong group!! as baseline of AC 1-12 is only $\frac{1}{4}$ mile south of camp on current claim map, assume error on claim map is not this great.

R.V., C.G., D.L., 4 mile traverse to get oriented, found baseline for AC 13-28 and marked in main streams on air photos.

June 4

C.G. & D.L. silt samples on large creek above anomalous Cu values and tributaries. Much trouble with little silt material, took soils on banks instead. Ideal 500' spacing proposed but much irreg sampling due to conditions

R.V. mapping on air photo (overlay)
encountered two outcrops containing
ccp in minor amounts. Both
contain their ccp along hairline
fractures and both same rx.
type (andesite $\rightarrow$ rhyolite.)

2nd outcrop 50' from
anomalous Cu value taken last
season. (silt)

L. Bill completed putting
tags on AC 13-28.

Approx. 20 samples taken
Hope to set up gross grid
tomorrow

June 5

C.G. continued silt sampling
D.L. + L. Bill started
sampling on grid (1000' lines
300' spacings)

R.V. traversed - no ccp
still in andesites + And. breccias
plus associated dykes of
volcanic cmpsn.

June 6

G.G. ran soil grid with
L. Bill

D.L. ran soil sample
grid

R.V. mapping

June 7

D.L. + L.B. finished soil
sample grid.

R.V. + C.G. mapped.

D.L. reports Cu stain.

June 8

D.L. + L.B. left for Whitehorse
to get groceries.

R.V. + C.G. went to look at
D.L.'s "Cu stain" - none in
the vicinity.

June 9

C.G. + R.V. built heliport
on small knoll 25 yards
N of camp.

D.L. returned from Whitehorse
by himself, L.B. had quit.
He (D.L.) could only manage
one load. Took him approx
 $9\frac{1}{2}$ hours to make trip
still $\frac{2}{3}$ of food at Jeep
so tomorrow all 3 of us
are going to have to go
down. In future all of
us are going to Whitehorse!

June 10

RV, G & D.L. hiked to
Jeep & brought back
supplies. Left Jeep on
Cat Road.

June 11

RV worked on report
C.G. & D.L. tried to find
claim posts for AA 1-12

June 12

C.G. + D.L. started on
soil grid on AA 1-12.
R.V. mapping.

C.G. getting pretty sick
R.V. found posts - L.B. 11 tagged

June 13 wrong claims!!

C.G. sick stayed in
camp all day. D.L. soil
sampling grid.
RV mapping.

June 14

C.G. left for Whitehorse
to see doctor

D.L. soil sample grid.
R.V. - drafting.

Talked to C.G. at
7:30 at Whitehorse

June 15

D.L. soils in morning
finished grid.

R.V. + D.L. mapping

from 11 AM on.

June 16

RV + D.L. went mapping.
Looked at Cu prospect

June 17

Laid out grid for
AH 55-62 RV + DL.
No outcrop visible
Sampled one line

June 18

Finished clearing
helipad. C.G. got back
RV finishing reports

June 19

D.L. + R.V. to Whitehorse
for groceries
C.G. on soil grid AH 55-62

June 20

D.L. + RV back from Whitehorse
C.G. finished above grid

June 21

Claim Group AH 29-44
RV, C.G + D.L - $3\frac{1}{2}$ miles walk
tried to locate claim posts
& started on grid.
RV mapping.

June 22

R.V mapping AH 29-44
C.G + D.L running grid.

June 23

RV walked along claim
base line trying to locate
outcrop. Staking absolutely
haywire - probably makes
claims invalid. - didn't tag.
C.G + D.L soil sample
grid.

June 24

C.G + D.L tagging claims
AH 1-72.

RV incamp - on helicopter
& written work.

June 25

June 26

June 27

June 28

Arrived in Whitehorse after
hiking out. 5 p.m.

June 29

In Whitehorse, finishing two
reports. Waiting for EOC, CGIDL
getting food order etc.

June 30

Flew into Little Buffalo with
BOC by Beaver. C.G. & D.L. at
Twin Lakes taking ~~material~~^{gear}
from first camp. Setup
part of camp by 8pm

July 1

Setup camp + worked
around camp etc.

July 2

Rain all day. Didn't go out
to field. Wood supply for camp.
Walked down to cache for
raft.

July 3

Went to Loon Lake, D.L. & C.G.
took silts, RV traversing up
same creek. Spent 5 hrs. walking
to & from Camp - so decided to
setup small fly camp.

July 4

Packed up gear for fly camp etc. Rain all day again, didn't leave, made up geochem grid, filled out some geochem sheets.

July 5

Left L.B.L and packed gear to fly camp. $3\frac{1}{2}$ hours $\approx$ 50 lbs. each. Set up camp - hope to start geochem grid tomorrow

July 6 R.V. mapping
C.G. & D.L. grid

7

"

8

"

9

"

Fly
camp.

10 Hiked back from Leon Lake Fly camp. Left samples & excess gear

at Loon Lake.

July 11

Started work on #2.

C.G. + D.L. good.

R.V. mapping in course
Rain all day

July 12

R.V. continued mapping.

Found an star in stream
zone.

C.G. + D.L. in good

July 13

C.G. + D.L. finished up
good

R.V. stayed in camp
to do winter work.

Packed up some of
gear. Leaving
tomorrow.

July 14

Left Little Buffalo

& collected samples from
Loon Lake. Left some
equipment at Turn Lake.

July 15
Whitehorse

July 16
Whitehorse

July 17

Left Whitehorse, up to
Aishihik Lake. Tried to get
into Stevens Lake by road
but couldn't.

Finally set up camp
as Echo Valley Fishing Camp
after deciding to work on
H.A. 1-16.

July 18

Located and tagged first
3 sets of clam posts.

July 19

R.V. started mapping + C.G. + P.L.

Started work on soil grid.

HA 1-16 probably started on
mag. anomaly.

July 20

D.L. + C.G. on grid

R.V. mapping.

July 21

C.G. finished soil grid on
HA 1-16.

R.V. + D.L. looking for lms
+/or Yukon group. Brokes bent
on Trunk.

July 22

C.G. in camp (soil sheets etc).

R.V. + D.L. looking for lms unit
Yukon group. Radio to Clyde.

July 23

Ran contour geochem lines over
areas of "moderate copper values"
last year

July 24

R.V. mapping in morning.
Hope to hear from Whitehorn.

July 25

To Whitehorse

July 26

To Whitehorse.

July 27

Drove to Polerat lake
then boated equip into
Stevens lake

July 28

Rain all day - didn't work

July 29

Looked prospect over-laid out
lines

July 30 + 31

R.V. mapping. D.L. & C.G. running
soil lines

Aug 1

Boated out from Stevens
lake & drove to Whitehorse

Aug 2

Whitehorse

Aug 3

Whitehorse

Aug 4

Flew into Bar lake & set
up camp left Whitehorse
7am. C.G. to Champagne

Aug 5

C.G. sick

RV mapping

D.L. running soil line

Aug 6

C.G. & D.L. running contour
geochron. lines on gossan

RV mapping on gossan

(finished)

Aug 8

D.L. & C.G. soil lines

RV in camp

Project Embryosa Photo _____ Collector AR Date JUNE 18/66 Page No. 1

Super Cub.

Wulson Lake, TRAVERSE No. AR1

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cu, Hg, Mn, Co, Ni, Pb, Zn	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)					
or A, B, C Horizon												
E 240	1 1/2 cusecs Slow	sand, org. no pan. (some mag.)					int.		Flat.	Deep ext.		
E 241	2 cusecs slow	sand, org. no pan.					int.		Flat	Deep ext.		
E 242	8 cusecs Mod.	sand. silt Pan.					int.		Flat	Deep ext.	0.1	
E 243	5 cusecs Mod.	gvl. sand no pan.					int. vol.		flat	Deep ext.	0.1	

Can lake - float, north side, mostly meta. (shisto)
and intrusive

Worm lake - NE end volcanics (Vol. Breccia, large blocks)
flow banding 60-70° / dip 25° NW.
Prominent joint approx. 050° / dip vertical.
mag. deflectability - 0- $\frac{1}{2}$ "
vol also SE end of lake.

Project Empress Photo _____ Collector AR Date JUNE 18/1960 Page No. 2

COMBINE SUPER CUB.

Wagon Lake TRAVERSE No. AR 1

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.				Cold	Hot
							Float (Intr., Volc., Sed.) Bedrock (Met., Alt., Fract.) (Sulphides)			Cu, H.M., Cu, Mo, Pb, Zn	
		or A, B, C Horizon									
E244	1 cusec. slow.		Sand, silt org. no pan. samp.				nil.		rolling hills exl Deep.		
E245	3 cusec slow		silt - org. no pan				int.		flat. exl Deep. marshy		
E246	1 cusec slow		org. silt. NO PAN				nil		flat. " Deep		
E247	2 cusec. med.		gl. sand. Pan				int. minor met.	Vol. Breccia	120 +5° mod. shallow		

[illegible]

sample E251 site float. granitic int. grading to schist.

Canyon lake. super cul.

TRAVERSE No. 2

Project <u>EMPRESS</u>		Photo	Collector <u>AR</u>	Date <u>JUNE 19/66</u>	Page No. <u>4</u>							
Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Flow	Bedrock			Cold	Hot
or A, B, C Horizon							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)		Cu, H.M., Ca, Mg, Pb, Zn			
E 249	1 1/2 cusec. slow	Boulders, sand org. Pan sample.					int. some met.		Flat	ext. deep.		
E 250	1/2 cusec. slow	org. silt no pan.					int		Flat	ext. deep.		
E 251	2 cusec. mod.	Boulders, sand silt					gran. int.		flat.	ext. deep.		
E 252	1/4 cusec. slow	sand silt no pan. not much mag.					int. vol. met.		flat	ext. deep.		

sample. E254 - no pan. - mainly quartz grains
mountain to west. Talus slope looks like
granitic int. rock.

Project ENDPASS. Photo _____ Collector AR. Date JUL 20 Page No. 5

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)					
		or A, B, C Horizon									Cu, H.M., Cu, Mo, Pb, Zn	
E253	5 cusec fast.	Boulders sand. Pan.					granitic int.		stream 230 + 18°	ext. shallow.		
E254	10 cusec. mod.	gvl. sand. mod. some org. PAN					granitic int.		Flat.	ext. mod.		
E255	5 cusec. mod.	silt & org. no pan.					nil		255 + 5°	ext. mod.		

Black Lake.

Ittemit Lake

TRAVERSE No. AR-7.

Project EMPRESS

Photo

Collector.

Date _____

June 20/66

Page No.

[illegible]

Project EMPRESS Photo _____ Collector AR Date JUNE 21/66 Page No. _____

Shap Lake.

TRAVERSE No. AR-4

1 Fly Lake

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Flat	Bedrock			Cold	Hot
							(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
							(Sulphides)					
		or A, B, C Horizon										
E259	Seepage.	soil in marsh no pan.					well.		Flat.	ext. deep.		
E260	5 cfs. mod.	sd. gol. sand. silt. no pan.					int					
E261	5 cfs. slow	sd. ✓ no pan.					int meta.		flat	ext. deep.		
E262	"	Pan					"		"	"		

Project EMPRESS Photo _____ Collector A. REMSBÄCKEN Date JUNE 21/66 Page No. _____

Macbride Lake
(Macbride)

TRAVERSE No. AR-A

Stew Lake

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Flat	Bedrock			Cold	Hot
							(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
							(Sulphides)					
						or A, B, C Horizon						
E263	5 cfs.		sand, silt				int. meta.		East +50	ext. deep.		
E264	"		pan				"		"	"		
E265			soil				int.		295 +50	ext. deep.		
E266			soil				nil					
E267	2 cfs slow		sand, silt				int.		flat.	ext. deep.		

NO PAN

silt sample E268 - only sand - very hard
to get soil sample - too deep.
marshy organics.

Can only get one sample (at abse LK.
marsh organics too deep.

Project

Empress.

Photo

Collector

A. Rains Bobbitt

Date

June 21

Page No.

Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

Gvl.

Sand

Silt

Clay

Org.

or A, B, C
Horizon

GEOLOGY

Float

Bedrock

(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold

Hot

Cu, H.M., Cu, Mo, Pb, Zn

E268

2 cfs.

slow

sd.

✓

No PAN

int

flat

ext.

deep.

E239

50 cfs

slow

sd.

✓

No PAN

milt

flat

ext.

deep.

TRAVERSE No. AR-9

DICK LK.

abe h.

①

Geology notes:

Anne Reinsbakken.

June 17/66.

Traverse west side Hopkins lake.

- (a) hst. hill — gossan zone NW corner of Hopkins lake.

Shear zone — fault plane with slickensides noted.

movement planes $346/82^{\circ}\text{SW}$

Pitch of slickensides 15° in SE dir.

- (b) silica rich rx. seem to trend in same direction as fault planes.

Sample AR-2.

hst. mineralized pass. with hematite

- (c) Dyke rock cutting through hst. very sheared.

Evening June 17/66.

Helicopter traverse SE of Ashinik lake.

AR 41 (a) Rock type — granitic int.

Joints $018/75\text{NW}$.

$075/62^{\circ}$ ~~NW~~ SE.

mag. def. 1-2"

(b) dyke or vol. contact.

004/65° W.

Seems to underlay granite.

(c) 100' to north

Carbonate rich zone 40' wide
trending 312/80° SW.
zone very sheared.

ARA2.

Not too much outcrop.
much enatics.

hst. felsenmires trending E-W
dipping N.

(125/40NE).

xstalline hst. with Silica Bands.

ARA3.

Volcanic Breccia outcrop.
feld. phenocrysts.

Prominant joints

012/83° W.

Rock sample ARA3.

mag. det. 1-2".

Gossan zone 300' to East.

flow banding 330/50° NNE.

Photo A14861-72.

June 19/66.

AR Traversc #2.

AR44. meta outcrop. 250 N along
Shore of Canyon lake from E251
gr. Gneiss long drawn out
qtz bands
shows plastic flow.
foliation 315°
dip is very irregular.

AR45 sample site E 253
Talas slope - granitic int.
mag. def. 2-3"
also silica rich int. Rx.
with visible magnetite grains
mag. def. 2-3"

Gossan Zone.

flow banding

330/50 N E

Photo A-14861 - 72.

June 19/66

AR Traverse #2.

250 N along shore of Canyon lake
from E 251

meta. outcrop.

gneiss — with long drawn
out Qtz streaks.

Shows plastic flow.

Foliation 315°

dip irregular

Sample site E 253

Talus slope — granitic intrusive
magnetic deflect.

2-3"

also silica rich int. RX.

with visible mag. grains.

mag. def. 2-3"

June 20/66

1 Traverse AR. - 3.

West of sample.

E256 (side poke)

Talus slope
granitic.

Rocks appear

2. sample # 258 ^{Pan} has much
magnetite.

June 21 1966

AR Traverse #4

* started to place Pan + silt
samples in diff. no. bags.

Pan sample E264 from N. end of
MacIntosh lake contained
much mag. + garnets.

2. Site of sample E265. (steep lake)

Hard Pan 1' from surface.

- float. intrusive (very angular)
Diorite - gneiss.

no pan sample on Staw Lake.

— Samples ~~E~~ 265 + 266 may give incorrect readings. because sample is silt material off top of hardpan underneath swampy cover.

no pan sample at Dick Lake.

JUNE ~~22~~²² 1966

1 AR Traverse no. 5 Cockfield Lk.

AR5 $\Delta 1$ Dirty Brown Pebble Conglomerate.
matrix arkosic

2. west side of peninsula
at 3 pebbles in cong. larger.

AR5 $\Delta 2$. Arkosic RX with bands
of of cong. pebbles.

Bedding: 108/82° NE.

sharp gradation between cong.
and arkose on south side.

fault trending approx 1 to Bedding.
sticken sides
Patch 5° to SE.

3. 500' South from tip of - RM.
Shear zone.

Shear planes.

(a) 028/42° NW.

(b) 020/90°

some of the Arkose lies on fault plane.

POSS. due to mobility during shearing

Shear planes 1-2' apart in Zones.

4. 400' south of qtz. pebble arkose.
same shear trend,
but closer together .6".

5. Directly across from 4
qtz pebble arkose.

6. cool? 1 mi

7. meta. arkosic rock. AR5-Δ3.
foliation approx 250/25° SSE.

8. vol. int. AR5 Δ4. 600' ^N from Δ3.

Joints (a) 012/85° NNW
(b) 330/18° NNE.

AR5 Δ4 is 300' S from E271

9. E272 seepage from slump
area
approx. $\frac{1}{2}$ mi ^N from E271

10. vol. AR5-Δ5.
150 yds S from point.

very fractured - 2-3' apart.
cooling fractures?

fracture planes.

11. stream E 273-4

Vol. not as rounded as int Rk.
not transported as far.

12 AR5-Δ6 500' from head
of lake down East side.

Volcanics.

13. Very few int float on East
side of lake.

Project EMPERESS Photo _____ Collector AR. Date JUNE 22/66 Page No. _____

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
AZ-5	E269	1 1/2 cfs slow	sed.	✓	✓			mill.		Real.	ext. deep.		
	E270	1 cfs slow	sed.	✓	✓			mill.		W +5°	ext. deep.		
	E271	1 cfs mod.	sed.	✓		✓		mill.		W +10°	ext. mod.		
	E272	seepage	sed.	✓	✓			mill.		W +10°	ext. deep.		

copper ore

Project EMPRESS

Photo

Collector AR.Date JUNE 22/66

Page No.

Project		Photo		Collector		Date								
TRAVERSE No. AR-5	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS		
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold Hot	Cu, H.M., Cu, Mo, Pb, Zn	
								(Intr., Volc., Sed.)	(Met., Alt., Fract.)					
														(Sulphides)
or A, B, C Horizon														
	E273	5 cfs. mod.	sd.	✓	✓				vol. + int		SSE +5°	ext. mod.		
	E274	"	"						"		"	"		
	E275	10 cfs. fast	sd.	✓	✓				vol. + int		SSE +5°	ext. mod.		
	E276	"	"						"		"	"		
	E277	2 cfs	sd.						vol. sd.		050 +5°	ext. mod.		

fieldbook setup specimen

Project _____ Photo _____ Collector _____ Date _____ Page No. _____

Project	Photo	Sample No.	Stream Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
				Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
									(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M.,	Cu, Mo, Pb, Zn
				or A, B, C Horizon							Loc Geochron			
1	Bog	E151	R	x	✓				granite		large, well			
		silt	20k					Rust Frac		red granite				
		E152		✓	✓			sample		float				
2	pan			(1/2 tsp)							boulder bottom			
		E153								grass				
				sl. org						man				
											permafrost			
											bottom			

Кресинский Гетур

Project _____ Photo _____ Collector _____ Date _____ Page No. _____

Sample No.	Flow F.L.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
		or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
E100	R 100ft					org ✓	vol-intr art	—	flat marsh 100' w/ silt channel			Loc Goodchem
E101	M 50ft					Dam (1/2 tsp)	vol fract	—	gully boulders 150' bottom			

Project **EMPRESS**

Photo

Collector

L. Franklin

Date

June 15/66

Page No.

*1**MO Lane*TRAVERSE No.
E1
E2

Sample No.

Flow
R.M.S.
Cusecs.

SED. OR SOIL

Gvl.
Sand
Silt
Clay
Org.
or A, B, C
Horizon

GEOLOGY

float Bedrock

(Intr., Volc., Sed.)
(Met., Act. Fract.)
... (Sulphides)Gen. Topog.
Slope AngleApprox. Depth
& Dist. of
Overburden

ANALYTICAL RESULTS

Fe
Ca, P, Mg, Cu, Mn, Pb, Zn

E140

2
*Cu secc.**Silt &*
*Org.**Int.*
*FRAC.**flat*
20 ft
*gds.**Marsh*
*w/ chan.**2.1*

E141

*"**Org. silt.*
*1/10 top conc**PERMA FROST**"**"*

E142

*dry**Org. silt**perma frost**Gen. Bog.*
*slope**0.7*

E143

*"**Org. silt*
*1/10 top conc**"**"**"**"*

Project EMPRESS

Photo

Collector L. FranklinDate June 15/66Page No. 2Sample
C.N.Flow
M.S.
Cusecs.

SED. OR SOIL

GEOLOGY

Float Bedrock

(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold Hot

Cu, H.M., Cu, Mo, Pb, Zn

Gvl. Sand Silt Clay Org.
or A, B, C
Horizon

TRAVERSE No.

E1 { E144
silt2
ca. sec.

sand

—

—

flat Marsh
W/chan.

0

E145
pan

"

"

—

—

"

"

E146
silt1/2
ca. sec.silt &
organicInt.
rounded
frag.flat Marsh
W/chan.

0

no panning
sample

Project **EMPRESS**

Photo

Collector

Franklin June 15/66

Date

Page No.

3

Project		Collector		Date		Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth of 3' Extent of Overburden	ANALYTICAL RESULTS	
								Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Coarse	Fine
													(Intr., Volc., Sed.)	(Met., Alt., Fract.)			(Sulphides)	Cu, Hg, Co, Mo, Pb, Zn
								A, B, C Horizon										
TRAVERSE NO.	E2	147	Dry	silt							fully	marshy	no chan	0.1				
		no panning sample																
		149	5 cusecs.	silt							flat	marshy	no chan	0.1				
		150	"	silt & gravel							"	"						

Project EMPRESS Photo (1) Collector E. JACKSON Date 15/6/66 Page No. 5

BUN
LAKE

	Sample No.	Flow P.A.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float Bedrock. (Intr., Volc., Sed.) (Met., Fract.) (Sulphides)			Grd	Hot Ca, H.M., Cu, Mo, Pb, Zn
							or A, B, C Horizon				LOCATION	
1 TRAVERSE No.	E151 SILT	1 cfs S	DRG.				INT. MET.	—	FLAT GRASSY MARSHY	SAMPLE TAKEN 100' FROM DLAKE	S. TIP 6.1	
	NO PAN		SAMPLE				"	—	"	"		
	E152 SILT	2 cfs S	some DRG.				INT. FRACT.	—	MARSHY	SAMPLE TAKEN 50' FROM LAKE	2.0	
2	E153 PAN	"	1/2 TSP.				"	—		SAMPLE TAKEN 200' FROM LAKE		

Project EMPRESS Photo _____ Collector E. JACKSON Date 15/6/66 Page No. 6

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
		or A, B, C Horizon					(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cy, Mo, Pb, Zn	
							(Sulphides)				<u>LOCATION</u>	
<u>E154</u>	<u>20M</u>	<u>GVL. SILT</u>					<u>INT. MET.</u>	<u>—</u>	<u>HILLY</u>	<u>OUTCROP NEARBY</u>	<u>500' N.W. OF N. TIP DOG LAKE</u>	
<u>SILT</u>											<u>0.1</u>	
<u>E155</u>	<u>20M</u>	<u>SILT. 1 TSP.</u>					<u>"</u>	<u>—</u>	<u>"</u>	<u>"</u>	<u>"</u>	
<u>PAN</u>												
<u>E156</u>	<u>35M</u>	<u>GVL.</u>					<u>INT. MET.</u>	<u>—</u>	<u>GORGE</u>		<u>1/4 M.S. OF S. TIP DOG LAKE</u>	
<u>SILT</u>							<u>GRANITIC</u>				<u>0.1</u>	
<u>E157</u>	<u>35M</u>	<u>1 TSP</u>					<u>"</u>	<u>—</u>	<u>GRASSY (VAST MARGINAL FLIGHT</u>			
<u>PAN</u>												

DOGS LAKE
TRANSVERSE No. 1

Project EMPRESS

Photo

Collector

E. JACKSON

Date

15/6/66

Page No.

7Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

GEOLOGY

Float - Bedrock

(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)Opn. Tongue
Slope AngleApprox. Depth
of

ANALYTICAL RESULTS

C, H, N, Cu, Ni, Pb, Zn

LOCATION

Gvl.
Sand
Silt
Clay
Org.
or A, B, C
Horizon

TRAVERSE NO.

E158
SILT

1 cf. S

SANDY
SL. ORG.

INT.

HILLY

DEEP
EXT1/4 MI. S OF N TIP
DDB LAKEE159
PAN

1 cf. S

SANDY
1 TSP

INT

HILLY

SLOPE 3
CREEK
85° 42'

2.0

E190
SILT

8 cf. M.

CIVL. BLDS.

INT.

HILLY

DEEP
EXT

1/4 MI. UP STREAM

E191
PAN

8 cf. M.

2 TSP.
GVL.

0.7

Project EMPRESS

Photo _____

Collector E JACKSONDate 15/6/66Page No. 8Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

GEOLOGY

Float	Bedrock
(Intr., Volc., Sed.)	
(Met., Alt., Fract.)	
(Sulphides)	

Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold	Hot
Cu, H.M., Cu, Mo, Pb, Zn	

Gul.	Sand	Silt	Clay	Org.
er A, B, C Horizon				

ADT LAKE

TRAVERSE No.

E192

2 M

SILT

SANDY
SOME ORG.VERY
SLIGHT
INTHILLY
(GORGE)SANDY
BOTTOM100' FROM
LAKE

E193

2 M

PAN

POSSIBLY SOME
ORG.VERY
FEW
ROCKS

1.3

Float Plane Sampling & Recon

9, 10, 11 June 1966

Lyman & Moore

1. Nomo lake (SW) is clear of ice & is suitable for landing & takeoff for Beaver Supply plane

Loaded lake of questionable

2. Work time to date totals $2\frac{1}{2}$ days with the following lakes being sampled

		Gilt & Pan Samp.
9 June	Little Buffalo	7
	Loon	10
		17
10 June	Cattle	8
	Ginger	2
	Davis	8
	Mink	4
	SUN	4
		28
11 June	Carnes	8
	Tube II	4
	Fink	8
	Mink	2
		22
	total Gilt & Pan samples	67

3. In addition, Cold extraction THM tests were conducted on 12 stream sed samples

4. The following lakes remain iced:

10 E → Cast, Mac, Ard
8 W → Cockfield, Satausug
7 E → Long, Cat
1 W → Pat, Cat

Fieldbook Setups

I. float plane sampling of lake inlets

<u>Lake #</u>	<u>Sample #</u>	<u>type</u>	<u>Loc</u>	<u>Stream</u>	<u>Remarks & Geol</u>	<u>Geochem</u>
			Long.	size, velocity	outcrop?	sample size
			Lat.	flow in cfs	distance of sample	test results
				size channel	from lake	in ppm
				type of channel	peculiarities	type of test
				type of bottom	orientation of	color
				type of float	altitudes	for ref

first & last letters in lake name

for rock samples.

NA in sequence of streams
sampled

Lake Sample		Type	Loc	Stream	16W Remarks	June 66 Geochem
1	E-9	Pan (1/20 tsp)	136°29' 61°53'	v. little flow meander & marsh	no outcrop	300mg Neg THM0
	E-10	silt	"	100' from lake		600mg 625ppm THM
2	E-11	Pan (1/20 tsp)	136°29' 61°53.5'	swift 25 cfs	no outcrop	300mg
	E-12	silt	"	rocky bottom little silt sample organic	sample 600' from lake (orange buffer) → 1st layer	100ppm THM (w/ink red) 4.0 confirmed 300mg Neg CV
3	E-13	Pan (1/20 tsp)	136°29' 61°53.5'	slow 1 cfs	no outcrop	300mg
	E-14	silt	"	meander silty, collapsed banks	sample 300' from lake	50ppm 1.3 THM
4	E-15	organic silt	136°25' 61°53'	small muskey marsh seep	sample from below muskegroots 200' from lake	300mg 1.3 100ppm THM organic

Lake #	Sample #	Type	Loc	Stream	Remarks	Geochem
Loon Lake 15E 9 June 66						
1	E-16	Pan (1/5 tsp)	136°32'	small slow	gooseneck river bend	300mg 50ppm 0.1 (blue/gn)
	E-17	silt	61°55'	1/8 cfs marshy	sample 200' from lake	600mg 50ppm (purple)
2	E-18	pan (1/2 tsp)	"	slow 1/10 cfs	no outcrop	300mg Neg THM 0
	E-19	silt	"	gravelly delta	sample 100' from lake	600mg 220ppm THM (slight blue)
3	E-20	Pan (1/10 tsp)	"	boulders & organic silt, no sand	no outcrop	300mg 50ppm THM
	E-21	silt	"	gravel, v slow 1 cfs	300' from lake	1.3
4	E-22	Pan 1/5 tsp	136°33'	small 1/10 cfs	hanging river	300mg Neg THM 0
	E-23	silt	61°55'	sandy bottom sample 15' from lake	1/4 mi upstream no outcrop, old delta	
5	E-24	Pan (1/10 tsp)	"	slow 1/10 cfs	no outcrop	300mg 50ppm 1.3
	E-25	silt	"	marsh 1/2 mi upstream	sample 100' from lake	TAM

Cattle Lake 9W

10 June 66

Lake #	Sample #	Type	Loc	Stream	Remarks	Geochem
1	E-26	pan 1/20 tsp	136° 18'	small slow	no outcrop	300mg
	E-27	silt	61° 36.5'	1/10 cfs marshy med gr sandy bottom	silt & organic	~ 75 ppm THM organic silt (blue-purple)
2	E-28	silt	"	small slow	no outcrop	300mg
	E-29	pan (1/16 tsp)	"	1/30 cfs marshy approach	little silt gravelly conglom of delta } qtz float	max THM
3	E-30	silt	"	slow marshy	no outcrop	300mg
	E-31	pan (1/16 tsp)	"	braided branch 1/2 cfs	granite floats	100 ppm THM (purple)
4	E-32	pan 1/20 tsp	136° 20'	slow 1 cfs	qtz conglom	300mg
	E-33	silt	61° 36.5'	2' wide 3' deep collapsed bars	d granite boulder float	Neg Cu / No test

(2)

10 June 66

Ginger Lake SW

Lake #	sample type	LOC		Remarks	Geochem
1	{ E-34 pan	136°22'	• Stream		} no test
	{ 1/8 tsp	61°43'	Mod fast	sample 50' from lake	
	{ E-35 silt	"	3' wide, 3' deep 15 cfsp sandy bottom	no outcrop	
	GR-1 Rock	136°22.5' 61°42'	—	orientation N05W 75E volcanics andesite?	no test
	GR-2 Rock	136°22.5' 61°43'	—	46 ind granite Joint N10E vert, N60W 81N	no test

Davis Lake 16W

1	{ E-36 pan	136°24'	broad muskeg marsh, no apparent flow, no main channel pan silt	sample 100' from lake	} no test
	{ 1/8 tsp	61°49'			
	{ E-37 silt	"		no outcrop	

(W)

Lake Sample type		Loc		Stream	Remarks	Geochem
2	E 38	pan	136° 24'	slow	boulder bottom	no test
		2 1/10 tsp	61° 47'	1 cfs	little silt except	
	E 39	silt	"	deep channel thru muskeg sample 200' from lake	w/ organic debris pan organic silt	
3	E 40	pan	136° 25'	slow, small	100' from lake	No test
		(1/20 tsp)	61° 47.5'	1 1/2 cfs	no sand, silt in	
	E 41	silt	"	1 ft channel in muskeg	organic debris pan organic silt	
4	E 42	pan	136° 24.5'	med, small	50' from lake	no test
		(2 tsp)	61° 47.5'	1/2 cfs	boulder bottom	
	E 43	silt	"	grassy muskeg	w/ silt good gold show	

Lake sample type Loc

Mink Lake 15E

10 June 60

Stream

Remarks

Geoclon

1	E44	pan	136° 36.5'	V. little flow	400' from lake	No test
		1/8 tsp	61° 37'	< 1/10 cfs	no sand or boulders	
	E45	silt	"	grass/muskeg marsh	pan silt	
2	E46	pan	136° 38'	Mod flow	800' from lake	No test
		1/20 tsp	61° 37.5'	1 cfs	pan gilty	
	E47	silt	"	boulder bottom	gravel volcanic ash	
				Sun Lake 10W	thick	
1	E48	silt	136° 23'	small, slow	200' from lake	no test
			61° 55.5'	< 1/10 cfs	pan sandy	
	E49	pan	"	boulder bottom	silt at outlet	
		1/20 tsp		w/organic silt		
2	E50	pan	136° 24'	slow 2' deep	300' from lake	No test
		1/20 tsp	61° 55.5'	2' wide 1/2 cfs	pan silt	
	E51	silt	"	1/2 mi marshy approach	permafrost bottom	6.0 (4)

10 June '66

Sun Lake 16W

Lake #	Sample #	Type	Loc	Stream	Remarks	Geochron
3	E-52	pan	136°33.5'	small slow	300' from lake	} no test 2.0
	E-52	1/2 otsp	61°55.5'	1/2 o.c.f.s	pan silt	
	E-53	Silt	"	grassy muddy mud	pan frost bottom	
				no sand or boulders	no outcrop	

Carnes Lake SE

11 June 66

Lake sample #

type

Loc

Stream

Remarks

Geochron

1	E54	Pan (1/20+sp)	136°12' 61°27'	small, mod fast 1/2 cfs	no outcrop, no float 200' above stream junct	no test 0.1
	E55	Silt	"	2' x 1' deep sandy bottom	grassy meandering channel	
2	E56	Pan (1/10+sp)	"	mod fast 1 cfs	no outcrop, no float 100' above stream junct	no test 0.1
	E57	Silt	"	2' x 2' deep Permafrost bottom	grassy meandering channel	
3	E58	Pan (1/20+sp)	136°11' 61°27'	mod fast 1/2 cfs	no outcrop, no float 200' above lake	no test p.1
	E59	Silt	"	3-2' x 1' channels Permafrost bottom	grassy meandering braided channels pan organic silt	
4	E60	Pan (1/20+sp)	"	little flow grassy braided channel	no outcrop 300' above lake	no test
	E61	Silt	"	gravelly bottom (greywacke,		
	CS-1	gravel			Stream gravel	

⑦

11 June 1966

Tube II Lake SE

<u>Lake Sample</u>		<u>Type</u>	<u>Loc</u>	<u>Stream</u>	<u>Remarks</u>	<u>Geochron</u>
#	#					
1	E-62	pan	136° 05.5'	mod fast	Outcrop 200 yds NE	no test
	1/20 tsp		61° 30'	4 cfs	in let from Tube I lake	
	E-63	Silt	"	2' x 2' deep grass banks sandy bottom	150' from lake	
	TH-1	rock	"	200 yds NW of 1	sandstone, Antidune axis	0.1
2	E-64	pan	136° 05.5'	slow, braided	Outcrop across lake to east	no test
	1/20 tsp		61° 31'	marsh & grass	sample 200' from lake	
	E-65	Silt	"	little sand silty bottom	pan silt	
	TH-2	rock	"	300 yd south of 2	along lake	3.0

Fink Lake SW

1	E-66	pan	136° 25'	little flow	no outcrop	no test
	1/20 tsp		61° 45'	grassy marsh	no float	
	E-67	Silt	"	little sand former frost bottom	sample 150' from lake pan silt	

0.1

②

11 June 66

FINK LAKE SWGeodon

Lake Sample #

Type

Loc

Stream

Remarks

2 { E68 pan 136°24.5' mod fast
($\frac{1}{2}$ tsp) 61°44.5' 4 cfs
E69 silt " 3' x 1 1/2'
sandy bottom

no outcrop
no float
200' from lake
inlet from Mike Lake
plus small drains

3.5

3 { E70 pan 136°24.5' v. little flow
($\frac{1}{2}$ tsp) 61°45' braided channels
E71 silt " in grass marsh
silt sample 100' from lake

no outcrop
granitic & volcanic
gravels
pan sands 50' from lake

no test
0.1

4 { E72 pan 136°24.5' v. small mod fast
($\frac{1}{2}$ tsp) 61°44.5' 1/10 cfs
E73 silt " 1' x 1'
sandy bottom

no outcrop
granitic float
150' from lake

no test
0.1Mike Lake 16W

1 { E74 pan 136°28.5' no apparent flow
($\frac{1}{2}$ tsp) 61°45' gravel bottom
E75 silt " marsh grass

no outcrop
granitic & volcanic float
250' from lake

no test

(6)

Lake sample

Nomo Lake

12 June 66

#	#	Type	Loc	Stream	Geology & Remarks	Geochem
1	E76	pan (1/10 tsp)		no apparent flow grass marsh permafrost bottom	no outcrop 100' from lake no float organic silt	300 mg damp 2.7
	E77	silt (org)				
2	E78	pan (1/10 tsp)		v. little flow 2' deep channel in grass & muskeg permafrost bottom pan organic silt	no outcrop no float 500' from lake	300 mg 50 ppm THM (blue) 1.3
	E79	silt				
3	E80	pan (1/20 tsp)		mod flow, 3 cfs 5' x 1' deep, meander channel cut thru grass & muskeg cobble bottom	no outcrop 400' from lake cobble-sized granitic pebble conglom, & volcanic float	300 mg 50 ppm THM (blue) 1.3 damp → 3.0
	E81	silt				

12 June 1960

Lake Sample		Crud Lake		Geology & Remains		Geochem	
#	Type	Loc	Stream				
1	E82 Pan (Viotsp)		No apparent flow	no outcrop	granitic, gneissic, volc. & pebble cong float & beach - Pay Organic Silt 300' from lake	300 mg	50 ppm THM (deep blue) 1.3
	E83 silt		Muskeg-bush marsh boulder bottom, No sand main channel not defined				
2	E84 Pan (Viotsp)		no apparent flow	no outcrop	broad grass-muskeg marsh, no sand Permafrost bottom 200' from lake organic silt	no test	
	E85 silt						
3	E86 Pan (Viotsp)		small, fast, 1 cts	no outcrop	1' deep channel cut in grass-bush marsh granitic cobble bottom rod from lake organic silt	no test	
	E87 silt						
4	E88 Pan (Viotsp)		small, slow, 2 1/2 cts	no outcrop	grass-bush marsh no sand sample 150' from lake	300 mg < 50 ppm THM bluish green 0.7	
	E89 silt (organic)		no sand	no float			
	E92 Clay below muskeg roots		Pan organic silt				
			150 ft up East fork from junct	no silt available		300 mg 50 ppm THM (blue green) 0.7	

Lake Sample #		Type	Loc	Super Lake	Geology	Remarks	Geochem
1	E90	Pan		slow, 3 cfs		no outcrop	300mg 75ppm THM (blue-purple) 300mg 50ppm THM (blue) 1.3
	E91	(1 1/4 tsp)		2' x 2' channel cut		no float	
				thru grass-bush marsh		150' from lake	
		Gilt		Gilt sand bottom			
				<u>O. P. Lake</u>			
1	E93	Pan		slow, small 1/3 cfs		no outcrop	no test 4.0
	E94	(trace)		grass-bush braided-channel marsh		no float	
		Gilt		permafrost bottom		200' from lake	
		(organic)				pan organic silt	
2	E95	Pan		Mod fast, 3 channels		angular, iron-stained	300mg 100ppm THM (purple) 2.7 300mg Neg Cu 600mg Neg Cu
	E96	(trace)		at 1/2 cfs, grass-bush marsh		sandstone or volcanic (altered) float pebbles	
		Gilt		pebble-sand bottom		250' from lake	
	OP-1			stream pebbles		volcanics or ss?	
3	E97	Pan		v. little flow		no outcrop	no test 0.1
	E98	(1/20 tsp)		grass & bush broad marsh, no channels		no float	
		Gilt		permafrost bottom		500' from lake	
		(organic)				pan organic silt	

12 June 66

Kirk Lake

12 JUN 66

Core #	Sample type	Loc	Stream	Geology & Remarks	Geochem
	KK-1	rock		East side of lake opposite first island in south end, volcanics w/ green stain in fractured zones, some manganese stain	
1	E-99	silt		fast, gets	altered & fractured } 300mg
	E-100	pan (1/40 tsp)		3' deep channel cut into grass-bush marsh cobble & sand bottom	volcanics above stream to west, volcanic float ~600' from lake } NegHIM ?
	KK-2	rock		200' west of 1, fractured & altered volcanics w/ copper(?) mineralization and calcite fracture filling. bed includes well rounded cobbles & pebbles of previous volcanics	
2	E-101	pan (1/40 tsp)		fast scfs	volcanic outcrops, apparent } no
	E-102	silt		100' deep rock gorge w/ cobble & boulder bottom, well worked	attitude N90E, 70N float of all types observed ~300 yds from lake } test
	E-103	silt		first silt sample upstream of KK3, second downstream	
	KK-3			up canyon on N end of Kirk lake, ~300 yds, near first water fall, volcanics w/ green mineralization at fractured intersect of joint planes N90E, 70N; N30E, vert. some Mn & Fe stain from stream	O.I O.I

Ann Lake

13 June 66

Lake Gaining #		Type	Loc	Stream	Geology & Remarks	Geochron
1	E104	pan (hot sp)		mod fast, small 2 cfs, 1 ft deep channel cut thru grass marsh, sand bottom;	no outcrop, no float drumlin hills upstream 300' from lake	no test 0.1
	E105	silt		main valley stream		
2	E106	pan (hot sp)		mod fast, small 1/2 cfs, 1/2' deep channel cut thru grass marsh, silty bottom	no outcrop, no float drains NE of lake 200' from lake	no test 0
	E107	silt				
3	E108	pan (hot sp)		no apparent flow 2' deep channel cut thru grass bush marsh, permafrost bottom	no outcrop, some volcanic float. pan organic silt 300' from lake	no test 0
	E109	silt				
<u>Glick Lake</u>						
1	E110	pan (hot sp)		no apparent flow grass-bush marsh organic silt paved permafrost bottom	no outcrop, no float 100' from south most lake to east of Glick	no test 0.1
	E111	silt				

Lake #	Sample #	Type	Loc	Stream	Geologist	Remarks	Geochem
Slick Lake							
2	E112	silt		200' North of E111, same conditions			no test 0.1
Log Lake							
1	E113	pan (1/20 tsp)		no apparent flow grass marsh volcanic float & silt bottom		outcrop 300 yds SW andesitic volcanics also andesitic & latitic float	no test 0.0
	E114	silt					
				sample → 300' from lake			
	LG-1	rock		near 1 volcanic outcrop & float			
2	E115	pan (1/20 tsp)		small, slow, 1/4 cfs 1' x 1' channel cut in grass-bush marsh organic silt bottom		no outcrop, some volcanic float sample 500' from lake	no test 0.1
	E116	silt (organic)					

13 June 66

SOB Lake

Lake Sample #	Type	Loc	Stream	Geology & Remarks	Geochron
1	{ E117 pan (1/10 tsp)		No apparent flow grass-bush marsh sand bottom no channel	no float, granitic & volcanic cobbles on beach sample 300' from lake	no test
	{ E118 silt				
	SB-1	rock		volcanic outcrop, attitude N 45° E	0.1
2	{ E119 pan (1/10 tsp)		v. little flow, meander channel in grass marsh silt & permafrost bottom sample 400' from lake	some volcanic float no outcrop volcanic rounded beach cobbles pan organic silt	no test
	{ E120 silt organic				

Lake sample type Loc		Copper Lake		14 June 66
		stream	Geology & Remnants	Geochem
1	E121 pan (1/100 sp)	v. little flow	no outcrop, volcanic (ephraim)	no test
	E122 silt	1' x 1' channel in grass marsh silt-sand bottom	tephanitic beach cobbles sample 100' from latter olivine & mafic high in beach sand	
2	E123 pan	no apparent flow broad grass-bush marsh, no channels permafrost bottom	no outcrop, predom volcanic beach cobbles pan organic silt-soil from grass roots	some quartz & epidote no test
	E124 silt-soil (organic)			
3	E125 silt (organic)	small, slow, 1/8 cts in 2 channels cut thru grass-bush marsh permafrost bottom	no outcrop, no float volcanic cobbles at inlet, no sand, organic silt	no test
	note: panning produced no concentrate			

Lave #	Sample type	Loc	Cooper Lake stream	Geology & Remarks	14 June Geochron
1	{ E126 pan (20tsp) E127 silt (organic)		no apparent flow grass-bush marsh no channel permafrost bottom	no outcrop volcanic & granitic beads cobbles sample 200' from lake pan organic silt	no test
2	{ E128 pan (1/3 tsp) E129 silt		small, slow, 4% of grass-bush lined cut w/ 1' x 1/2" deep channel sand-silt bottom	no outcrop, no float sample 200' from lake	no test
3	{ E130 pan (1/20 tsp) E131 silt		slow, large 24 cts 300' wide valley w/ grass-bush marsh & beaver dams	no outcrop, no float sample 250' from lake silty bottom	no test
4	{ E132 pan (1/10 tsp) E133 silt		fast, large, 10 cts + channel cut 8' x 1' thru grass-bush valley sand-cobble bottom	no outcrop, granitic & some volcanic float sample 300' from lake good sample	no test

Lake Sample #		Type	Loc	Cooper Lake		Geology & Remarks	14 June Goodson
#				Stream			
5	E134	pan (1/20 tsp)		no apparent flow		no outcrop, no float	no test
	E135	silt (slight org)		broad grass-bush marsh no channel permafrost bottom		sample 300' from lake <u>slightly organic silt</u>	
6	E136	silt		mod fast, 1 1/2 cfs		no outcrop, no float	no test
	E137	pan no tsp		2x2 channel cut thru grass-bush marsh w/ 2' banks, silt-sand bottom		sample 200' from lake good sample	

Top Lake

1	E138	pan (1/20 tsp)		no flow, high gradient		white granitic outcrop	}
	E139	silt		bush marsh, no channel down timber, soil-veg bottom, 600' from lake, sl. org. silt		entirely granitic float	

Marijke Lake

15 June 66

Lake #	Sample type	Loc	Stream	Geology & Remarks	Geochron
2	E160 silt no pan sample taken		v. little flow grass bank w/ 1" channel silt bottom	no outcrop, granite float 300' from lake good sample	no test O.N
3	E161 silt no pan		no flow grass marsh, no channel	no outcrop, granite float 800' from lake good sample	no test O
4	E162 silt (organic) E163 pan (1/5 tsp)		v. little flow grass-bush marsh many 1" channels permafrost bottom organic silt	no outcrop, granite float 400' from stream junct on east branch	no test O
5	E164 pan (1/5 tsp) E165 silt		v. little flow grass-bush marsh many 1" channels silt bottom	no outcrop granitic float 100' west of stream junct good sample	no test -
ME-1	Granitic float				

Marigke Lake

15 June

Lake Sample # type	Loc	Stream	Geology & Remarks	Geochron
6 { E164 pan E167 (1/2 tsp) silt organic		v. little flow, many channels, grass-bush marsh in wide drain granite float bottom sample 300' from lake	granite & porphyro granite outcrop on ridge to S granitic float w/ some augen gneiss & (amirite) gneiss pan organic silt	{ no test 0
8 { E168 silt (good) no pan sample		no flow, small channel in granite boulder gorge w/ down timber	granite outcrop, jointing ndue N, vert, granitic float w/ granite gneiss sample 500' above small lake	{ no test 0
3 { E169 pan E170 (1/10 tsp) silt (organic)		Bottom flutshi no flow, massive, steep gradient, boulder to sand bottom, organic silt	no outcrop, granite, sand & volcanic float, 300' from lake pan gravels, sands & silt	{ no test —
4 { E171 pan E172 silt (sandy)		no flow, steep gradient sand & gravel bottom grassy channel in steep banked cut	no outcrop, float of all super from old Kame terrace sample 200' above small dam	{ 1.3

Water Sample		Satarish Lake		16 June 64	
1	type	Loc	Stream	Geology & Remarks	Gradient
1	E113 pay (1/2 tsp)		slow, 2 cfs 3x3' channel in broad valley w/ grass-bush marsh, silt/sand bottom	no outcrop 250' from lake granitic & volcanic stream gravels	0
	E114 silt (good)				
2	E115 pay (1/2 tsp)		slow, 1 cfs 3x2' channel in narrow cut w/ grass & bush sandy & gravelly channel	no outcrop, granitic & volcanic gravel 150' from lake	1.3
	E116 silt (sandy)				
3	E117 pay (1/4 tsp)		mod fast, 4/5 cfs 1/2 x 1/2' channel thru grass-bush marsh	no outcrop, angular chert & sand pebbles sandy & silty bottom 50' from lake	1.3
	E118 silt (good)				
4	E119 pay (1/2 tsp)		slow, 4 cfs 3x3' channel thru grass bush marsh	no outcrop, no float 75' from lake	3.0
	E120 silt (good)		silty-sandy bottom		

Safasha Lake						
Core #	Sample #	type	Loc	Stream	Geology & Remarks	Geochem
5	E181	pan (bot sp)		fast, left shallow, 3' wide, cobbles	no outcrop. granitic & sed	}
	E182	Gilt		dried channel thru brush marsh.	(pebble conglom) float 75' from lake	
6	E183	pan (sp)		no flow, high gradient	outcrop of volcanics	} no test
	E184	Gilt		seasonal drain down alluvial fan. grass & brush veg.	600' N. contact of intrusives 400 yds NNE sample 400' from lake	
SA-1 volcanics & intrusives from contact						

17 June

Lake #	Sample #	Type	Loc	Swamp Lake Stream	Geology & Remarks	Geochron
1	E185	pan (19 tsd)		no flow, muskeg - bush marsh, volcanic clay layer sampled sand layer panned	no outcrop, no float sample 150' from lake, old Kanie terrace slopes	no test
	E186	silt (clay)				
2	E189	pan (120 tsd)		no flow, bush-grass marsh, volcanic clay layer sampled	no outcrop, no float sample 100' from lake	no test 0
	E194	silt (clay)				
<u>Norden River</u>						
1	E187	pan (98 tsd)		Mod fast, 200 cfs 40' wide, muddy grass & bush banks meander channel	no outcrop, no float silty river banks	no test
	E188	silt (good)				

Lake Sample Type Loc				Thirty Seven Mile Lk.		17 June
#	#	Type	Loc	Stream	Geology	Geochron
1	E194	pan		mod fast, 1 cfs	Outcrop 300 yd N along shore - pink bluish granite, granitic float	1.3
	E196	silt		sand-boulder bottom heavy brush sample 300' from lake		
2	E197	pan		fast, 3/4 cfs, r	No outcrop, gneiss & granitic float	0.1
	E198	silt		cobble boulder bottom w/ alluvial delta recent flood sample 250' from lake		
3	E199	pan (No top)		fast, 1 cfs	Outcrop 300 yd South, phyllite cracks, red	0.1
	E200	silt (sandy)		boulder bottom recent flood w/ silt deposits	due N, 80 E; float predom gneissic, some granite	
	E201	silt (clay)		heavy brush veg.		0.1
	E202	silt (organic)			sample 400' from lake	2.0

Staph Lake

18 June

Lake sample #	Type	Loc	Stream	Geology	Geology
1	{ E203 pan (Votsp) E204 silt (organic)		No flow, recent flood, 5' deep grass w/ heavy brush cut silt bottom w/ cobbles river cut off from lake <u>Tin Lake</u>	No outcrop, float of all types from old river deposits, Metamorphic to 500 ft.? Sample 300' S of lake	9.5
1	{ E205 pan (Votsp) E206 silt (clay) Pan gravel sample taken		No flow, high and grass - brush shallow cut, silt-gravel bottom Pan silt-gravel	No outcrop, predom gneissic float, gravel & beach boulders, angular. Sample 300' from lake	0
2	{ E207 pan (Votsp) E208 silt (sandy)		Mod fast flow, 1 CK 6' x 6" deep bed in brushy channel sand thru boulder bottom Sample 300' NW of lake	No outcrop, predom gneissic float w/ some granite & ls,	2.0

Long Sample type Loc

3 E209 silt
(clay-sand)

4 { E210 pan
(kiosk)
E211 silt
(good)

1 { E212 pan
(kiosk)
E213 silt
(below roots)
E214 silt

(blue clay) for control

Tin Lake Stream

no flow, many 1' x 1' channels cut thru grass, sand & pebble bottom

mod fast. 1' x 1' x 1' deep sandy w/ sand-silt bottom in bush grass veg.

Arc Lake

no flow, grass & bush marsh, blue clay bottom w/ sand & gravel

Geology

no outcrop, gneissic float, angular sample 400' from lake

no outcrop, precom gneissic float, angular sample 200' from lake

no outcrop, gneissic & granite angular gravel & beach boulders, some vol. sample 300' from lake

Blume Geochron

0

1.3

0.7
~~1.3~~

0.7

MacIntosh Lake low

18 June 66

lake sample # Type Loc

Stream

Geology

Geochem

E215

E216

2.0

E217

C218

2.0

E219

E220

2.0

Lake #	Sample #	Type	Loc	And Lake Stream	Geology	18 June 66 Geochem
1	{ E221 E222		gilt	Med fast flow, 3 cfs rounded cobble bottom, recent flood	no outcrop	4.0
2	{ E223 E224		gilt	no flow, 20' wide 5' deep channel, rd cobble lined	Porphyritic granite Outcrop 400 yds N, mixed float granite predom also gneiss & vol well rounded sample 350' from lake	2.7
3	{ E225		gilt (good)	no flow,		

Lake Sample #		Type	Sam Lake		19 June 66
#	#		Loc	Stream	Geology
1	E226	dam (1/5 top)		no flow, grass - bush marsh, no channel granodiorite gravel bottom	outcrop 500' N along shore - biotite, hornblende granodiorite sample 250' from lake
	E227	silt			
2	E228	dam (1/10 top)		mod fast, 1 cfs steep 10' banks brush covered w/ 2' x 2' channel, silt bottom	no outcrop, granitic angular boulders along shore sample 400' from lake
	E229	silt (1/10 top)			

Line sample type loc

Joe Lake
Stream

Geology

19/one
Geochron

1 { E230 pay
E231 silt

2 { E232 pay
E233 silt

4 { E234 pay
E235 silt

$$4 \left\{ \begin{array}{l} 236 \\ 237 \end{array} \right.$$

$$3 \left\{ \begin{array}{l} 238 \\ 239 \end{array} \right.$$

Carp Lake

Lake Sample #	Type	Loc	Stream	Geology	Geochron
1 { E280	pan (1/5 tsp)		first, 25 ch	no outcrop, gneissic & granitic float	
	E281	silt (50000)			
2 { E282	pan				
	E283	silt			
3 { E284	pan				
	E285	silt			

Bad Lake

1 { E288 pan
E289 silt

2 { E290 pan
E291 silt

3 { E292 pan
E293 silt

Susan Lake

{ E294 pan
1 { E295 silt

Rowena Lake

(greasy)

{ E296 pan
1 { E297 silt

Ashwin Lake

{ E298 pay
1 { E299 gilt
E300 gilt

{ E301 pay
2 { E302 gilt

July 8/66

San Franklin

EMPRESS

Stn. ①

Metamorphic
gneiss + crystalline
limestone

running 13° E of N
dipping at $5-10^{\circ}$ to the NW
Outcrop is well fractured.

Stn. ②

bottom of hill Run 26° W of N
dip almost vertical
(possibly metamorphic)
top of hill The same as the
bottom except for a
vein of quartz running
through the rock.

July 10/66

S. Franklin
Empress

Stn ①

Outcrop consists of quartz
monzonite and intrusive
rocks.Runs 40° W of NDips approx. 5° S

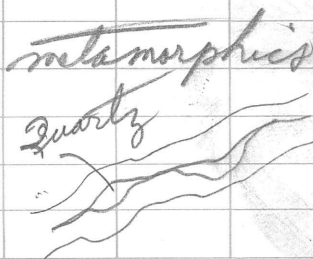
Stn ②

Outcrop consists of
metamorphics + quartz
- schist, pyrites, - ?Outcrop is dipping
approx. 20° from the vertical
in a direction of
 10° N of E.rock is severely
contorted along bedding
plane

Empress
July 10/66 A. Franklin

25 yds south of stn (2)
fold across the bedding
plane

34° E of S



metamorphic
Quartz

Stn (3)

Running at 30° W of N
Rock types appear to
be the same

150 yds S

white rock presumably
limestone. scratched by
knife

Rock types along the
 east side of the canyon
 appear to be of the same
 type

Stn (4)

Rock dipping 50° E of N
 at an angle of 60° from
 the vertical

- rock is metamorphic,
 schist

and some quartz

July 11/66

J. Franklin
Empress

Stn ①

Quartz monzonite and
metamorphic int.

Dipping 120° W of N at an
angle of 60° from the
vertical.

- Rock is folded and
fractured.

Stn ②

Metamorphics

schist, quartz veins

Dipping 120° W of N at an
angle of 60° from the
vertical

Sample[#], Flow, Sed. or soil, Geology,
slope.

(33)

EMPRESS
A. Franklin

July 24/66

10-E +

10-W

804 trickle S, sed. silt,
int. & vol. float, 5° slope

805 pan

806 marsh, sed. silt & org.
nothing visible, 5° slope

807 1/2 cu sec S, sed. silt & sl. org,
int. float, flat & marshy

808 pan

809 trickle, sed. silt, nothing
visible, 3-5° slope

810 pan

811 dry, sed. silt, nothing
visible, flat.

812 1/2 - 1 cu sec N, sed. silt &
slight org., int. float,
3° slope

813 pan

Empress

July 24/66

L. Franklin

10-E

(34)

814 dry, sed. silt & sand,
int. float, 5° slope.

815 1 case M, sed. silt sand,
int. + quartz float, 5° slope

816 pan

817 dry, red. silt + sand,
int. float, 5° slope

818 dry, sandy soil, int.
float, 5° slope

819 trickle S, sed. silt,
nothing visible, gentle slope

820 trickle S, soil, int. +
vol. float, 5° slope.

821 pan

822 trickle S, sed. silt,
no float, flat.

823 pan

824 trickle S, sed. silt + org
no float, gentle slope

825 trickle S, sed. silt,
no float, flat, marshy

Empress
J. Franklin

July 24/66
10-E

(35)

- 826 $\frac{1}{2}$ cu sec S, org. + sandy silt,
int. float, 5° slope
- 827 marshy, soil
no float, 7° slope, inactive
- 828 $\frac{1}{4}$ cu sec M, clay silt,
int. float, gentle slope
- 829 1 cu sec M, org silt,
int. float, gentle slope
- 830 pan
- 831 $\frac{1}{2}$ cu sec M, red. silt,
int. float, gentle slope
- 832 pan
- 833 trickle S, silt, slight
org., int. float, 5° slope
no panning possible
- 834 trickle S, org silt,
no float, flat
- 835 $\frac{1}{2}$ cu sec M, red. silt,
no float, flat

Empress
J. Franklin

July 24/66
10-E

(36)

- 836 H. ca. sec. S, sed. silt.
no float, flat & marshy
- 837 truckle S, soil,
int. float, flat & marshy
- 838 pan
- 839 dry, soil, int. float,
gentle slope
- 840 dry, silt sand, int. float
flat.

Sample #, flow, sed. or soil,
Geology, Slope.

(37)

8-

10-E

July 29/66

836 dry, soil, int. float,
flat + marshy.

841 trickle, sed. silt, no
float, flat + marshy.

16-W

July 30/66

842 $\frac{1}{4}$ cu. sec. M, int. float,
sed. silt + s. org., 5°

843 pan

844 dry, sandy soil,
nothing visible, gentle

845 $\frac{1}{2}$ cu. sec. M, sed. silt sand
int. float, gentle

846 pan

L. Franklin

(38)

"E" project.

16-W

July 30/66

847 sed. silt, trickle M,
nothing visible, gentle

848 $\frac{1}{4}$ m sec M, sed. silt & sl. org.
int + some, met. float, gentle

849 pan.

July 31/66

16-W

850 swamp w/chan., soil
nothing visible, gentle

L. Franklin

(39)

Empress. Proj.

Buffalo Lake

16W

Aug. 4

851 $\frac{1}{2}$ cu. sec. M, red silt. + sl. org.

int. float, gentle

852 1 cu. sec. M, red silt.

int. float, steep

853 swamp, soil (vol. ash +
org.) no float, flat

Aug. 5

9-W

854 dry, soil (sandy grey)
int. float, flat

855 $\frac{1}{2}$ cu. sec S, soil
no float, flat
marsh with reeds

856 6 cu. sec. M, red silt
int. float, flat

"E." project
Aug. 7/66

J. Franklin (40)
9-W

857 $\frac{1}{2}$ cu sec S, soil
no float, flat & marshy.

858 $\frac{1}{2}$ cu sec S, soil
no float, flat & marshy

859 $\frac{1}{4}$ cu sec M, silt
no float, flat & marshy

860 trickle S, soil
int float, flat & marshy

861 trickle S, soil
no float, gentle slope
& marshy

862 1 cu sec M, silt
no float, gentle slope

863 trickle M, silt
no float, gentle

7W

Project EMPRESS

Photo

A11015-120

Collector

J. Franklin

Date

June 22/66

Page No.

1

TRAVERSE NO.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float Bedrock (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cold	Hot
			or A, B, C Horizon								Cu, H.M., Cu, Mo, Pb, Zn	
1	E510 silt	S 4 cu. secs.		sand				nothing visible	FLAT	Marsh w/chan.		
	E511 silt	8 M cu secs		organic silt				sed.	FLAT	Marsh w/chan		
	E512 soil	—		soil sandy				nothing visible	10° slope West	scrub		
	E513 soil	—		soil sandy gravel				nothing visible	15° slope West	scrub		

7W

E510

Limestone dipping east
running north-south
- green blue gossan

E512 soil sample, 100' west
of E511

7 W

Project EMPRESS

-Photo.

A11015-120

Collector.

A. Franklin

Date _____

June 22/68

Page No.

2

TRAVERSE No.	7W	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS		
				Gvl.	Sand	Silt	Clay	Org.	or A, B, C Horizon	Float			Bedrock	Cold	Hot
										(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M.,	Cu, Mo, Pb, Zn
1		E514 soil		sed. soil.					Nothing Visible		Gentle slope East	Marshy			
		E516 silt	S 12 cusecs	sed. silt					Nothing Visible		FLAT	Marshy			
		E517 pan	1/15 top												

7W

Project EMPRESS Photo A11015-120 Collector J. Franklin Date June 22/66 Page No. 3

Sample No.	Flow R.M.S. Cusces.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gr.	Sand	Silt	Clay	Org.	Flint	Bedrock			Cold	Hot
							(Intr., Vole., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
		or A, B, C Horizon										
E518	S 0.5 Cusces	sed silt					Nothing Visible		5° East slope	Marsh 1/4 chan		
E519	—	soil					Nothing Visible		FLAT	Miss		

7W

TRAVERSE No. 1

Dawson Trail
Kynocks to Copper Lake

Project F M I A E S Photo

Photo

Collector

Date.

4A

Page No.

4

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS Cu, H.A., Cu, Mo, Pb, Zn
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				
2	E1100 silt	M 50 cu secs		sed. sand + org.				Int.		FLAT		
	E1101 silt	M 1 cu sec		sed. sand + org.				Int met		5' slope East		
	E1102 pan	1/20 tsp										
	E1103 silt	M 2 cu secs		sed.				Int.		FLAT		

Project EMPRESS Photo 14861-124 Collector A. Franklin Date June 28 Page No. 5

Project		Photo		Collector		SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
Sample No.	Flow R.M.S. Cusecs.	Gvl.	Sand	Silt	Clay	Org.	GEOLOGY		Cold Hot	Cu, H.M., Cu, Mo, Pb, Zn						
							Floot	Bedrock								
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Culphides)									
or A, B, C Horizon																
TRAVERSE NO 3	E1104	R 15 cu. sec	sed sand				Int.				Narrow Valley					
	E1105	pan 15 top														
	E1106	1 cu sec M	sed sand & organics				Int				20° slope West					

Map

1-W

Project EMPRESS

Photo

14861-123

Collector

J. FRANKLIN

Date

June 28/66

Page No.

2

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 3	E1107	M										
	silt	5 cusecs						Int. conglom.	15° slope West			
	E108	pan 1/10 top										
	E1111	R										
	silt	60 cusecs						Int. some conglom.	Narrow Valley			

1-W

1-W

Project EMPRESS

Photo

Collector

A Franklin

Date

July 1/66

Page No.

7

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	<u>Float</u> (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	<u>Bedrock</u>		Cold	Hot
				or A, B, C Horizon							Cu, H.M., Cu, Mo, Pb, Zn	
4	E1112 SOIL	DRY		soil sandy				Nothing Visible		FLAT		
	E1113 soil	DRY		soil silt + org.				Int.		5° SE slope		
	E1114 soil	1 cu sec. S		soil org. silt				Nothing Visible		>5° slope East	March No Chen.	
	E1115 silt	S 500 cu sec		sed. silt				Nothing Visible		FLAT	40' Chen.	

1-W

4

TRAVERSE No.

1-W

Project EMPRESS

Photo

Collector

A. Franklin

Date

July 1/66

Page No.

8

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cold	Hot
				or A, B, C Horizon							Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 4	E1116 soil	Dry		Soil clay				Int	Narrow Valley S			
	E1117 silt	Dry		sed. silt + sand				Nothing visible	75° slope W			
	E1118 silt	6 M cu secs		sed silt + sand				Int some Met	5° slope W		Back Side	
	E1119 pan	1/20 top										

1-W

E1118 Quartz Monzonite +
sed. rock found in
stream bed.

Project EMPRESS

-Photo

Collector

Collector J. Franklin

Date _____

Date July 1/66

Page No

9

Project		Photo	Collector	Date	Egg No.							
TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float			Bedrock	Cold
			or A, B, C Horizon				(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
1-W + 8-W TRAVERSE No. 4	E1120	S 10 cu. sec.	sed silt				Nothing Visible		FLAT	marsh w/chert		
	E1121	5 M cu. sec.	sed. silty org.				Int		5° SW			
	E1122	6 cu sec M	sed silt sand				Int		5° slope NW			
	E1123	pan to top										

E1121 Possible Quartz Monzonite
NE of sample site.

Project EMPRESS Photo _____ Collector J. Larkin Date July 1/00 Page No. 10

[illegible]

Project EMPRESS Photo 8-E Collector L. Franklin Date July 1/66 Page No. 11

TRAVERSE No.	8-E	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
				Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
				or A, B, C Horizon					(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
4		E1127 silt	6 cu secs. M	sed. silt					silty silt some Met.		FLAT			
		E1128 pan	1/2 top											
		E1129 silt	1/2 cu sec S	sed. silt + org.					Nothing Visible		75° slope NE	Marsh H/don.		

Project EMPRESS Photo 8-E Collector J. Franklin Date July 1/66 Page No. 12

TRAVERSE No. <u>4</u>	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
<u>8-E</u>	E1130 silt	R 25 cu secs.	sed silt					Ant		Narrow gorge			
	E1131 pan	1/20 top										back side	
	E1132 silt	dry	sed silt + sand +					Nothing Visible		5-10° slope S			
	E1133 silt	3 cu secs M	sed clay silt					Ant		FLAT			

E1130 rock face
running 220°

EMPRESS

Photo

8-E

Collector

S. Franklin

Date _____

July 1/66

Page No.

13

[illegible]

8-E

Project EMPRESS

Photo

Collector

J. Franklin

Date

July 2/66

Page No.

14

Y-E

TRAVERSE No. 5

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)					
or A, B, C Horizon												
E1135	dry	sed. silt					Int.		10° slope W	Narrow gorge		
E1136	dry	soil sandy					Int.		10° slope SW			
E1137	1/4 cu sec S	sed. silt					Nothing Visible		FLAT			
E1138	2 cu secs.	org. soil					Nothing Visible		FLAT			

8-W

Project EMPRESS Photo _____ Collector Ian Franklin Date July 3/66 Page No. 16

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 6	E1157 silt	10 sec. M		sed.	silt			Int.		FLAT			
	E1141 silt	dry		sed.	silt			Int.		FLAT			
	E1142 silt	dry		sed.	silt + sand			Nothing visible		FLAT			
	E1143 silt	1/4 sec S		sed.	clay			Int.		FLAT			

Project EMPRESS Photo _____ Collector A. Franklin Date July 3/66 Page No. 17

Project	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
	E1144 pan	1/20 top											
	E1145 silt	S 5 cu secs.	sed sand + clay					Int		FLAT			
	E1146 pan	1/5 top											
	E1147 silt	1/4 cu sec S	sed clay					Nothing Visible		FLAT			

8-W

Project EMPRESS

Photo

Collector

J. Franklin

Date

July 3/66

Page No.

18

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cold	Hot
			or A, B, C Horizon								Cu, H.M., Cu, Mo, Pb, Zn	
	E1148 soil	dry	soil clay.					Nothing Visible	FLAT			
	E1149 silt	1/2 can see S	sed. silt					Nothing Visible	FLAT	Marsh w/chen		
	E1150 soil	Marsh	soil clay ash					Nothing Visible	FLAT	Marsh no chen		

14W-14E

15773-6 to 9

Project EMPRESS

Photo

Collector

Date

Page No.

19

J. FranklinJuly 6/66

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float Bedrock			Cold	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cu, H.M., Cu, Mo, Pb, Zn	
		or A, B, C Horizon									
E1151	2.5 cu. sec. S		sed. silt & sand				Met Int	FLAT RIVER VALLEY	Ext. deep		
E1152	1/2 top										
E1153	1 cu. sec. S		sed. silt & sand				Met Int	Slope NW	Ext. deep		
E1154	1/2 top										

TRAVERSE No.

14-E

Project EMPRESS

Photo

Collector

A. Franklin

Date _____

July 6/66

Page No.

20

TRAVERSE NO.	Sample No.	Flow R.A.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
	E1155	2.5 cu sec. M		sed. silt & sand.				Met.		5° N slope	deep ext.		
	E1156	2 cu sec. S		org. silt				Nothing Visible		3° N slope	marsh w/chen		
	E1158			sandy soil (B)				Nothing Visible		10° W slope	deep ext.		
	E1159	trickle S		sed. silt				Nothing Visible		10° N slope	deep ext.		

Project EMPRESS

14-E
Photo

Collector J. Franklin

Date July 6/66

Page No. 21

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
Photo												
Collector												
or A, B, C Horizon												
E1160 silt	1 1/2 cu secs.	sed. silt sand + org.	Nothing Visible	5° W slope	Marsh w/chan							
E1161 silt	trickle S	sed. silt.	Nothing Visible	30° NW slope	Marsh w/chan							
E1162 silt	290 cu sec M	sed. silt.	Met	FLAT								

13-E 15491-19

Project EM PRESS Photo 15428-8 Collector J. Franklin Date July 8/66 Page No. 22

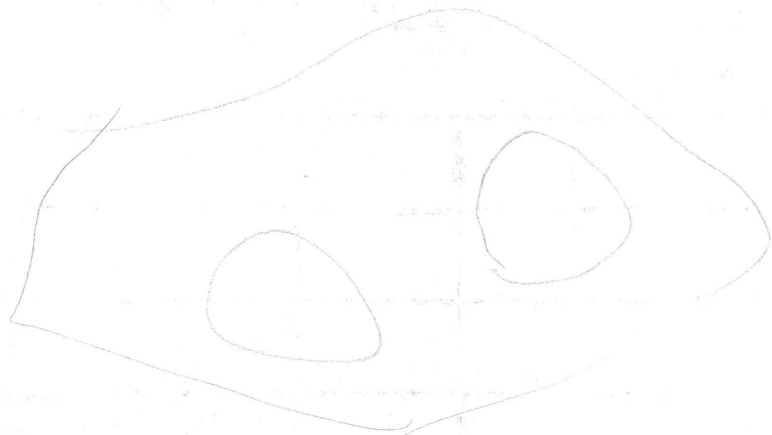
TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
	E1163 silt	10 cu secs S		sed. silt				Nothing Visible		FLAT			
	E1164 silt	dry		sed. silt sand + org.				Nothing Visible		FLAT	Marshy		
	E1165 silt	inactive		sed sand + silt				Nothing Visible		FLAT	POOLS of water		
	E1166 silt	1/2 cu sec S		sed. silt				Nothing Visible		FLAT	Marshy		

10-W

Project EMPRESS Photo 11369-18 Collector J Franklin Date July 10/66 Page No. 23

TRAVERSE No.

Photo		Collector		Date		Page No.						
Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
or A, B, C Horizon												
E1167	1 cu sec. M	sed. silt.					Nothing Visible		5° SW slope			
E1168	1 cu sec. M	sed. silt sand					Nothing Visible		5° W slope			
E1169	1/2 cu sec. M	sed silt sand					Nothing Visible		5° NW slope			
E1170	1/2 cu sec. M	sed. silt sand					Nothing Visible		5° N slope			



Project.

EMPRESS

Photo.

11369-20

Collector

J. Franklin

Date _____

July 10/66

Page No

25

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extant of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.) (Met., Ait., Fract.) (Sulphides)	Cu, H.M., Cu, Mo, Pb, Zn				
			or A, B, C Horizon										
TRAVERSE NO.	E1175 silt	1/2 cu sec R	sed. silt					Nothing Visible		7° W slope			
	E1176 silt	trickle	sed. silt					Met.		5° NW slope			

Project FMPRESS

Photo

15428-35

Collector

J. Franklin

Date

July 11/66

Page No.

26

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)					
E1177	2 cu sec. M silt	sed. silt & org.	Int.		3° NW slope								
E1178	2 cu sec. M silt	sed. silt & org.	Nothing Visible		5° NW slope								
E1179	1/2 cu sec. M silt	sed. silt.	Quartz Monzonite		7° slope								
E1180	1/2 cu sec. M silt	sed. silt & org.	Nothing Visible		10° NW slope	Marshy							

Project

EMPRESS

Photo

15428-35

Collector

I. Frankel

Date

July 11/86

Page No.

27

[illegible]

10-E
Project EMPRESS Photo 15428-71 Collector A. Franklin Date July 17/66 Page No. 28

TRAVERSE No.

Project		EMPRESS		Photo		15720-11		Collector												
Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS									
		Gvl.	Sand	Silt	Clay	Org.	or A, B, C Horizon	Float			Bedrock	Cold	Hot	Cu, H.M., Cu, Mo, Pb, Zn						
							(Intr., Volca., Sed.) (Met., Altk., Fract.) (Sulphides)													
E1182	trickle	sed.	silt.					Nothing visible	FLAT											
E1183	8 cu sec M	sed.	silt & sand					Int. Conglom.	FLAT											
E1184	pan																			
E1185	Day	sed.	silt soil sandy					Int.	FLAT											

Project EMPRESS Photo 15428-70 Collector J. Franklin Date July 17/66 Page No. 29

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., A.I., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No.	E1186 silt sand	1/4 in sec. S	sed. silt + soil					Int.		FLAT			
	E1187 silt	Dry	sed. silt								Pool of water		
	E1188 silt	20 in sec R	sed silt					Int Vol.		6° slope			
	E1189 pan		pan taken in area of old sluice box										

10-E

EMPRESS

1

S. Franklin

July 18/66.

30

TR AVERAGE No.

15-W

Project EMPRESS Photo 15428-15 Collector J. Franklin Date July 20/66 Page No. 31

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
							or A, B, C Horizon	(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
	E1192 silt	swamp		sed. silt sand				Nothing Visible		4° slope			
	E1193 soil	dry		B soil				Int.		5° slope			
	E1196 soil	trickle		B soil				Nothing Visible		1° slope			
	E1197 silt	dry		sed. silt sand				Nothing Visible		FLAT			

Project

EMPRESS

Photo

15428-15

15491-11

Collector

J. Franklin

Date

July 20/66

Page No.

32

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cold Cu, H.M., Cu, Mo, Pb, Zn	Hot
							or A, B, C Horizon					
TRAVERSE No.	1198	1 cu sec		sed. silt sand				Nothing	3°	Marsh		
	silt	S		slightly org.				Visible	slope			
	1199	Marsh		soil				Nothing	FLAT	Marsh		
	soil							Visible		no chan		
	800	Truckle		sed. silt &				Int.	5°	Marsh		
	silt	S		org.					slope	W/chan		
	801	2 cu sec		sed. silt &				Nothing	FLAT	Marshy		
	silt	S		org.				Visible				

15-W

Project EMPRESS

Photo 15791-11

Collector

A. Franklin

Date _____

July 20/66

Page No.

33

[illegible]

Project

Empress

Photo

7-E
7-W
14861-39-38

Collector

J. Franklin

Date

Aug. 12/66

Page No.

41

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock			Cold. Cu, H.M., Cu, Mo, Pb, Zn	Hot
			or A, B, C Horizon										
	864 soil	1/4 cu sec. S	soil & vol ash					—	—	flat	marshy		
	865 soil	Swamp	org. soil					—	—	flat	marshy		
	866 soil	Swamp	sl. org. soil					—	—	flat	marshy		
	867 soil	Lake Edge	sandy soil					—	—	flat	marshy		

7E
7W

Project Empress Photo 14861-38-39 Collector A. Franklin Date Aug 13/66 Page No. 42

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	or A, B, C Horizon			Cold	Hot
TRAVERSE No.	868 soil	—		fine sand + clay soil			Int.	—	gentle			
	869 soil	—		soil			Int. + Met.	—	gentle			
	870 soil	—		clay			Int.	—	gentle			
	871 soil	—		soil			Int.	—	gentle			

2-E
2-W

Project Empress

Photo 14861-39-38

Collector J. Franklin

Date Aug. 12/66

Page No. 43

TRAVERSE No.	Sample No.	Flow P.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold Cu, H.M., Cu, Mo, Pb, Zn	Hot
								(Intr., Volc., Sed.)					
								(Met., Alt., Fract.)					
								(Sulphides)					
or A, B, C Horizon													
	872	/	clay	Int. & Met.		gentle	moss + buckbrush						
	873	/	fine sandy soil	Int.		gentle	"						
	874	/	fine sand clay soil	Int.		gentle	"						
	875	/	clay	Int. & Met.		gentle	"						

Project

Empress

Photo

14861-38-39

Collector

J. Franklin

Date

Aug. 12/68

Page No.

44

7E
7W

TRAVERSE No.

Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

Gvl.
Sand
Silt
Clay
Org.
or A, B, C
Horizon

GEOLOGY

Float Bedrock
(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)

Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold Hot
Cu, H.M., Cu, Mo, Pb, Zn

876

✓

org. soil

Int.

gentle Moss
+
larchwood

877

✓

clay soil

—

flat

"

878

Swamp

sandy soil

Int.

flat

Moss

879

Swamp

sl. org + sandy
clay soil

—

flat

"

Project Empress Photo 14861-39-38 Collector A. Franklin Date Aug 12/68 Page No. 45

[illegible]

Project

Empress

Photo

9W

Collector

S. Franklin

Date

Aug. 14/66

Page No.

*46*Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

Gvl.

Sand

Silt

Clay

Org.

or A, B, C
Horizon

GEOLOGY

FloatBedrock(Intr., Volc., Sed.)
(Met., Ait., Fract.)
(Sulphides)Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold

Hot

Cu, H.M., Cu, Mo, Pb, Zn

TRAVERSE No.

*899 trickle silt**—**flat**200' N50E
OF ACH*

Project Empress Photo 11364-453 Collector A. Franklin Date Aug. 17/66 Page No. 47

Project	Sample No.	Flow R.M S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No.	883	/	soil					/	/	gentle slope	deep + ext.		
	884	/	rusty colored soil					/	Vol	steep	nil.		Mag. defl. 2 in
	885	/	soil					/	Vol	steep	nil.		Mag. defl. 2 in
	HG 5,4,3	Feb 25/64	H. Sholes										

Project Empress Photo 11364-453 Collector S. Franklin Date Aug. 17/66 Page No. 48

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	or A, B, C Horizon			Cold	Hot
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cu, H.M., Cu, Mo, Pb, Zn	
	886	trickle S		silt, some clay					gentle slope	deep & ext.		
	887	trickle M		soil				Vol.	gentle slope	"		
	888	trickle S		silt					gentle slope	"		
	889	trickle		sl. org sandy silt					gentle slope	"		

Project Empress Photo 11364-453 Collector J. Franklin Date Aug 17/66 Page No. 49

Project	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.)					
								(Met., Alt., Fract.) (Sulphides)					
												Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No.	890	2 cu sec.	sl. org. sandy silt					—		gentle slope	deep ext.		
	891	1/4 cu sec M	silt, sl. org.					—		gentle slope	deep + ext		
	892	trickle S.	silt, sl. org.					—		gentle slope	"		
	893	1 cu sec	silt, sandy							gentle slope			

Project

Empress

Photo

11364-453

Collector

J. Franklin

Date

Aug. 17/66

Page No.

50

TRAVERSE No.

Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

Gvl.

Sand

Silt

Clay

Org.

or A, B, C
Horizon

GEOLOGY

Float	Bedrock
(Intr., Volc., Sed.)	(Met., Alt., Fract.)
(Sulphides)	

Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold

Hot

Cu, H.M., Cu, Mo, Pb, Zn

*894**1/2 cu
sec.**silt**gentle slope
deep ext.*

EMPRESS PROJECT

JULY 6th.

1 - downstream Nisling river
from Victoria Rk.

1A1 - silt sample E 1151
- pan sample E 1152
- float consisting of
gneiss & gty - mica schist
- float quite angular & small
- some rounded float
which is intr.
- gty, plag, K-spar
- very little mafics

1A2 - silt sample E 1153
- pan sample E 1154
- S0Shit
- rx still ang. but some
much more rounded
- some andesite (well rounded)
float
- intr. well rounded.

1Δ3 - silt sample E 1155

- intr. bedded

- very qtz rich

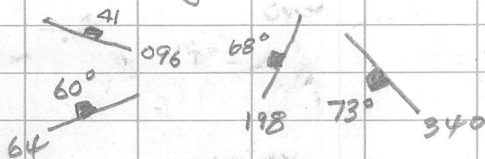
- 1 to 5% biotite

- see sample

- very large qtz veins
of no regular fashion.

- very rusty stain in
places.

- jointing thru both qtz & int.



1Δ3 to 1Δ4

- intr. rx.

- whole mountain seems
to be very qtz rich

1Δ4 - or. - gty muscovite schist

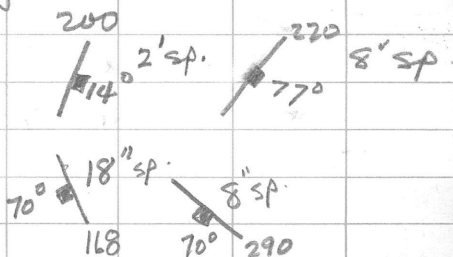
- many gty veins
scattered throughout.

- greiss farther
westward.

- 4" gty veins in greiss
trending 200/12° SE

- most gty veins
controlled by joints

- joints



1Δ5 - org + silt sample E 1156

- soil sample E 1158

- no float or o.c.

- ext overburden

- swampy

1Δ6 - sand + silt sample E 1159
- TR.

- no float or o.c.

1Δ7 - sand + silt sample E 1160

- no float or o.c.

1Δ8 - silt sample E 1161

- no float or o.c.

1Δ9 - end of traverse

- silt sample E 1162

- volc. + granite float

- well rounded

EMPRESS PROJECT

JULY 8th.

TRAVERSE 2 - HOT DOG LK AREA.

2A1 - sample EM1300
taken

- pan sample impossible

EM1300

- org + silt

- $\frac{1}{2}$ cu/s

- M-F flow

- ext + sh.

- flat.

- no o.c. or float.

2A2 - sample EM1301

- silt + org

- pan impossible

- $\frac{1}{2}$ cu/s

- M flow

- ext + sh.

- flat

no o.c. or float

- 2A3 - dry swampy ck bottom
- silt, soil sample EM 1302
- intr. float
- no O.C.

- 2A4 - silt sample EM 1303
- pan sample EM 1304
- 1 cu/s
- Slow
- intr. float
- no O.C.

- 2A5 - silt + org sample EM 1305
- pan sample impossible
- 1 cu/s
- S-M flow
- no float or O.C.

- 2A6 - dry ck bed
- sample EM 1306
- float - intr. volc, meta.
- no outcrop.
- sand, silt, org, soil.

gossan zone - Burn Lake

247 bedding 348/55 NE
soil sample
EM 1307 taken
from gossan

248 - bend at bottom
- gossan soil sample
EM 1308 taken
- rx highly ftd + faulted
in places
- appear to be volc. dikes?
scattered here & there

249 - gossan soil sample
- EM 1309

2510 - gossan soil sample
EM 1310

JULY 9th

STEPHENS LK AREA

12 E + 11 W

TRAVERSE NO 3

301 - silty sand sample
EM 368

- dry ck bed.
- no brk
- intr, volc, met float.
- ext. + deep
- pan sample EM 371

302 - silt sample EM 372

- M flow $2\frac{1}{2}$ c/s
- no brk
- intr, volc, met float
- pan sample EM 373
- ext. + deep.

313 - sandy silt sample

EM 374

- pan sample EM 375

- S - 1 cu/s

- volc, intr., + met float

- no birk

- ext. + deep.

314 - sandy silt sample

EM 376

- pan sample EM 377

- S 2 cu/s

- ext. + deep

- no birk.

- volc, intr., met. float.

315 - silt sample EM 378

- pan " " 379

- M - 8 cu/s

- ext. + deep

- no birk

- met., volc, intr float.

3A6 - silty sand sample
EM 380

- pan sample EM 381
- M - 1 c/s
- no btk
- met, intr, volc, float
- ext. + deep

3A7 - silt sample EM 382

- pan sample EM 383
- M - 6 c/s
- ext. + deep
- no btk
- met, intr, volc float

3A8 - silt sample EM 384

- pan sample EM 385
- S - $1\frac{1}{2}$ c/s
- ext + deep
- volc, intr, met. float
- no btk

3Δ9 - silt sample EM 386
- dry ck
- ext + deep
- volc, intr, met float
- no bik.

3Δ10 - silty sand sample EM 387
- fan sample EM 388
- ext + deep
- volc, intr, met float
- no bik
- M - 1 cu/s.

3Δ11 - silty sand sample EM 389
fan sample 390
- ext + deep
- volc, intr, met float
- no bik
- S 1 cu/s

- 3Δ12 - silty sand sample 391
- pan sample 392
 - ext. + deep
 - no bit
 - volc, intr, sed, met float
 - M - $\frac{1}{2}$ cu/s

- 3Δ13 - silty sand sample EM 393
- pan sample 394
 - ext + deep
 - S - $\frac{1}{2}$ cu/s
 - no bit
 - volc, intr, met float.
 - well rounded

- 3Δ14 - silt sample EM 395
- pan sample EM 396.
 - ext + deep
 - no bit
 - intr, met, volc float.
 - M - $\frac{1}{2}$ cu/s
 - see sample.

3A15 - org. silt sample EM 397
- silt sample EM 398
- TR
- no outcrop or float
- just above swampy area
- ext. + deep.

3A16 - sandy silt sample EM 399
- ext. + deep.
- other CK only swamp.
- no float or outcrop
- S - $\frac{1}{2}$ c/s.

3A17 - silty sandy soil sample
EM 1500

- pan sample 1501
- met, intr, volc float
- no blk
- M - 1 c/s
- ext. + M deep.

3Δ18 - sandy silty soil
sample EM 1502

- pan 1503
- net + intr, vde float
- no bsk
- ext. + M deep
- S flow - 1 cu/s.

3Δ19 - sand silt sample
EM 1504

- pan sample 1505
- net + intr float
- no bsk
- M-flow 1 cu/s
- ext + M deep.

EMPRESS PROJECT

JULY 12/66

TRAVERSE NO. 4 - CKs coming
into Cat, Chap, +
Long lakes.

- 4Δ1 - EM 1311 - silty sand
- EM 1312 - pan sample
 - M flow - TR.
 - ext. + M deep.
 - intr, volc, minor schists
+ gneisses as float.
 - no outcrop.

- 4Δ2 - silty soil sample EM 1313
- no pan.
 - M flow - TR.
 - ext. + M deep.
 - intr, volc, minor schists
+ gneisses as float
 - no outcrop.

- these are Cat Lk samples.

- 4Δ3 - Chap Lk sample
- EM 1314 - silt sample
 - EM 1315 - pan sample
 - no float or blk.
 - ext + M deep overburden
 - S flow - $\frac{1}{2}$ cu/s

Long Lk samples

- 4Δ4 - EM 1316 - sandy silt
- M flow - 1 cu/s
 - ext + deep
 - intr. float
 - no blk

- 4Δ5 - EM 1317 - sandy silt
- slightly org.
 - EM 1318 - pan sample
 - intr. float
 - no blk
 - ext + deep
 - M flow $\frac{1}{2}$ cu/s

- 446 - EM 1319 - sandy silt
 - EM 1320 - pan sample
 - M - $1\frac{1}{4}$ cu/s
 - ext + M deep
 - outcrop - gty - mossy
 - float - intr.

EMPRESS PROJECT

JULY 13/66.

TRAVERSE No 5.

- 5A1 - silty soil sample EM 1321
 - pan sample EM 1322
 - ext. + M deep
 - intr. float
 - S flow - 2 cu/s.
 - no bkr.

- 5A2 - EM 1323 - silty silt sample
 - EM 1324 - pan sample
 - intr float
 - no bkr
 - M flow - $1\frac{1}{2}$ - 2 cu/s
 - ext. + M deep

543 - EM 1325 - silt sample:
- S flow - $1\frac{1}{2}$ cu/s
- ext. + M deep
- no bit.
- intr. float

544 - EM 1326 - sandy silt
- sl. org.
- EM 1327 - pan sample
- M - $1\frac{1}{2}$ - 2 cu/s
- intr. float
- no bit.
- ext. + M deep

545 - EM 1328 - silty silt
- no pan sample.
- M flow $\frac{1}{2}$ - 1 cu/s
- ext. + deep.
- intr. float
- no bit.

546 - EM 1329 - silty silt sample

- no pan
- no blk
- intr float
- ext. + deep
- S flow - 2 cu/s

547 - EM 1330 - silt sample

- EM 1331 - pan sample
- mainly v. fine float
- minor schists + intr
- S flow - $\frac{1}{2}$ cu/s
- ext. + deep
- no blk.

548 - EM 1332 - silty silt

- some org
- EM 1333 - pan sample
- intr float
- no blk
- S flow - $\frac{1}{2}$ cu/s
- ext + deep

5A9 EM 1334 - silt sample
- EM 1335 - pan.
- no float or brk
- ext. + deep.
- M - $\frac{1}{4}$ cu/s.

5A10 EM 1336 - silt
EM 1337 - pan
- M flow $3\frac{1}{2}$ cu/s
- intr. + vol. float
- no brk.
- ext + deep.

5A11 - EM 1338 - silt + org.
- S. flow $\frac{1}{2}$ cu/s
- no brk or float
- swampy
- ext + deep.

5A12 - EM 1339 - sandy silt.
- EM 1340 - pan
- M flow - 5 cu/s
- no brk
- intr. float.

5A13 - Soil, org, silt EM 1341

- no float or outcrop
- S $\frac{1}{4}$ on 5
- ext. + deep

5A14 - Volc ash sample EM 1342

- ext. + deep
- flat
- marshy
- no float or outcrop

5A15 - volc ash EM 1343

- ext + deep
- flat
- marshy
- no float or outcrop

5A16 - EM 1344 - soil

- ext + deep
- flat + marshy
- no fl or o.c.

5A17 - EM 1345 Soil
- flat
- ext + M deep
- int + w/c float
- no o.c.
- cl marshy.

5A18 - EM 1347 - silt
- flat
- TR - S.
- no fl or o.c.
- ext + deep.

5A19 - EM 1346 - silt
- M flow - $1\frac{1}{2}$ cu/s
- ext + deep
- no fl or o.c.

5A20 - EM 1348 - org.
- flat + marshy
- ext + deep
- no fl or o.c.

5A21 - EM 1349 - silt + soil
 EM 1350 - pan
 - M flow - $1\frac{1}{2}$ - 2 c/s
 - int. float
 - some metamorphics
 - ext + M deep
 - flat - gentle
 - no o.c.

5A22 - EM 1351 - soily silt
 - EM 1352 - pan
 - S flow - TR
 - met. float
 - gentle
 - ext + M deep
 - outcrop - gty. musc. schist.

5A23 - EM 1353 - soily silt
 - EM 1354 - pan
 - S flow - TR
 - gentle
 - v. c. + int. fl - no o.c.
 - ext. + deep

5A24 - EM 1355 - sandy silt
- M flow - $1\frac{1}{2}$ - 2 cufs
- intr. float
- no outcrop.
- ext + deep.
- flat

5A25 - EM 1356 - org. silt
- S flow 3 - 4 cufs
- intr. float?
- no o.c.
- ext. + deep
- flat.

5A26 - EM 1357 - volc ash.
- flat + marshy
- no fl or o.c.
- ext + deep.

5A27 - EM 1358 - soil
- no pan. - ext. + M deep.
- intr, met, volc fl.
- met. o.c.
- S - TR. - gentle

5A28 - EM 1359 - vole ash.
- S - $\frac{1}{2}$ cu/s - flat
- swampy
- no fl or o.c.
- ext + deep.

5A29 - EM 1360 - silty soil
- S - $1\frac{1}{2}$ - 2 cu/s
- swampy
- no fl or o.c.
- ext. + deep.

5A30 - EM 1361 - vole ash.
- swampy
- ext + deep.
- no fl or o.c.
- flat.

5A31 - EM 1362 - silty soil
- dry ck bed
- ext + deep
- no o.c.
- intr. + net float.

5032 - EM 1363 - silt

- dry ck bed
- no o.c.
- intr + med float
- flat.

5033 - EM 1364 - soil +
vole and

- swampy
- flat
- no float or o.c.
- ext + deep.

5034 - EM 1365 - silt

- S - $\frac{1}{4}$ cu/s
- flat + swampy
- no fl or o.c.
- ext + deep.

5035 - EM 1366 - silt

- EM 1367 - Pan
- F - 4 cu/s gentle
- ext + M deep
- no bk, intr + vole float

5Δ36 - EM 1368 - silty soil

- EM 1369 - pan

- M - 2 cu/s

- flat - gentle

- ext + M deep

- no o.c., intr + volc fl.

51 - EM 1370 - silty soil

- EM 1371 - pan

- M - F flow - 4 cu/s

- intr + volc fl, no o.c

- ext + M deep

- flat - gentle

5Δ37 - EM 1372 - silt

- EM 1373 - pan

- M flow - 5 cu/s - gentle

- ext + M deep

- no outcrop

- intr, volc fl.

- 5Δ38 - EM 1374 - silty silt
- intr. + vole float
- dry ck.
- ext + M deep - gentle
- no o.c.

EMPRESS PROJECT

JULY /66

TRAVERSE NO. 6

- wrote up Arnes
notes for traverse #14.

EMPRESS

JULY 25/66

TRAVERSE NO. 7 - detail in top
of 10W

7Δ1 - EM 1375 - soil sample

- gty mica schist
- high content of gty
- veinlets up to 2"
- veinlets irregular
- strike + dip of country rk

↘ 85° 126°
jointing - 57° 60°
2' apart.

7Δ2 - appears to be jumble
of rk types (samples 1-5)
- no definite contact
- soil EM 1376.

- small folds found in the
schistose rk
- see samples 6, 7, 8.
- extensive folding.

7Δ3 - EM 1377 - soil

contact? - no

- rks stained reddish over much of area but no mineralization seen.
- in some met. qtz veins trending 46° + dip 25° NW

7Δ4 - EM 1378 - soil

- gneiss? - reddish stain
- brittle foliation
- strike + dip usual.

7Δ5 - EM 1379 - soil

7Δ6 - " 1380 - "

7Δ7 - schistose gneiss.
- sample #9.

7Δ8 - EM 1381 - soil

7Δ9 - EM 1382 - soil

- at str. @ JULY 10 I.F.

- Qty many.

- jointing $\nearrow^{020}_{72}$ / spacing

$\nwarrow^{790}_{130}$ 8"

7A10 - EM 1383 - soil

7A11 - EM 1384 - silt

- " 1385 - pan

- intr. float

- M flow - gentle

- 3 c/s

7A12 - EM 1386 - sandy silt

" 1387 - pan

- 3 c/s - M flow

- gentle

- no fl or blk

EMPRESS

JULY 30

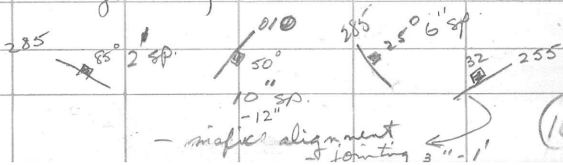
TRAVERSE NO 8 - detail in top
of 10W

8A1 - intr

- high biotite content

- some alignment of mafics

- jointing



8A2 - EM 1388 - silt

- EM 1389 - pan.

- TR. + gentle

- ext + sh

- no fl or o.c.

8A3 - EM 1390 - silty soil

- EM 1391 - soil

- ext + sh

- gentle + $1\frac{1}{2}$ cu/s

- intr fl - no o.c.

8A4 - EM 1392 - silt

- sh. org.

EM 1393 - pan

- ext + M deep.

- gentle - 1 cu/s

- intr fl - no o.c.

8A5 - EM 1394 - silty silt

- M - gentle - $\frac{1}{2}$ cu/s

- intr fl - no o.c.

- ext + M deep.

8A6 - EM 1395 - soil

- at top of hill there is o.c.
of mhr sk

8A7 - EM 1396 - soil

- ext + M deep

- no fl or o.c.

- gentle - M - 2 cuf/s

8A8 EM 1397 - soil

EM 1398 pan

ext + M deep

F - M flow 3 cuf/s gentle

no fl or o.c.

8A9 EM 1399 - soil

Project EMPRESSPhoto 2WCollector E. JACKSONDate 13/6/66Page No. 1

TRAVERSE No. 1	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
or A, B, C Horizon													
E400	12 MOD	ORG. SAND NO HEAVY MINERALS	INT.		SLOPE AND CREEK +186+12	MOD.							
E401	20 M	SILT, GVL. PANNING	INT		SLOPE AND CREEK +110+5	MOD							
E402	50 R	SILT, GVL. NO PAN	INT		"	MOD.							
E403	30 M	SILT, GVL. NO PAN	INT			MOD.							

ELEV. 9900

Project EMPRESS Photo AI1002-230 Collector E. JACKSON Date JUNE 14/66 Page No. 2

	Sample No.	Flow Path Cuscs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			CU	Fe
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 2	E404	150 cuses R	gvl. - boulders panning also					INT. MET.		Flat	Deep + Extensive		
	E405	30 M	gvl. - blds. PAN SAMPLE					INT. MET		Flat	DEEP EXT.		

Project EMPRESS

Photo

A14861-127

Collector

E. JACKSON
D. JARVOS

Date

JUNE 18/66

Page No.

3

TRAVERSE No.	Sample No.	Flow R.M.S. Cusacs.	SED. OR SOIL					GEOLOGY		Gen. Tepeg. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
or A, B, C Horizon					(Sulphides)		LOCATION ↓ GEOCHEM ↓						
3	E484	(M) 10 CUS SEC	SILT - PAN ORG. PRESENT GVL.	INT. MET.		FLAT	EXT. SOME OUTCROP	25'S 16'S					
	E481	15 CUS SEC	SILT - ORG. PRESENT GVL.	INT.		FLAT WASHY	VAST EXT.						
	E482	15 CUS SEC	SILT - PAN SAND - GVL.	INT.		FLAT	VAST EXT.						
	E483	25 CUS SEC	SILT PAN GVL.	INT. MET		FLAT	VAST EXT.						

Project EMPRESS

Photo

A10989

Collector

JARVIS
JACKSON

Date

19/6/66

Page No.

4

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Fluat	Bedrock			Cold	Hot
								(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
			or A, B, C Horizon					(Sulphides)					
<u>4</u>	E485 SILT + PAN	40 cfs (M)	SL. ORG.					INT MET.		HILLY	DEEP EXT		
	E486 SILT + PAN	1 cfs (S)	SILT MOSTLY SAND. SNOW COVERED GROUND					INT MET.		"	"		
	E487 SILT + PAN	8 cfs (M)	CLAY, SANDY ALSO SEDIMENT SAMPLE TAKEN					INT		FLAT		200'S	7 Δ 1
	E488 SILT + PAN	2 cfs (S)	SL. ORG. GVL.					INT		FLAT		50'S	7 E487

Project EMPRESS Photo AID989-245 Collector JARVOS JACKSON Date 19/6/66 Page No. 5

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float Bedrock (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cold	Hot
											Cu, H.M., Cu, Mo, Pb, Zn	
			or A, B, C Horizon									
X	E489 SILT + PAN	15 cfs (M)	GVL BOULDERS, SAND.				INT. MET.		HILLY	FAST SLIGHT		
	E490 SILT + PAN	3 cfs (M)	SANDY. SL. ORG.				INT.		HILLY	FAST		
	E491 SILT + PAN	30 cfs (R)	GVL. SAND				INT.		HILLY	"		
	↑ 25											

65

JARVIS
JACKSON(TUESDAY)
21/6/66

6

Project: EMPRESS Photo: A14960-52 Collector: Date: Page No.

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float Bedrock (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cold Cu, H.M., Cu, Mo, Pb, Zn	Hot
			or A, B, C Horizon									
TRAVERSE No. 5	E492 SILT	40 cusecs. (R)		BLDS, SANDY				INT		HILLY DEEP EXT.		
	E493 PAN	"		1/2 T.B.P. T.B.S.T.				"	"	"		
	E494 SILT	1 cusec. (S)		SANDY, SL ORG.				INT.	"	"		
	E495 SILT	30 cusecs. (R)		RED LITTLE BEDROCK VISIBLE SANDY				INT.	"	"		

Project EMPRESS Photo A14960-52 Collector JACKSON Date 21/6/66 Page No. 1

Project	Photo	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS		
				Gvl.	Sand	Silt	Clay	Org.	or A, B, C Horizon	Float			Bedrock	Cold	Hot
										(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
TRANSVERSE NO. 5		E496 PAN	30 CUSECS (R)	VERY. LITTLE MAG.					INT.		HILLY	EXT. & DEEP			
		E497 SILT	40 CUSECS. (R)	GVL. BLDS. SANDY.					INT.		HILLY	EXT. DEEP			
		E498 PAN	40 CUSECS (R)	HIGH MAG. 1 TBSP.					"						
		E633 SILT	60 CUSECS (R)	SANDY, BLDS. SL. ORG.					INT. (SLIGHT)		"	"			

GEOLOGY NOTES

E. JACKSON

HOT DOG

BON
TRAVERSE

JUNE 16/66

1) SOME MINERALIZATION AT S. TIP
OF BONLAKE. DEEP FRACTURES
EVIDENT. SAMPLE TAKEN (E151)
OUTCROP AZIMUTH 154° . POSSIBLY
GOSSEN AS BROWN STAINS EVIDENT.
APP. $\frac{1}{2}$ MI. FROM S. TIP OF LAKE

2) 1 MI. UPSTREAM FROM E153
LARGE GOSSEN AREA. SAMPLE
TAKEN AT BOTTOM OF STREAM

3) AT SAMPLE AREA OF E154-55,
OUTCROP OF SED. + VOLCANIC
STRUCTURES. KNEISIC STRUCTURE.
POSSIBLY SOME MALACHITE IN VOLCANICS.
2 SAMPLES TAKEN.

4/ CRACKS IN GROUND ON E-SIDE
DOG LAKE. SAMPLE TAKEN
(E 156)

5) LARGE ROCK (GRAVEL) DEPOSIT AT
N.E. TIP DOG LAKE. MOSTLY
MET. + INT. (YELLOW KNEISSIC + RED
GRANITIC) ~~INT.~~

6) SW. TIP HOT LAKE - OUTCROP OF
LIMESTONE - SAMPLE (E 190)

7) N. TIP HOT LAKE. OUTCROP
OF PREVIOUS INTRUSIVE, RED,
GRANITIC ROCK.

June 13/96 E JACKSON
TRAVERSE 1 Geology notes.

1. 600' E of station $\Delta T1$
Outcrop. Biotite gneiss structure
flow structure due poss. to
folding. also assoc. Hornblende.
feld. Dyke. HIGHLY SHEARED.

2. SHEAR PLANES a) $28/17$ S.W.
b) $1003/85$ N.W. EPIDOTE
STRINGERS ASSOC. WITH DYKE

AT BASE OF FIRST HILL CONTACT
BETWEEN POSSIBLY LIMESTONE
AND VOLCANIC. GARNETS IN
SEARN ZONE

R/ CREV. APPROX 2000'
AZIMUTH TO CAMP 350
AZIMUTH TO S. TIP OF GILTANA LAKE 036
BUGGARED UP SEARN ZONE
MAG. DEF. $\frac{1}{2}$ - $1''$ (~ 0)
NOTED RECRYSTALLIZED LIMESTONE
LARGE QUARTZ VEINS CUTTING THROUGH
LIMESTONE

3/ 400' E of limestone cliff SILICA
RICH SEARN ROCK WITH PYRITE
ASSOC.
LINEATION - AZIMUTH 180

- 4/ 2nd PEAK - GRANITIC TYPE
ROCK WEATHERED IN SHEETS.
EROSION POSSIBLY DUE TO
GLACIER ACTION

GRANITIC TYPE DEF. $\frac{1}{8}$ " - 1"

- 5/ Joint in Granitic rock to
running 012° az. dipping 76° NW
joints filled with dyke rock
Sample: dyke no. 2.
Shear joint. Slickensides noted

6/ S. END OF GILTANA LAKE
OUTCROPS GIBBSIC, MET. ROCK

E. J. - TRAVERSE # 2

JUNE 14/60

- 1/ SILT - E404 taken below wooden bridge
- 2/ Small Pit West side of road 2000 ft+ North
of point 1 on road.
- chalcopyrite
 - malachite
 - molybdenite
 - gossan zone in same vicinity
- 3/ West of small Lake, North of Giltana Lake,
just west of the side of the road.
numerous
+ trenches
- Metamorphosed sedimentary - phyllite
associated quartz + siderite veins
with massive pyrite - also some
calcite
- Mag defl. - 3 inches to 5 inches

3/ Cont'd - highly fractured intrusive
extensive trenching on west side
of road

4/ Claim Posts Northern Tip of small
Lake draining from the North into Giltana

JM #3 M.C.

1500 N

1500 R

March 14/66

Geo. Washington

posts 1 and 2 too faded to read

JM #4 M.C.

1500 N

1500 to L

March 14/66

Geo. Washington

Post #1

BEE #4

1500 N

1500 E

April 16/66

G. Whitmore

Post #1

BEE #3

1500 N

1500 W

Post #2

BEE #1

1500 W

Post #2

BEE #2

1500 E

5/ E-405 - panning showed large
percentage of magnetite +
galena.

6/ N.E. Tip of small lake north of Giltana

Intrusive outcrop - very silica rich

possibly aplite - quartz veining
with associated muscovite or pegmatite

TRAVERSE 3 (EMPRESS) E. JACKSON
D. SARVOS

GEOLOGY NOTES

JUNE 18/66

1) MOSTLY GRANITIC INTRUSIVE +
METAMORPHOSSED AT $\Delta 1$ T3.

QUARTZ PRESENT. FLOOD AREA,
MANY NEW STREAMS. SAMPLE ROCK
TAKEN

2) $\Delta 2$ 300' N of $\Delta 1$. QUARTZ
RICH AREA. VOLCANIC ROCK

3) $\Delta 3$ 200' N of $\Delta 2$. INTRUSIVE
GRANITIC. CALCITE DEPOSITS
($\Delta 4$)

$\Delta 5$ SOUTH END EAST SIDE OF
LAKE - METAMORPHIC - STRONG
QUARTZ

$\Delta 6$. S.W. TIP OF LAKE. ($\Delta 5$) 200'
N of $\Delta 5$. RICH DEPOSIT OF
MICA LIKE ROCK. SHINY SILVER
PLATE LIKE.

TRAVERSE 4

E. JACKSON
D. SARVOS
JUNE 19/66

GEOLOGY NOTES.

1) $\Delta 1$, QUARTZ PRESENT. MICA LIKE MINERAL FOUND YESTERDAY. QUARTZ AZIMUTH $126/54$ NE. SIKITE SCHIST

2) ABOUT 700' N. OF CLAIM POSTS, MICA LIKE MINERAL FOUND PLentiful IN LARGE ROCK. ALSO SOME QUARTZ & GREEN (POSSIBLY EPIDOTE)

3) CLAIM POSTS: ($\Delta 2$)

POST #1.

JUNE #1

1500' S.

1500' R.

8/6/66

G. THOM.

POST #1

JUNE #2

1500' S.

1500' L

8/6/66

G. THOM

AZIMUTH 115° TO JUNE GROUP.

TRAVERSE 5

D. JARVIS

JUNE 21/66

GEOLOGY NOTES

E. JACKSON

- 1) E493 PAN HAD MODERATE MAG. CONTENT
(SOUTH FORK) NORTH FORK - LOW MAG.
CONTENT. VERY LITTLE BEDROCK.
- 2) E498 PAN - HIGH MAG. CONTENT.
VERY GREY SOIL NEARBY.
UPSTREAM, SOAPY SUDS ARE
NUMEROUS.
- 3) $\Delta 1$ QUARTZ SCHISTITE TYPE
ROCK. LOCATION - 200' DOWNSTREAM
FROM E 498. SOME QUARTZ
PRESENT. STRIKE & DIP 182/54
SAMPLES TAKEN (002)
- 4) PAN SAMPLE E634 - HIGH
MAG. CONTENT. MAG. VISIBLE
IN LARGE AMOUNTS AT EDGE OF
WATER. (NORTH SIDE)
- 3) $\Delta 2$ - $\frac{1}{4}$ MI. FROM LAKE. OUTCROP
OF QUARTZ SILLICITE SCHIST.
SOFT, JAGGED ROCKS. SAMPLE TAKEN
NO MAG. DEF. ON S. SIDE, OUTCROP
OF POSSIBLY LIMESTONE VISIBLE.
BROWN STAINING.

INITIAL MILEAGE - 88.3

 Project EMPRESS Photo (7W) Collector E. JACKSON Date 12/4/66 Page No. 31

TRAVERSE No. Road A1541/1111

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
		or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
60, m E424	60, m	gvl.					mxd, intr + MET.		Flat	Deep Ext.		
3 mi. N of Hopkins E425	3 mi. N of Hopkins	panning also					SED. SILT		FLAT	DEEP EXT.		
1 mi. N of E424	1 mi. N of E424	SED. SILT					INT, MET		FLAT	DEEP EXT.		
E426	3 cfs	SILT					MET.		FLAT	DEEP EXT.		
1/2 MILE UP CREEK	1/2 MILE UP CREEK	PANNING, ORG. PRESENT					INT.		FLAT	DEEP EXT.		
E427	125 cfs	SILT					INT		FLAT	DEEP EXT.		
2 mi. TRB.	2 mi. TRB.	PANNING - LOW MMS. PINK GARNET					MET		FLAT	DEEP EXT.		

CANYON

Project

-Photo.

Collector E. JACKSON

Date 12/6/66

Page No

Sample
No.

Flow
M.S.
Cuscs.

SED. OR SOIL

GEOLOGY

Float) Bedrock
(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)

ANALYTICAL RESULTS

Cold	Hot
Cu, H.M., Cu, Mo, Pb, Zn	

Gvl.	Sand	Silt	Clay	Org.
er A, B, C				
Horizon				

Gen. Topog.
Slope Angle

Approx. Depth
& Extent of
Overburden

E 428
SADTRIZ

32 of 32

SILTY SAND

1.07.
MET

Loc Geschen

TRAVERSE No.

~~CONFIDENTIAL~~

5

organic - st. org.

1 CF3

~~1/2 + sp~~

IVC an 5M

~~w/chain~~

60

Project **EMPRESS** Photo **7W A15739-75** Collector **JACKSON** Date **23/6/66** Page No. **8**

TRAVERSE No. 6	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS			
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock			Cold	Hot		
														or A, B, C Horizon	Cu, H.M., Cu, Mo, Pb, Zn
	E635 SILT	16 cusecs (M)		SAND				SL ORG.	INT.		FLAT	DEEP EXT	7W 136° 55' 61° 27'		
	E636 SILT	20 cusecs (M)		ORG. SAND					INT.		"	DEEP EXT	7W		
	E637 SILT	1 cusec (S)		NO BEDROCK OR FLOAT					-		"	"	7W		
	E638 SILT	35 cusecs (M)		ORG. SANDY.					INT.		"	"	7W		

7W

Project EMPRESS Photo A15739-75 Collector JACKSON Date 23/6/66 Page No. 9

TRAVERSE No. <u>6</u>	Sample No.	Flow R.A.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			GVL	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
LOC.													
	E639 SILT	80 cusecs (R)	SAND, GVL.					INT MET		FLAT	FAST EXT	7W	
	E641 SILT	2 cusecs (S)	ORG. CLAY					—		FLAT MARSHY	DEEP EXT	7W	
	E642 SILT	1 cusec (M)	ORG CLAY					—		FLAT MARSHY	"	7W	
	E643 SILT	2 cusecs (S)	ORG. SANDY					INT MET		FLAT " MARSHY	"	7W	

7W

Project EMPRESS

Photo

A15739-76

Collector

JACKSON

Date

8/6/66

Page No.

9

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.				Cold	Hot
			or A, B, C Horizon								Cu, H.M., Cu, Mo, Pb, Zn	
											LOR.	
TRAVERSE No. <u>6</u>	E644 SILT	3 cusecs (S)	org. clay				int met		flat muddy	deep ext.	7W	
	E645 SILT	45 cusecs (R)	org. clay				int		flat	deep ext.	7W	
	E646 SILT	50 cusecs (R)	gol. sandy.				int met.		hilly	"	7W	
	E647 SILT	8 cusecs (M)	org. clay.				int.		flat	"	7W	

Project EMPRESS

Photo

A15739-75

Collector

JACKSON

Date _____

23/6/66

Page No.

10

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS		
			Gravel	Sand	Silt	Clay	Org.	or A, B, C Horizon	Float (I-tr., Volc., Sed.) (Met., Alk., Fract.) (Sulphides)			Bedrock	Cold Cu, H.M., Cu, Mo, Pb, Zn	Hot
5	E648 SILT	70 cusecs R)	SL. ORG SANDY	INT MET.		HILLY MARSH	DEEP							
	E649 PAN	-	MED. MAG. SANDY K T SSP	"										

Project EMPRESS

Photo 4W

Collector JACKSON

(SUN)
Date 26/6/66

Page No. 14

7
TRAVERSE NO.

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
		or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
E599 SOIL.	< 1 cu. sec. (S)	org.					NO FLOAT OR BEDROCK		HILLY	DEEP EXT		
E600 SILT	25 cu. sec. (M)	org, sandy.					vol. int.		FLAT	DEEP EXT		
E601 PAN	25 cu. sec. (M)	1 to 5 p.					vol. int.		FLAT	DEEP EXT		

N↑

26/6/66

E. JACKSON

TRAVERSE 6.

S. EAST OF COPPER LAKE



Project EMPRESS

Photo

1 E

Collector

JACKSON

Date

08/6/66

Page No.

12

TRAVERSE NO. <u>8</u>	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
								(Sulphides)					
	E602 CLAY	1 cusec (S)	sl. org.					vol. some banding		HILLY	DEEP EXT		
	E603 PAN	1 cusec (S)	sandy. 1/2 TBSP.					"		"	DEEP EXT		
	E604 SILT	5 cusec (M)	GVL BLDS. SANDY					INT. VOL.	BANDING	"	"		
	E605 PAN	5 cusec (M)	SOME MAG. 1/2 TBSP.					INT VOL		"	"		

Project

EMPRESS

Photo

1E

Collector

JACKSON

Date

28/6/66

Page No.

13

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float Bedrock (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cold	Hot
							or A, B, C Horizon				Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 00	E606 SILT	2cusec (M)		sandy. sl. org.				NO BEDROCK	HILLY	DEEP EXT		
	E607 PAN	2cusec (M)		sl. mag. 1/4 TSP.				-	"	"		
	E608 SILT	3cusec (S)		sandy, sl. org.				-	flat			
	E609 SILT	45cusec (R)		gol. blds, sandy				int. mes.	hilly	green zone		

Project EMPRESS Photo 1E Collector JACKSON Date 22/6/66 Page No. 14

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cold	Hot
							or A, B, C Horizon				Cu, H.M., Cu, Mo, Pb, Zn	
80	E610 PAN	45 cm/sec (R)		FAIR MAG. 1 TSP.				INT. MET.		hilly	green zone limestone	
	E611 SILT	50 cm/sec (R)		SANDY GUL. B.C.D.S.				VOL. MET.		"	"	"
	E612 PAN	20 cm/sec (R)		SL. MAG.				"		"	"	"

TRAVERSE 8
MAP 1E - SIFTON RANGE
GEOLOGY NOTES

E. JACKSON
JUNE 28/66

- 1) MOSTLY VOLCANIC. SOME BANDING;
EVIDENT. eg. $\Delta 1$ SAMPLE
- 2) AT $\Delta 3$, GOSSEN ZONE. SAMPLE
TAKEN
- 3) AT $\Delta 4$ LARGE GOSSEN ZONE
POSSIBLY LIMESTONE NEXT TO
IT. SAMPLE TAKEN

REINSBARKEN
SACKSON

TRAVERSE 9

JUNE 29/66

N.E. CORNER COPPER LAKE

GEOLOGY NOTES.

- 1) APPROX. 500 YD. FROM N.E. TIP
COPPER, GRANITIC OUTCROP.
SAMPLE TAKEN (1) MAG. DEF 2-3".
MAG. CRYSTALS VISIBLE

POSS. BLY VOLCANIC XENOLITH
SIMILAR TO VOLCANIC BRECCIA
ON LITTLE MTN.

- 2) 200 YD. FROM N.E. TIP COPPER
LK. OUTCROP PURPLISH-GREEN
VOLCANIC BRECCIA.

Project COMPRESS Photo TE Collector JACKSON Date 29/6/66 Page No. 15

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS		
		Gvl.	Sand	Silt	Clay	Org.	<u>Float</u>			<u>Bedrock</u>	Cold	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cu, H.A., Cu, Mo, Pb, Zn		
or A, B, C Horizon												
TRAVERSE TO HILLS AT N.E. TIP												
COPPER LAKE. QUARTZ MONZONITE												
PRESENT. 2 SAMPLES TAKEN.												

Project

EMPRESS

Photo

1W

Collector

JACKSON

Date

1/7/66

Page No.

16

Project	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
or A, B, C Horizon													
TRAVERSE No. 10	EM 613 SILT	25 cusec (M)	gol blas. sandy.					int. med.		flat	deep ext		
	EM 614 PAN	25 cusec (M)	mod. mag. 1/2 TSS					int. med.		flat	,		
	EM 615 SILT	1 cusec (S)	sandy sl. org.					int.		"	"		
	EM 616 SILT	20 cusec (M)	sandy sl. org.					int.		"	,		

Project EMPRESS Photo 1 N Collector G. JACKSON Date 1/7/66 Page No. 17

TRAVERSE No.	Project	Photo	Collector	GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS						
	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock	Cold	Hot	Cu, H.M., Cu, Mo, Pb, Zn		
			Gvl.	Sand	Silt								Clay	Org.
10	EM 617 PAN	20 cusecs (M)	mod. mag. 1/4 TSP					int.		flat	deep cut			
	EM 618 SILE	2 cusecs (S)	sl. sig. NO PAN					-		"	"			
	EM 619 SILE	3 cusecs (S)	sandy clay					-		"	"			
	EM 620 PAN	3 cusecs (S)	mod. mag. 1/4 TSP					-		"	"			

Project EMPRESS Photo 1W Collector JACKSON Date 1/7/66 Page No. 18

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
10	EM 621 SILT	DRY		SANDY				—		FLAT	deep ext.		
	EM 622 SILT	3 cusecs (M)		clay, gnl. blk.				int.		hilly	outcrop fractured (granite)		
	EM 1200 PAN	"		sl. mag. 1/5 TSP				"		"	"		
	EM 201 SILT	5 cusecs (M)		sandy, gnl.				vol. med.		"	deep ext.		

Project

EMPRESS

Photo

86

Collector

JACKSON

Date

1/7/66

Page No.

19

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock			Cold Cu, H.M., Cu, Mo, Pb, Zn	Hot
TRAVERSE No. 10	E1202 PAN	5 cusecs (M)	sl. mag.	1/4 TSP.				vol. met.		hilly	deep est.		
	EM 1203 SILT	20 cusecs (M)	sandy. gvl.					vol. int. met.		"	"		
	EM 1204 PAN	"	sl. mag.	1/5 TSP.				"		"	"		
	E1205 SILT	1 cusec (S)	sl. mag. clay.					-		"	"		

TRAVERSE 10
(IN) NORDENSKIL RIVER
GEOLOGY NOTES

E. JACKSON
JULY 1/66

1) AT 41, LARGE OUTCROP OF
QUARTZ RICH INTRUSIVES
SAMPLE TAKEN - DIP & STRIKE
 $205^{\circ}/42^{\circ}$ NE.

2) AT 43 GORGE LINED WITH
VOLCANIC ROCK. SOME QUARTZ
PRESENT. SAMPLE TAKEN.
DIP & STRIKE $158^{\circ}/16^{\circ}$ NE

Project EMPRESS Photo 8E Collector JACKSON Date 2/7/66 Page No. 20

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
								(Culphides)					
11	EM 1207 CLAY	MARSH	ORG. CLAY					-		FLAT	DEEP EXT		
	EM 1208 SILT	25 cusecs (M)	sandy, gull					int vol.		FLAT	"		
	EM 1209 CLAY	MARSH	ORG. CLAY					-		FLAT	"		
	EM 1210 CLAY	dry	sl. org clay					-		hilly	"		

Project EMPRESS Photo 1E Collector JACKSON Date 2/7/66 Page No. 21

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
			or A, B, C Horizon										
TRAVERSE No. 11	EM 1211 CLAY	dry	slog. clay					-		flat	deep		
	EM 1212 SILT	dense (S)	sandy.					-		flat	"		
	EM 1213 PAN	dense (S)	med. mag. to TSP.					-		flat	"		
	EM												

Project

EMPRESS

Photo

8N

Collector

JACKSON

Date

2/7/66

Page No.

22

Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

Gvl. Sand Silt Clay Org.
or A, B, C
Horizon

GEOLOGY

Float Bedrock
(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)

Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold

Hot

Cu, H.M., Cu, Mo, Pb, Zn

TRAVERSE No. 12

EM
12142 cusecs
(S)

ORB CLAY

vol.
int.

flat deep

EM

1215

15 cusecs
(M)sandy
grd

"

"

"

EM

1216

10 cusecs
(M)sandy org.
grdmed
med.

EM

1217

"

sl. mag.

"

"

"

Project EMPRESS

Photo SW

Collector JACKSON

Date 3/7/66

Page No. 23

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
12	EM 1218 SILE	1 cusec (S)		org. sandy			int		flat	deep ent			
	EM 1219 SILE	< 1 cusec (S)		sl. org.			-		hilly	deep ent			
	EM 1220 SILE	2 cusec (M)		sandy.			ent		flat	"			
	EM 1221 PAN	2 cusec (M)		high mag.			ent		flat	"			

Project ADDRESSPhoto SWCollector JACKSONDate 3/7/66Page No. 24

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
								(Sulphides)					
			or A, B, C Horizon										
12	EM 1223 SILT	17 cusecs (R)	ORG.	GVL				vol. med.		flat	deep		
	EM 1224 PAN	"	sl. mag.	1/3 TSP.				"		flat	"		
	EM 1225 SILT	1 cusecs (S)	clay bottom					—		flat	deep ext		
	EM 1227 SILT	25 cusecs (M)	clay bottom					—		flat	"		

Project IMPRESS

Photo 8W

Collector JACKSON

Date

3/7/66

Page No.

25

Sample
No.Flow
R.M.S.
Cusars.

SED. OR SOIL

Gvl.

Sand

Silt

Clay

Org.

or A, B, C
Horizon

GEOLOGY

Float

Bedrock

(Intr., Volc., Sed.)

(Met., Alt., Fract.)

(Sulphides)

Gen. Topog.
Slope AngleApprox. Depth
& Extent of
OverburdenANALYTICAL RESULTS
Cold Hot
Cu, H.M., Cu, Mo, Pb, Zn

TRAVERSE No. 12

EM
1228
SILT40 cm
(M)sandy,
sl. org.

int.

EM
1229
PAN

"

very sl. mag.
1/5 TSP

"

flat

deep
extEM
1230
SILT1 cm
(S)

org. sandy

vol.
int.

"

deep
extEM
1231
PAN

"

very sl. mag
1/5 TSP.

"

hilly

deep
ext

"

"

Project EMPRESS Photo SW Collector JACKSON Date 3/7/66 Page No. 26

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 12	EM 1232 SILT	15 cusecs (M)	sl. org.	sandy				vol.	int	flat	deep		
	EM 1233 PAN	"	mod. mag	1/4 TSP				"		"	"		
	EM 1234 SILT	20 cusecs (S)	d. org.					int		"	"		
	EM 1235 PAN	"	sl. mag.					"		"	"		

Project EMPRESS Photo SW Collector JACKSON Date 3/7/66 Page No. 27

TRAVERSE No. <u>12</u>	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
								(Sulphides)					
	EM 1236 SILT	11 cusecs (S)	sl. org.							flat	deep cut		
	EM 1237 SILT	20 cusecs (M)	SL ORG.					vol. met		flat	"		
	EM 1238 IAN	"	SL. MAG.					"		"	"		
	EM 1239 SILT	5 cusecs (M)	sl. org. gol.					vol. int		"	"		

Project

EMPRESS

Photo

15

Collector

JACKSON

Date

3/5/66

Page No.

28

Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

Gvl.

Sand

Silt

Clay

Org.

or A, B, C
Horizon

GEOLOGY

FloatBedrock(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold

Hot

Cu, H.M., Cu, Mo, Pb, Zn

TRAVERSE No. 12

EM
1240
SILT10 cusecs
(M)

SL ORG

vol
intflat deep
catEM
1241
SILT

15 cusecs

ORG
SANDYvol
int

11

1

Project EMPRESS Photo 11W 11E Collector E. JACKSON Date 6/7/66 Page No. 29

Project

Photo

Collector

Date

Page No.

TRAVERSE No. 13	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.)	(Met., Alt., Fract.)				
or A, B, C Horizon													
	EM 1242 SOIL	100000 (S)		CLAY				mainly		flat	deep ext.	61°35'	
	EM 1243 SOIL	MARSH 110 FLOW		SL. ORG. SILT				-		flat	deep ext.	137°75'	
	EM 1244 SOIL	MARSH 105000		SL. ORG. CLAY				-		flat	deep ext.	61°36'	
	EM 1245 SOIL	100000 (S)		ORG. CLAY RED STAINING IN CLAY				-		flat	deep ext.	137°45'	

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11W11E

Collector

E. JACKSON

Date

6/7/66

Page No.

30

Sample
No.Flow
D.A.S.
Cusecs.

SED. OR SOIL

Gvl. Sand Silt Clay Org.
or A, B, C
Horizon

GEOLOGY

Float Bedrock
(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)

Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS
Gold Iron
Cu, H.M., Cu, Mo, Pb, Zn

TRAVERSE No. 13

EM
1246
SILT200600
(M)

sl. org. silt

met.
int

flat

deep
cutEM
1247
PAN

"

little mag.
1/4 TSP

"

"

"

"

61°40'S

EM
1248
SILTMARSH
NO
FLOWORG.
SILT
CLAY

-

"

"

137°6.5'

EM
1249
SILT200600
(M)SANDY
SL ORG.

VOL.

INT.

"

"

Project

EMPRESS

Photo

HE 11 W

Collector

JACKSON

Date

0/7/66

Page No.

31

TRAVERSE No 13

Sample No.	Flow R.A.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cold	Hot
										Cu, H.M., Cu, Mo, Pb, Zn	
			or A, D, C Horizon								
EM 1250 PMD	700000 (M)	SC. MAG.					100 INT	flat	deep	61° 40.5'	
EM 1051 SILT	100000 (M)	SC. ORG.					-	'	'	37° 6.5'	
EM 1250 SILT	100000 (M)	sl. sandy silt.					-	flat	deep	61° 36.5'	
										137° 14.5'	

Project EMPRESS Photo 134 Collector J. JACKSON Date 8/7/66 Page No. 32

TRAVERSE No. 14	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Grl.	Sand	Silt	Clay	Org.	Floot	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
								(Sulphides)					
	EM 1253 SILT	80 cusec (M)	VERY SL ORG. SED. SILT					VOL. MET		FLAT MARSHY	DEEP MOD		
	EM 1254 PAN	80 cusec (M)	MOD. MAG. 1/4 TSP					"		"	"		
	EM 1255 SILT	50 cusec (M)	sl. sandy. sed.					vol. med.		flat	deep mod.		
	EM 1256 PAN	"	mod. mag. 1/4 TSP					"		"	"		

Project EMPRESS Photo 13W Collector JACKSON Date 8/7/66 Page No. 33

TRAVERSE No. <u>14</u>	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Culphides)			Cold Cu, H.M., Cu, Mo, Pb, Zn	Hot
	EM 1257 SOIL	2 cusecs (S)		sl. sandy, mg. soil.					flat	deep er.		
	EM 1258 SOIL	2 cusecs (M)		ORG. SL. SANDY SDIL SAND BOTTOM, RED SOIL.					MARSHY FLAT	"		
	EM 1259 PAN	"		GOOD MAG. CONTENT 1/4 TSP.					"	"		
	EM 1260 SILT	60 cusecs (M)		SL. ORG. SANDY SILT.				VOL. MET INT.	FLAT	deep er.		

Project EMPRESS Photo 13W Collector E. JACKSON Date 8/7/66 Page No. 34

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS		
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot	
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Cu, H.M., Cu, Mo, Pb, Zn					
														or A, B, C Horizon
14	EM 1261 PAN	50 cusecs (M)						BONE MAG RED GARNETS KTSF	VOL INT MET		flat	deep cut.		
	EM 1262 SILT	SWAMP NO FLOW						ORG. SED.	—		flat	deep cut.		
	EM 1263 SOIL	25 cusecs (M)						sandy shog soil	marshy no flow		1	11		
	EM 1264 SILT	10 cusecs (M)						org. soil.	marshy		1	1		

Project IMPRESS Photo 11 W 11 E Collector E. JACKSON Date 8/7/64 Page No. 35

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.				Cold	Hot
			or A, B, C Horizon								Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 14 T. 15	EM 1065 SILT	12 cusecs (S)	SL ORG. SANDY SILT				-		hilly	deep		
	EM 1266 SILT	10 cusecs (M)	SL ORG. CLAY SED				-		flat	deep		
	EM 1267 SILT	3 cusecs (M)	sl. org. clay silt				int.		hilly marshy	deep int.		
	EM 1268 PAN	"	sl. mar. 1/4 TSP				"		"	"		

(NE)

437
436Project EMPRESS

Photo

11364-435

Collector

E. JACKSON

Date

10/7/66

Page No.

36

TRAVERSE No. 15	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Date	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock	Gen. Topog. Slope Angle		
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn
	EM 1269 CLAY	—	sl. org. clay					int.		hilly.	deep ext.	
	EM 1270 SILT	small (M)	sl. org. clay silt (SED)					int vol.		"	"	
	EM 1271 PAN	"	good mag. content K ₂ TSF					"		"	STREAM AZIMUTH 178° (UPST. REAM)	
	EM 1272 SOIL	small (M)	sl. org. sl. sandy soil					int		hilly	deep ext.	

(NE)

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11364-436

Collector

E. JACKSON

Date

10/17/66

Page No.

37

	Sample No.	Flow R.M.S. Cussets.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cold	Hot
			or A, B, C Horizon								Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 15	EM 1273 DAN	Scarc (M)	sl. mag.					int.	hilly	deep end		
	EM 1274 SOIL NO. 2A	4 cuss (M)	org. sl sandy clay					few int blds.	hilly			
	EM 1275 SILT	2 cuss (S)	sl. org sandy red. sect.					no float bedrock	"	"		
	EM 1276 SILT	2 cuss (S)	very sl. org sl. sandy sed.					vol, int banding variable	flat	"		

very little float.

(11E) 437
436Project EMPRESS

Photo

11364-435

Collector

E. JACKSON

Date

10/7/66

Page No.

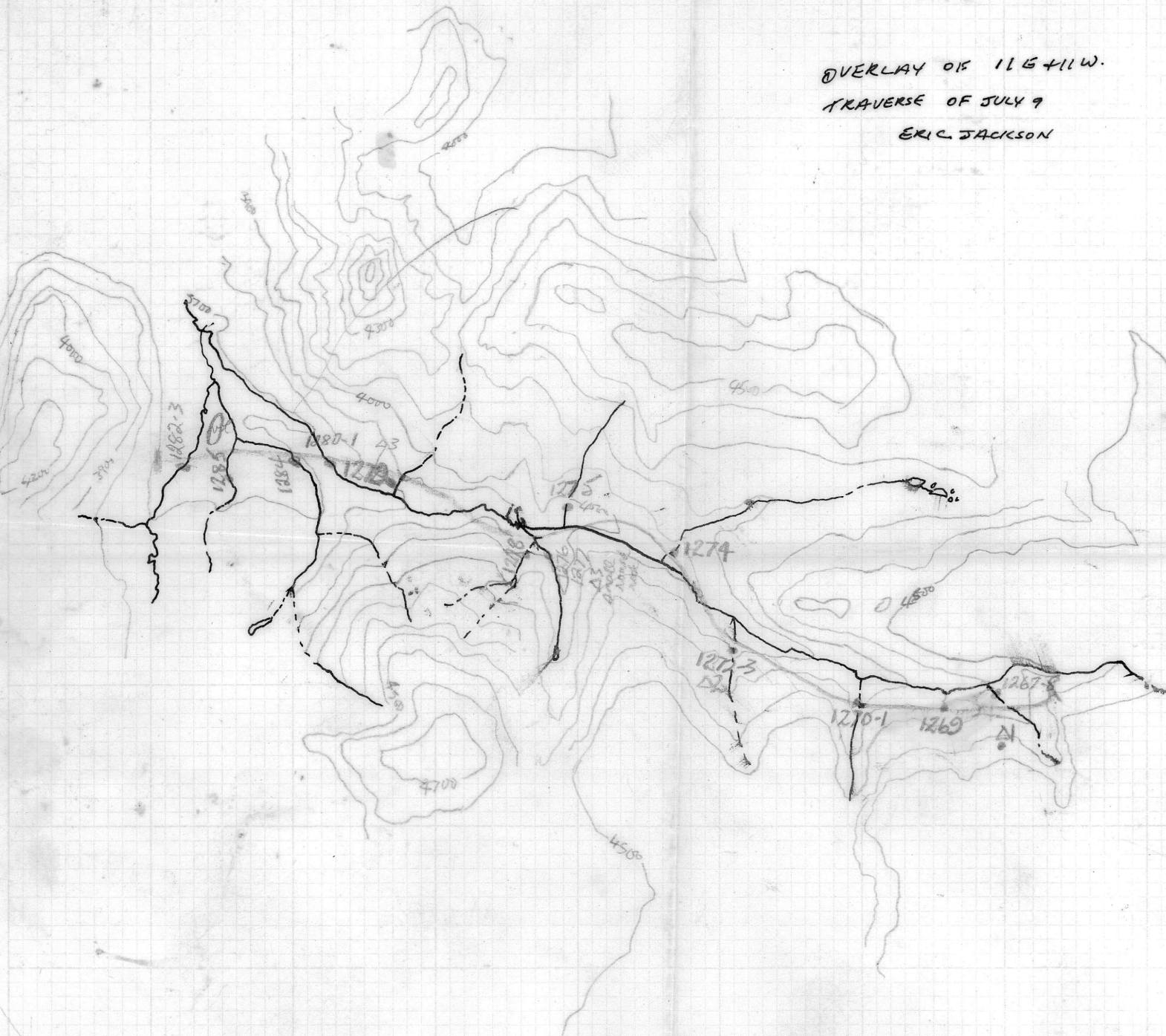
38

	Sample No.	Flow R.M.S. Cores.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gy.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			of A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 15	EM 1277 PAN	2 anal (S)	good mag. content KTS P					vol. int. very little float bedrock		flat	deep end.		
	1278 SILT	1 anal (S)	sandy, sl. org. sed.					no float bedrock		"	"		
	EM 1279 SOIL	DRY	very sl. org. soil.					-		flat	"		
	EM 1280 SILT	15 anal (M)	sl. org. clay sed.					med. int.		"	"		

(11E) 437
436Project EMPRESS Photo 11364-435 Collector G. JACKSON Date 10/1/66 Page No. 39

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	or A, B, C Horizon			Cold	Hot
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cu, H.M., Cu, Mo, Pb, Zn	
11	EM 1281 PAN	15 cusec (m)	mod. mag. content.	mod. int.					flat	deep cut.		
	EM 1282 SILT	20 cusec (m)	very sl. org. sandy silt	int					flat	"		
	EM 1283 PAN	"	mod. mag. 1/4 TSP	"					"	"		
	EM 1284 SOIL	DRY	SL SANDY CLAY	int med.					"	"		

OVERLAY OF 115+11W.
TRAVERSE OF JULY 9
ERIC JACKSON



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EMPRESS

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NE 2W

Collector

D. GUOTRIE
C. JACKSON

Date

10/5/66

Page No.

40

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	or A, B, C Horizon			Cold	Hot
											Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 15, 16	EM 1285 SOIL	DRY NO FLOW		SL. SANDY CLAY					flat	deep est		
	EM 1527 SILT	Samec (M)		sl. org. clay silt			vol. mud		flat	deep outcrop nearby		
	EM 1528 PAN	"		sl. mag 1/4 TSP			"		"	" "		
	EM 1529 SILT	samec (M)		sandy silt			red float		"	on trap nearby deep overburden		

D. GOODRICH

Project EMPRESSPhoto 2WCollector E. JACKSONDate 11/7/66Page No. 41

TRAVERSE No. <u>16</u>	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	<u>Floot</u>	<u>Bedrock</u>			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, HMA, Cu, Mo, Pb, Zn	
								(Sulphides)					
	EM 1530 FAN	4 cusecs (M)	some mag.					int floot		flat	deep outcrop nearby		
	EM SILT 1531	5 cusecs (M)	sl. sandy clay silt.					int floot		"	"		
	EM 1532 FAN	"	mod. mag. content some garnets.					"		flat	"		
	EM SILT 1533	10 cusecs (M)	slog sandy silt					int met. floot		flat	outcrop nearby against 7260°		

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2W

Collector

E. JACKSON

Date

11/7/66

Page No.

42TRAVERSE No. 16

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cu	Fe
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Cu, H.M., Cu, Mo, Pb, Zn				
or A, B, C Horizon												
EM 1534 DAN	10 cusec (m)	clod of mag. reddish 1/2 TSP					met. int		flat	deep outcrop nearly.		
EM 1535 SOIL NO PAN	DRY	sl sandy. org. clay					no float bedrock		"	deep end.		
EM 1536 SILT NO PAN	10 cusec	clay silt					no float bedrock		"	"		
EM SILT 1537 (M)	2 cusec	clay silt.					no float bedrock	int. zone	hilly	deep some outcrop nearly		

Project EMPRESSPhoto 1WCollector R. GOODRICH
E. JACKSONDate 11/7/66Page No. 43

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Gold	Iron
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. <u>16</u>	EM 1538 PAN	2 cusecs (m)	sh. mag. arg. silt					no float		hilly	deep	some outcrop nearby.	
	EM 1539 SILT	1 cusec (s)	sl. arg. clay silt					no float		flat	deep	some outcrop.	
	EM 1540 SOIL	DRY NO FLOW	SANDY SLURRY CLAY					—		"	"		
	EM 1541 SILT	2 cusecs (m)	clay silt					met	int.	hilly	deep	some outcrop.	

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1W

Collector

D. GOODRICH
E. JACKSON

Date

11/7/66

Page No.

44

Sample
No.Flow
R.M.S.
Cuscs.

SED. OR SOIL

Gvl.

Sand

Silt

Clay

Org.

at A, B, C
Horizon

GEOLOGY

Float Bedrock

(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold

Hot

Cu, H.M., Cu, Mo, Pb, Zn

TRAVERSE No. 10

EM
1542
PAN2 small
(M)good mag.
contact
LTSPint
met

ully

deep
outcrop nearbyEM
1543
SILT5 small
(S)sl. org. clay
silt.

int.

"

"

EM
1544
SILT5 small
(M)sl. org. clay
silt

no float

"

deep
ext.EM
1545
PAN5 small
(M)good mag. contact
LTSP

"

"

"

DEODRICH

E. JACKSON

Project EMPRESSPhoto 2E

Collector

Date

11/7/66

Page No.

45

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. <u>16</u>	EM 1546 S.C.T.	15 cusecs (M)	clay silt.					int		plat	deep		
	EM 1547 PAN	15 cusecs (M)	good mag. content $\frac{1}{2}$ TSP.					"		"	"		
	EM 1548 SILT	8 cusecs (M)	sandy silt.					int.		"	deep		
	EM 1549 PAN	8 cusecs (M)	mod. mag. content.					int		"	"		

Project EMPRESS Photo 2E Collector D. GOODRICH
E. JACKSON Date 11/7/66 Page No. 46

	Sample No.	Flow R.M.S. Cuscs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. <u>16</u>	EM 1550 SILT	same (M)	clay silt.					—		flat	deep cut.		
	EM 1551 PAN	"	mod. mag. 1/4 TSP					—		"	"		
	EM 1552 SILT	2mm (M)	CLAY SILT					—		"	"		
	EM 1553 PAN	"	mod. mag. 1/2 content TSP					—		"	"		

Project EMPRESS Photo 2E Collector D. GOODRICH
E. JACKSON Date 11/7/66 Page No. 47

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.				Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 16	EM 1554 SILT	10 cusecs (M)	sandy. sl org. clay silt					int vol		flat deep ext		
	EM 1555 PAN	10 cusecs (M)	good mag content					"		"		
	EM 1556	20 cusecs (M)	sandy. clay litt.					int vol.		"		
	EM 1557 PAN	"	mod. mag. content E.T.S.R.					"		"		

Project

EXPRESS

Photo

2E

Collector

D. GOODRICH
E. JACKSON

Date

11/7/66

Page No.

48

Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

GEOLOGY

Float Bedrock

(Intr., Volc., Sed.)
(Met., All., Fract.)
(Sulphides)Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold

Hot

Cu, H.M., Cu, Mo, Pb, Zn

Gvl.
Sand Silt Clay Org.
or A, B, C
Horizon

TRAVERSE No. 16

EM
1558
SILT2 cusecs
(S)

clay silt.

—

flat deep
ext.EM
1559
SILT5 cusecs
(M)

clay silt

—

flat

EM
1560
PAN

"

good neg.

—

EM
1561
SILT2 cusecs
(S)clay silt
sl. sandy

—

"

Project

EMPRESS

Photo

26, 76

Collector

D. GOODRICH
E. JACKSON

Date

12/7/66

Page No.

50

Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

Gvl.

Sand

Silt

Clay

Org.

or A, B, C
Horizon

GEOLOGY

Float	Bedrock
(Intr., Volc., Sed.)	(Met., Alt., Fract.)
(Sulphides)	

Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold	Hot
Cu, H.M., Cu, Mo, Pb, Zn	

EM

EM

1566
SOILDRY
MARSH

ORG. CLAY.

-

FLAT

DEEP
EXT

EM

1567
SILT
1568
PANSmall
(M)sandy sl. org. silt
sl. mag.int.
gol. bld.

Hilly

gauge.
m. no.
nearby.

EM

1569
PANSmall
Hsandy silt
some mag.int.
gol. bottom

"

"

EM

1571
WOPAN1 ch. sec
(S)sandy sl. org.
siltint.
gol.
blds

Hilly

no outcrop
nearby
Rocky hnts

TRAVERSE No. 17

Project EMPRESSPhoto 7ECollector JACKSON
GOODRICHDate 12/7/66Page No. 51

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Vole., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
[	EM 157250	0.5 cusecs	sl. org. sl. sandy silt.					int. met.		hilly	deep		
	157300	(S)	some mag. present.								ext.		
	EM 1574	0.5 cusecs	sl. sandy silt					int.			deep		
	1575	(S)	some mag. present					met.		flat	ext.		
	EM 1576	2 cusecs	sl. sandy, sl. org.					int.			deep		
	1577	(M)	silt.					met.		hilly	ext.		
			some mag.										
	EM 1578	DRY	sl. sandy, org.					int.					
	SILT		silt.					met.					

Project

EMPRESS

Photo

7E

Collector

JACKSON
GRODRICH

Date

12/7/66

Page No.

52

Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

Gvl.
Sand
Silt
Clay
Org.

or A, B, C
Horizon

GEOLOGY

Float Bedrock

(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)Gen. Topog.
Slope AngleApprox. Depth
of
Overburden

ANALYTICAL RESULTS

Gold Pot
Cu, H.M., Cu, Mo, Pb, Zn

TRAVERSE No.

EM
15790.2 cusec
(S)

sl. sandy, org. silt

int med

hilly

deep

1580

DRY

sandy, sl. org. silt

int

hilly

"

EM

1581 Silt

20 cusec

sandy silt

int

"

"

1582

PAN

some mag.

med

EM

1583 Silt

F

Gvl. - boulders

INT.

+

MET

Gentle

deep

Buck

1584 pan

100

Slope

Ext.

Brush

EM

1585 Silt

10 cusec

sl. org. sandy silt

int

flat

deep

1586

(M)

sl. mag.

med

flat

int

Project EMPRESS Photo 7 W Collector GOODRICH JACKSON Date 12/7/66 Page No. 54

	Sample No.	Flow P.A.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
	EM												
TRAVERSE NO. — 8	1594 SILT	10 cusecs	org. clay silt					int.		flat	some outcrop nearby		
	1595 PAN	(M)	some mag.										
	1596 SILT	20 cusecs	sandy, sl. org. silt					int		"	deep ext.		
	1597 PAN	(M)						not					
	1598 SILT	10 cusecs	sandy, sl. org. silt					int		"	"		
	1599 PAN	(S)						met					
	1286 SILT	M	Gvl. - boulder					INT.		Gentle	deep	Buck	
	1287 PAN	20 cusecs	SANDY					MET.	—	slope	+ ext.	Brush	

Project

EMPRESS

Photo

7W

Collector

GOODRICH
JACKSON

Date

12/7/66

Page No.

55

Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

Gvl.
Sand
Silt
Clay
Org.
or A, B, C
Horizon

GEOLOGY

Float Bedrock
(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)

Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold

Hot

Cu, H.M., Cu, Mo, Pb, Zn

TRAVERSE No.

7

1288 S/LT	MARSH	ORG. CLAY SILT	—		flat	deep set		
1289 S/LT	20 cusec	clay sl. sandy silt.	int.					
1290 S/LT	(12)		met		flat	deep set		
1291 S/LT	2 cusec (5)	sl. org. clay silt	met int		"	"		
1292 S/LT	25 cusec (12)	sl. org. clay silt.	int met		"	"		
1293 S/LT								
1294 S/LT	1 cusec marsh	sl. org. clay met	—		"	"		
1295 S/LT	2 cusec (5)	sandy sl. org. silt	—		"	"		

Project

EMPRESS

Photo

7W

Collector

GOODRICH

Date

12/7/66

Page No.

56

Project		Photo	Collector		Date		Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
						Gvl.			Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock	Cold Cu, H.M., Cu, Mo, Pb, Zn			Hot	
																			or A, B, C Horizon
TRAVERSE No. 17	EM																		
	1296	silt	1 cusec	sl. org. clay silt					-		flat	deep silt							
	1297	silt	60 cusec	sl. sandy. sl. org. silt					int med		"	"							
	1298	pan	(F)																
	1299	silt	15 cusec (M)	sl. sandy silt					no float bedrock		"	"							
	1400	pan	15 cusec																
	1401	silt	15 cusec (M)	sl. sandy. sl. org. silt					int med		"	"							
	1402	pan																	
	1403	silt	MARSH	ORG. CLAY SILT					-		1	1							

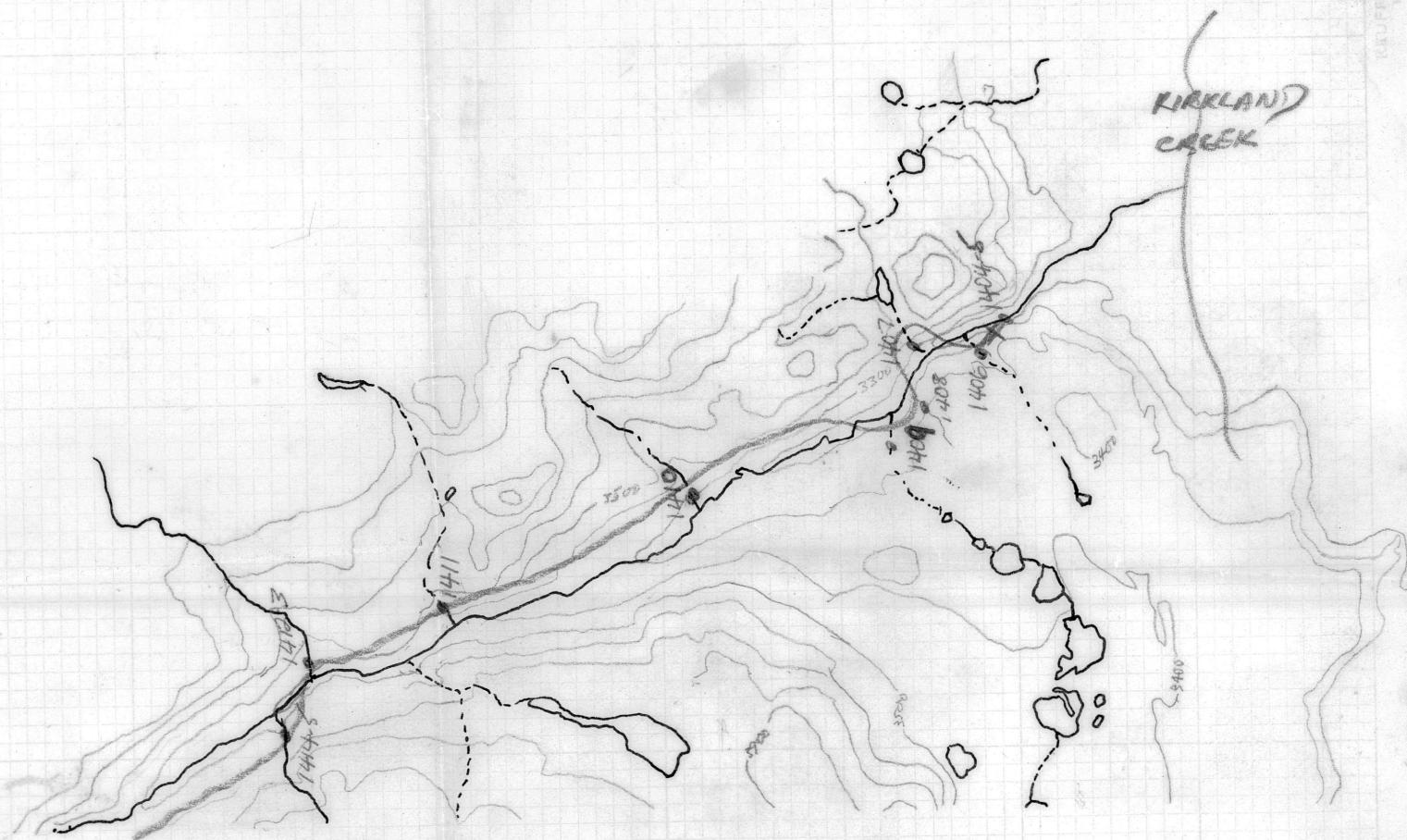
CORNER TRAVERSE 10W, 9E, 7E

CORNER TRAVERSE 10W, 9E, 7E

JULY 17/66

E. JACKSON

TRAVERSE 18



TRAVERSE 18

(57)

GEOLOGY NOTES

JULY 17/66

ERIC JACKSON

- 1) AT 1000' UPSTREAM FROM JOINING
WITH KIRKLAND STREAM, VOLCANIC
OUTCROPS BOTH SIDES OF RIVER.

- 1) $\Delta 1$ EM 1416-7 15 cores (M)
sl. sandy ^{of} org. silt int. float
v. high mag. conc. flat, buckbrush.
aspect, overburden.
- 2) $\Delta 2$ EM 1418-9 2 cores (S)
sandy, sl. org. silt
mod mag. content
Int. float, bedrock
flat, buckbrush area.
deep ~~silt~~ overburden
- 3) $\Delta 3$ EM 1420 2 cores (S)
org. clay silt no float, bedrock
no pan
marshy buckbrush area.
deep ~~silt~~ overburden
- 4) $\Delta 4$ EM 1421-2 35 cores (M)
org. clay silt
high mag. content
Int. float
flat area.

Δ EM 1423-4 (59) 10 cases (M)

sandy silt
mod. lime content
flat bed

Int. met float

TRAVERSE 00 (16W) E 5

(60)

01. EM 1454 SILT ONLY

DRY STREAM

SANDY, SL. DRG SILT.

INT & MET BEDROCK

MOSSY AREA. 100 YD. FROM MAIN
RIVER. ~~fl~~ hilly area
DEEP EXT. OVERBURDEN.

02 EM 1455-6 SILT & PRN

10 cusec moderate slope

sandy silt.

fluvial - int & met.

mossy, hilly area.
deep ext overburden

03 EM 1457 SILT ONLY

3 cusec. gentle slope

sl. sandy silt

no fluvial bedrock

sandy bottom.

- mossy, marshy area

- deep ext overburden

D4 EM 1458 SILT ONLY

(67)

2 cusec, gentle slope

- sandy silt

- no float, bedrock

- sandy bottom

- deep sand overburden

D5 EM 1459 silt only

5 cusec - moderate slope

In & max. float.

sandy silt.

deep sand overburden

TRAVERSE 21

(62)

183
JULY 30

41) EM 1446-7 SILT/CLAY
90 msec - moderate slope

Int. float

sandy, sl. org. silt

can. good neg. content $\frac{1}{2}$ TSP

outcrop all around - gorge.

kelly area.

42) EM 1448 SILT ONLY

dry stream - no flow, sl. marshy

sandy silt, sl. org.

no float, bedrock

outcrop nearby.

43) EM 1449 silt only

dry stream, marshy.

org. silt.

no float, bedrock

kelly area.

44) EM 1450 silt only

3 msec - gentle slope

Int. float.

sandy sl. org. silt

outcrop nearby.

45 EM1451 silt only

(63)

8 cores - gentle slope.

- very little float or bedrock
- some sand & mud float

- Org silt taken

flats area

deep sand overburden

46) EM1452 SILT ONLY

- TRICKLE.

- SANDY SL. ORG. SILT.

- SANDY BOTTOM

- NO FLOAT OR BEDROCK

- MARKS IN HILLY AREA

- OUTCROP NEARBY

47) EM1453 SILT ONLY

3 cores - gentle slope

- sandy sl. org. silt

- sandy bottom, no float, bedrock

- on top nearby.

TRAVERSE 22

(64)

E. JACKSON
JULY 31/66

Δ1) EM 1460-61 silt & pan

8 core - moderate slope
sl. org. soil sample taken
pan - sl. mag. $\frac{1}{4}$ TSP
Int & some vol. float.
buckbrush hilly area.
deep silt. overburden

Δ2) EM 1462 silt only

8 core - gentle slope
sl. sandy sl. org. silt
no float, bedrock
deep silt. overburden
buckbrush, hilly area.

Δ3) EM 903-4

silt & pan

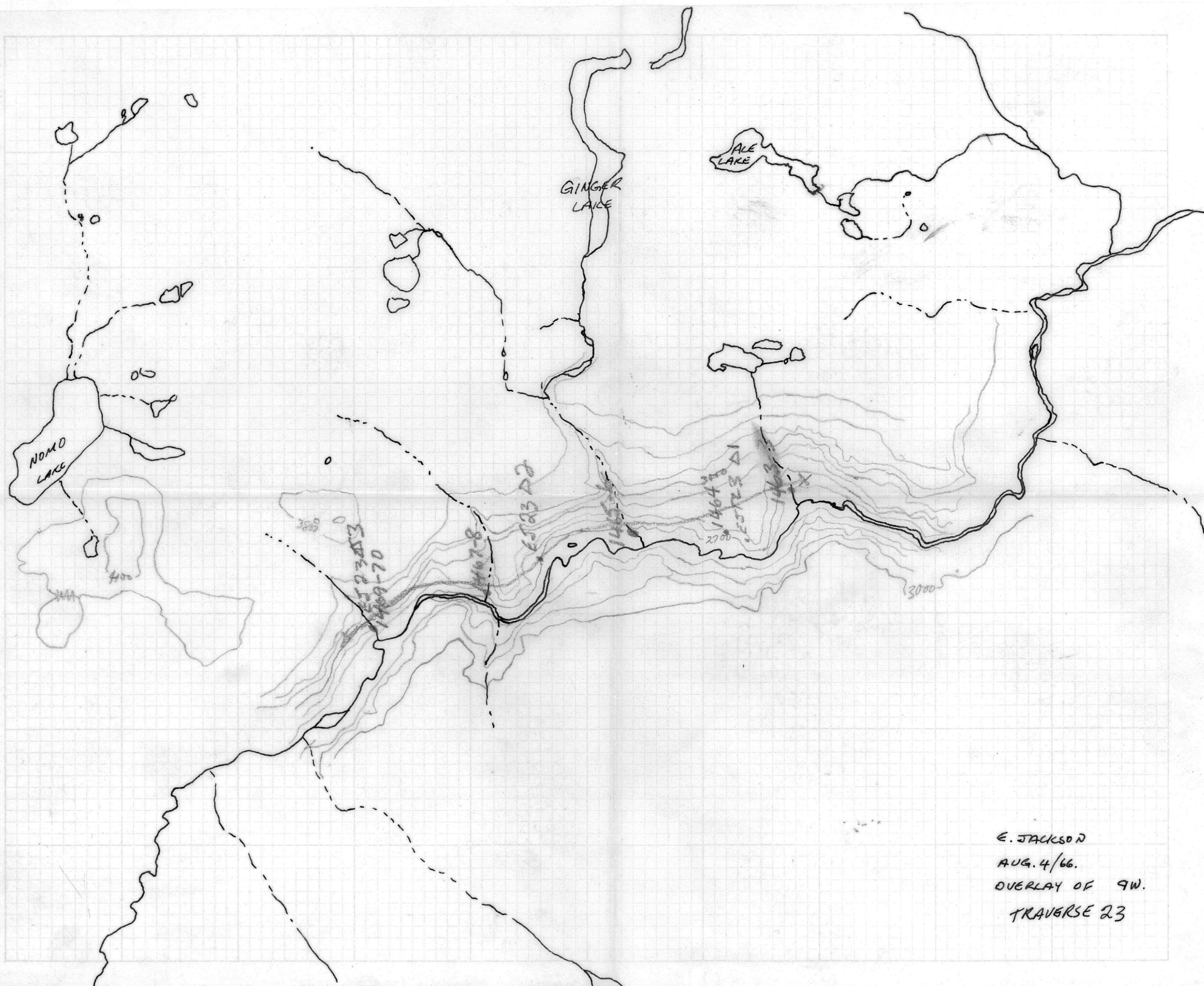
5 core - gentle
mostly sandy bottom, few int & vol.
float

silt - sl. sandy
pan - sl. mag. $\frac{1}{4}$ TSP
buckbrush area, marshy
outcrops nearby.



ALUMINUM QUOTE LINE
NON-REPRODUCIBLE 10 X 10 TO THE INCH

KEUFFEL & ESSER CO.
MADE IN U.S.A.



E. JACKSON
AUG. 4/66.
OVERLAY OF 9W.
TRAVERSE 23

TRAVERSE 23 (65) AUG 4/66

Δ1) EM 1463 silt only

scuse - gentle slope

- clay silt
- no plant or bedrock.
- flat marshy area
- deep ext overburden

Δ2) EM 1464 SOIL

DRY GULLEY.

SL. DEG. SOIL (SAND) (ALSO)

VOL & INT. BEDROCK

OUTCROP NEARBY

Δ3) EM 1465-6 - silt & pan

10 cusec - moderate slope.

int & vol float.

silt - fine sand

pan - mod. mag. 1/4 TSP

marshy but but here

deep ext overburden

Δ4) EM 1467-8 silt & pan

scuse - gentle slope

vol & int float

silt - sandy, sl. org

pan - very sl. mag. 1/2 TSP

- belly area deep ext overburden

(66)

Δ5) EM 1469-70 silt & pan

10 cursec - rapid slope

Int. & vol. float

silt - sl. sandy

pan - good mag. content. $\frac{1}{2}$ test.

Int. zone bands creek.

TRAVERSE 24

RNG. 5/66

GEOLOGY & GEO-CHEM DATA

Δ1) EM 1471 silt only

- 1 case gentle slope
- orig. silt
- no float bedrock
- buckbrush hilly area
- deep soil overburden

Δ2) EM 1472-3 silt + pan

- 5 cases rapid slope
- highly int. zone, granitic
- silt - sl. sandy, sl. org
- pan - some mag. & r.s.
- hilly, buckbrush area
- Outcrops (e.g.) nearby.
- sample taken (quartz) (Δ1)

Δ3) EM 1474 soil

- dry stream
- int. bedrock.
- soil sample - very sl. org.
- hilly area.
- deep soil overburden

Δ4) EM 1475 silt

- 1 case gentle slope
- sandy sl. org. silt
- no float bedrock, sandy cotton
- valley marshy buckbrush area
- deep soil overburden

EJ. 24

AUG 5/66

65) EM 1476 silt only

(68)

1 acre gentle slope

no float, bedrock

sandy bottom

silt - sl. sandy, sl. org.

marshy, hilly, buckbrush

deep ext. overburden

66) EM 1477 silt only

- marshy area slight flow

- no float, bedrock

- silt - org.

- marshy, buckbrush valley area

deep ext. overburden

67) EM 1478-9 silt & sand

10 acres - moderate slope

very little float or bedrock but

some int. float - mostly

sandy bottom

silt - sl. sandy, sl. org.

sand - slight dip $\frac{1}{2}$ ft. p.

buckbrush, marshy, hilly

deep ext. overburden

EJ. 24

AUG 5/66

Δ8) EM 1450 silt only

69

10 cores - gentle slope
no float, bedrock, sl. sandy
bottom

silt - sl. org.

mossy, marshy & lily
deep ext. overburden

Δ9) EM 1451-2 silt & sand

5 cores - moderate slope
sandy bottom - no float

silt - sl. sandy, sl. org.
pan. mod. mdy. & br.
backwash, lily area
deep ext. overburden

LS 25

70

AUG 7/66

- Δ1) EM 1483 - silt only
trickle - gentle slope
silt - 819
no float or bedrock
deep est. overburden
lilly area
- Δ2) EM 1484 silt only
5 core - gentle slope
sandy bottom, vol & vol float
silt - sandy
deep est. overburden
lilly, backwash area
- Δ3) EM 1485 silt only
1 core - gentle slope
vol & some int. float.
silt - silty sandy
flat area, backwash
deepest. overburden
- Δ4) EM 1486 silt
2 core - gentle slope
vol & int. float.
silt - sandy
deep est. overburden
backwash flat

Δ5) EM 1487 ~~soil~~

(1)

marshy area

no float, bedrock

soil - org

backbrush, flat area
deep soil overburden

Δ6) EM 1488 ~~soil~~

marshy - no flow

no float, bedrock

soil - org

backbrush, flat

Δ7) EM 1489 ~~soil~~

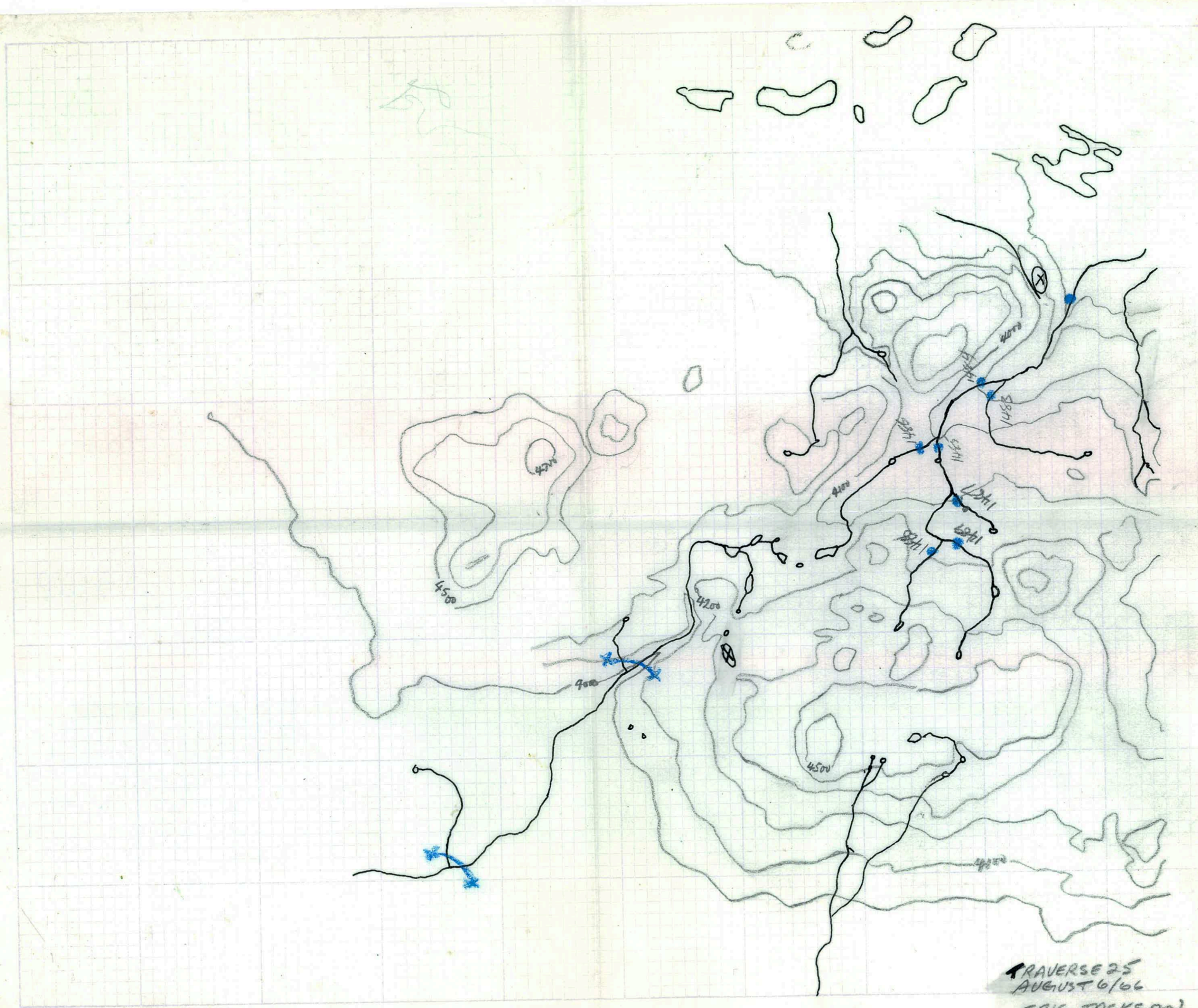
dry stream - no flow

int. vol. bedrock

soil - st. org soil

backbrush, flat

deep soil overburden



TRAVERSE 25
AUGUST 6/66
ERIC JACKSON

FLY CAMP S. END LONG LAKE

Project Empress Photo 75-7W Collector JACKSON Date Aug 12/66 Page No. 73

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
						or A, B, C Horizon						
EM. 1490	huddle swamp					org. silt.	no float bedrock		rough flat marshy	deep silt		
1491 SOIL	dry					org. soil.	-		gentle slope	" very soft & powdery soil		
1492 LAKE SILT	small lake no flow					sl. org. sl. sandy silt	Int. rocky around lake		hilly marshy bedrock	"		
1493 SILT	no flow marshy					SL. ORG. CLAY GREY COLOR	INT + VOL.		hilly bedrock	"		

TRAVERSE No. 26

Project EMPRESS Photo 7J Collector JACKSON Date AUG 12/66 Page No. 74

Project	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold Cu, H.M., Cu, Mo, Pb, Zn	Hot
								(Intr., Volc., Sed.)					
								(Met., Alt., Fract.) (Sulphides)					
or A, B, C Horizon													
TRAVERSE No. 20	1494 SILT	NO FLOW MARSHY	sandy sh. org silt					some granitic int.		hilly	deep ext		
	1495 SILT	"	very. org.					-		flat	"		
	1496 SILT	"	sandy					Int + vol.		"	"		
	1497 SILT	"	sandy					"		"	"		

Project EMPRESSPhoto 7WCollector E. JacksonDate Aug. 12/66Page No. 75TRAVERSE No. 29

Sample No.	Flow R.M.S. Curves.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Evl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
						or A, B, C Horizon	(Intr., Volc., Sed.) (Met., Alt., Fract.) (Culphides)				Cu, H.M., Cu, Mo, Pb, Zn	
1498 SOIL	NO 340N MARSHY		SL. ORG. SANDY SOIL				—		plat	deep ext.		
1499 SOIL	—		SL SANDY CLAY-GREY				—		"	"		
1600 SOIL	—		SL. SANDY SL. ORG. SOIL				Int. vol. Intr.		"	"		
1601 SILT	MARSHY		FINE SAND ORG. SILT				—		"	"		

Project

Impress

Photo

7W

Collector

Jackson

Date

Aug 12/64

Page No.

*76*Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

Gvl. Sand Silt Clay Org.
or A, B, C
Horizon

GEOLOGY

Float Bedrock
(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)

Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS
Cold Hot
Cu, H.M., Cu, Mo, Pb, Zn

TRAVERSE No. *26**1602*
*SOIL**—**sl. org soil*
*black.**—**flat**deep*
*cut**1603*
*SOIL**—**ORG. SOIL**—**"**"**1604*
*SILT**marshy**org. mss.**—**"**"**1605*
*SILT**marshy**sl. sandy clay.*
pond bottom
*sample**—**"**"*

Project

Compress

Photo

7E-7W

Collector

Jackson

Date

Aug 17 / 66

Page No.

27

Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

Gvl. Sand Silt Clay Org.
or A, B, C
Horizon

GEOLOGY

Float Bedrock
(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)

Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold Hot
Cu, H.M., Cu, Mo, Pb, Zn

TRAVERSE No. 26

1606
SILT

—

sl. rocky clay
pond bottom
sample

—

Plax deep
cut1607
SILT

—

org. silt
marshy area

—

bedrock
"

"

1608
SILT

—

sl. org clay-grey
pond bottom
sampleInt
&
met

"

"

1609
SOIL

—

sl. sandy soil.

Int.
bedrock

"

"

Project E-pur Photo 24 Collector Jackson Date 13/5/66 Page No. 78

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. <u>26</u>	<u>1610</u> <u>SILT</u>	<u>POND</u>	<u>sl. org. sed. clay</u> <u>sed</u>					<u>-</u>		<u>hilly</u>	<u>deep</u> <u>sed</u>		
	<u>1611</u> <u>SOIL</u>	<u>-</u>	<u>very sl. org. soil</u> <u>hilltop sample</u>					<u>-</u>		<u>4</u>	<u>1</u>		

EJ25

79

AUG 12/66

FLY CAMP

S. END

CONG. LAKE

- 1) NOT MUCH OUTCROP VISIBLE
SOME ORG + SOME INT. ROCKS
CONTAINING HEXAGONAL PLATES BIOTITE

TRAVERSE 27

(80)

1) AT sample 1612 - fine grained
volcanic with some phenocrysts
also epidote. Sample taken
along a slip structure. Strike of
slip plane 70°

(2) AT EM 1622
2) GREEN VOLC.
JOINTS $18^\circ/45^\circ$ N.E.
 $3/5^\circ/75^\circ$ SW
 $70^\circ/70^\circ$ S.E.
EPIDOTE IN STRINGERS

Project

Express

Photo

95

Collector

E. Jackson

Date

Aug 14/66

Page No.

52

TRAVERSE No.	Sample No.	Flow R.M.S. Cuscs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
257	EM												
	1616 sect	frickle					org. silt	-		hilly	deep sect		
	1617 sect	1 case gentle					sandy silt (fine)	sl. sandy bottom		"	"		
	1618 sect	2 cases (s)					fine sandy silt	sl. sandy bottom	(epidote)	"	"		
	1619 sect	5 case mod slope					fine sandy silt	sl. sandy bottom		"	"		

Project Emery Photo 9E Collector Reynolds Jackson Date Aug 14/66 Page No. 83

	Sample No.	Foss. R.M.S. Content.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gr.	Sand	Silt	Clay	Org.	Flint	Bedrock			Cold	Hot
			of A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE 400	1620 silt	< 1 cm (s)	sl. org. silt					-		hilly	deep erod		
	1621 silt	6 cm (m)	sl. org. silt					-		"	"		
	1622 silt	10 cm (m)	org. silt					Int.		"	"		
	1623 silt	10 cm (m)	sl. org. silt					Int vol		"	"		

Project

Empress

Photo

95

Collector

Rensselaer
Fisk

Date

Aug 14/66

Page No.

24

Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

Gvl.

Sand

Silt

Clay

Org.

or A, B, C
Horizon

GEOLOGY

Float

Bedrock

(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold

Hot

Cu, H.M., Cu, Mo, Pb, Zn

TRAVERSE No. 27

EM

1624

any

silt

—

flat

deep
cut

Project Empress Photo 9W Collector Galpin Date Aug 15/66 Page No. 85

just south of
Mack's Copper Camp.

TRAVERSE NO.

Sample No.	Flow R.M.S. Casts.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth of & Extent of Overburden	ANALYTICAL RESULTS	
		Gwl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
		OF A, B, C Horizon					(Intr., Vole., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
EM 1625	1/2 inch (S)	org. silt.					-		mucky flat	deep cut		
EM 1626	1/2 inch fine	very sl. org. silt					-		flat mucky	deep cut		
1627	fully fine sand	org. silt.					-		"	"		
1628	-	sl. org. soil					-		flat	"		

Project

Empress

Photo

9W

Collector

Jackson
Farros

Date

Aug 17/66

Page No.

86

Sample
No.Flow
R.M.S.
Cusecs.

SED. OR SOIL

Gvl.

Sand

Silt

Clay

Org.

or A, B, C
Horizon

GEOLOGY

Float

Bedrock

(Intr., Volc., Sed.)
(Met., Ait., Fract.)
(Sulphides)Gen. Topog.
Slope AngleApprox. Depth
& Extent of
Overburden

ANALYTICAL RESULTS

Cold

Hot

Cu, H.M., Cu, Mo, Pb, Zn

TRAVERSE No. 28

1629
soil

-

soil
sl. sandy

-

hilly

deep
extkerch
sample1630
soil

-

sl. org. soil

-

flat

"

1631
soilhuckle
gentle
slope

org. soil

-

flat
marshy

"

1432
soil

-

org soil

-

"

"

ES 28

~~1633~~ GEO-CHEM NOTES

(87)

1633 - silt only
shallow - gentle slope
no float or bedrock
silt - org.
deep est overburden
flat, marshy area

1634 - silt
no flow, float or bedrock
sl. org. silt - some vol ash
hill sample
deep est overburden

1635 - silt
marshy area - no flow
silt - org.
no float or bedrock
deep est overburden

Project EMPRESS PhotoCollector Dr. Goodrich Date July 10/66 Page No. 32

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock			Cold Cu, H.M., Cu, Mo, Pb, Zn	Hot
			or A, B, C Horizon										
TRAVERSE NO 5	EM1523 SILT only	S 1.5 cusecs	ORG.					—	no pan	5° slope	Deep + Ext.	Grass (Marshy) Moss Buckbrush	
	EM1524 SILT only	M 1 cusec	Clays + org.					INT. pebbles	no pan	5° slope	Deep + Ext.	Marshy Moss, Buckbrush	
	EM1525 SILT only	M 1 cusec	Sand + org.					—	no pan	5° slope	Deep + Ext.	Moss Buckbrush	
	EM1526 SILT only	M 2 cusecs	Sand + org.					INT pebbles	no pan	5° slope	Deep + Ext.	Buck Brush Marshy	

115-4
10W & 11E

Project Empress Photo 11364-453 Collector D. Goodrich Date Aug 16/66 Page No. 61

Mack
Copper

TRAVERSE No. 23

Sample No.	Flow R.A.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Culphides)				Cu, H.M., Cu, Mo, Pb, Zn	
		or A, B, C Horizon										
EM 965 SILT	2		sandy silt orange slime on ck. bottom				No Float	—	mod. Slope	deep + ext.	Marshy Bush scrub.	
EM 966 SILT	1		org. volc. ash				No float	—	Mod. slope	deep + ext.	Mossy Bush + scrub.	
EM 967 SOIL	—		clay-soil damp area.				volc.	—				
EM 968 SOIL	—		red-brow soil Large trench volc rock.				rusty rock pyrite	stains on mineralization				

- 60(a) -

D.G. - 23 Mack Copper Aug. 16/66

Δ1 - EM 957 SILT.

Δ2 - EM 958 SOIL

Δ3 - Claim posts & EM 959 (SOIL)

Post #1, Joe 8, 1530' N
1500' E
July 8/66
M. Peel

Post #1 Joe 7, 1500' N
1500' E
m. peel
July 8/66

Post #2, Joe 6

Post #2, Joe 5

old posts with new ink
old markings not very clear
but appear to have written Feb. 14/65
under the title of M.C.

Δ4 - EM 960 (SOIL) trench - rusty zone,
magnetic mineralization
deflection - 0 to 1" purple weathered
rocks

Δ5 - EM 961 (SOIL)

Volc rock - magnetic def - nil

Δ6 - Volc outcrop - possibly slight mineralization
strike - 085°, Dip - 20° to SE

magnetic defl. 5 inches
Site 200' North of EM 961

Project Empress Photo _____ Collector D. Goodrich Date Aug. 11/66 Page No. 51

Project		Photo		Collector		Date		Page No.					
TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)					
or A, B, C Horizon													
15-W 20	EM 931 SILT	M 10	coarse sand & gvl.					Intr. Volc.	Intr. outcrop. beside ck.	gentle slope	deep possibly but not ext.		
	EM 932 pan	"	1 tsp - much magnetite					"	"	"	"		
	EM 933 SILT	M 10	Coarse pink Sand.					No Float	Intr. outcrop in area.	gentle slope	deep-outcrop 1/2 mi SE		
	EM 934 pan	"	1/2 tsp - mostly magnetite					"	"	"	"		

Project Empress Photo 15W Collector D. Goodrich Date Aug. 11/66 Page No. 52

15W	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE NO. 20	EM 935 SOIL	—	Base of granite outcrop. Brown soil						granitic badly weathered very crumbly				
	EM 936 SILT	M 3	fine gvl + sand					Int. gvl.	Int. outcrop in surrounding area	mod. slope	deep but not ext.	Buck brush + grass.	
	EM 937 pan	"	1/4 tsp - mostly magnetite					"	"	"	"	"	
	EM 938-39 Silt-pan	M 3	fine gvl + sand pan - 1/4 tsp - mostly magnetite					Int. gvl.	"	"	"	"	

Project Empress Photo 15W Collector D. Goodrich Date Aug. 11/66 Page No. 53

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
15W	EM 940	R 30	Sand + Lge. gvl.					Int. + Volc.	None	mod. slope	deep + ext.	Buck brush + scrub	
	EM 941	"	1 tsp. - magnetite - some color					"	"	"	"	"	
	EM 942	M 10	boulders + lge. gvl.					Int. + Volc.	None	gentle slope	deep + ext.	Buck brush + grass	
	EM 943	"	1/4 tsp. - magnetite some color					"	"	"	"	"	
	PAN												

Project

Photo

Collector

Date

Page No.

Sample No.

Flow Box:
Cuscs:

SED: OR SOIL

GEOLOGY

Analytical Results

Gravel

Sand

Silt

Clay

Cgs.

8F A, B, C
H.S. 394

Float

Bedrock

(Matr., Volc., Sed.)
(Met., Silt, Fract.)
(sulphides)

Cem. Tonnage
Slope Angle

Approx. Depth
& Extent of
Overburden

Cold Hot
Cu, H.M.; Cu, Mo, Pb, Zn

21

9W

EM 944
SILT

M 10

gul - boulders

Int
volc

none

mod.
to steep

deep
+ ext.

Buckbrush
+ scrub

EM 945
pan

"

1/2 tsp - mostly
magnetite

"

"

"

"

"

EM 946
SILT

M 5

gul - boulders

Int.

none

mod.
to steep

deep
+ ext

"

EM 947
pan

"

1/2 tsp - some
magnetite

"

"

"

"

"

Aug 11/66

D.G. - 20.

 $\Delta 7$ - Claim posts (2)

- no description (bleached posts)

- claim line running $N 70^\circ E$ - two more claim posts could
be seen at approx 3000' ft. $N 70^\circ E$ from $\Delta 7$ Not able to identify any of
the posts. $\Delta 7$ is marked on map 15W
position 11015-197 $1\frac{3}{4}"$ N $\frac{1}{4}"$ W

Project Empress Photo Map 9W Collector D. Goodrich Date Aug 12 / 66 Page No. 55

TRAVERSE NO.	Sample No.	Flow R.M.S. Cusets.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Int., Volc., Sed.)	(Met., Plt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
								(Sulphides)					
9W 21	EM 948 SILT	5 5	Volc ash deep channel grassy.					None	None	gentle slope	deep + ext.	Marshy Buck-brush	
	EM 949 SILT	M 3	gvl - some sand					Int Volc	none	mod. slope	deep + ext.	Buck brush + scrub.	
	EM 950 pan	"	1/4 tsp - slight magnetik					"	"	"	"	"	
	EM 951-52 Silt + pan	M. 10	coarse pink sand pan - 1 tsp - slight magnetik					Int sand.	none	gentle slope	deep + ext	"	

Project Empress Photo map 9W Collector D. Goodrich Date Aug 12/66 Page No. 56

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock				
9W 21	EM 953 Silt	M 1		Sand & grass				none	none	mod slope	deep & ext	buckbrush & scrub	
	EM 954 Silt	S 0.5		Sand & grass				"	"	"	"	"	

Project Empress Photo 11364 - 453 Collector D. Goodrich Date Aug. 16/66 Page No. 59

Mack
copper

TRAVERSE No. 23

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cold	Hot
		or A, B, C Horizon								Cu, H.M., Cu, Mo, Pb, Zn	
EM 957 silt	0.5 S	fine silt					none		gentle slope	deep + ext.	bush + scrub
EM 958 silt		trench. volc. rock rust present in & on all rock					Volc. magnetic def. 6 to 8 inches				
EM 959 silt		Soil & clay volc rock in area with some mineralization									
EM 960 silt		Volc. rock mineralization red-brown silt									

Mack
Copper

Project Empress Photo 11364-453 Collector D. Goodrich Date Aug. 16/66 Page No. 60

TRAVERSE NO.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
23	EM 961 SOIL		Small trench 3' deep Light brown soil					some orange color					
	EM 962 SOIL		Light brown soil Volc. rock no rust stain										
	EM 963 SILT	0.5 S	Clay-silt					None	—	gently slope	deep + ext	Bush + scrub	
	EM 964 SOIL	—	Brown - soil					Volc	—				

D. Goodrich

-2-

June 18/66

TRAVERSE #1

1/ -100 ft. N.W. of E456 (pan $\frac{1}{30}$ tsp.)

- Fractures or shears - strike - 303°
DIP - 52° to NE

- Mag. defl. 1-2 inches

Mainly intrusive rock - lineations

(biotite, muscovite) - schist appearance
- quartz veining

2/ 400 ft North of station 1

Angular rock, could be outcrop or float

Platy - schist appearing (biotite, muscovite)

Large quartz veins - 3 to 4 in.

Volcanic Looking rock. (very fine grain)

Note: possible outcrop identical to
outcrop at station 1

3/ E457 - intrusive and metamorphic

some large boulders consist of layers

may be gneissic

Note - pan sample $\frac{1}{4}$ tsp.

*

Large rock outcrop (possible weak gossan)

Azimuth 250° from E457 about $1\frac{1}{2}$ miles
away. Most likely right beside same
creek.

4/ 2500 ft on an azimuth of 030° from
E457 - granitic outcrop along base
of ridge southern tip of North Hutshi
Mag. defl. - nil

OVER →

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June 18/66

TRAVERSE 1 (cont'd)

5/ 2500 ft on an azimuth of 020°

Float and possible outcrop

granitic - mainly intrusive in nature

Mag. defl. - nil (457-2)

6/ 300 ft North of station # 5

in Ravine running west to east

outcrop & float mainly intrusive
granitic rock, with some fine grain
rock (457-3)

- Mag. defl. - practically nil

7. Approx. 1 mile from station # 6 on an

azimuth of 045° - weak gossan zone
(457-4)

- Some outcrop and much float
mainly intrusive + metamorphic

Mag. defl. 0-1 m.

- also some fcted limestone float
very powdery (rotten egg smell)

8/ Large ^(intrusive) granitic outcrops 600
ft N.E. of stat. # 7

Strike - 193°

Dip - 53° to S.E.

Mag. defl. - 0 to 1 inch

9/ 100 ft N.E. of stat. # 8.

same type of rock outcrop.

strike - 180°

Dip - 57° to W.

strike - 081°

Dip - 75° to SE

A+ 4500 ft.

 $2(z-w)$

TRAVERSE No.

Project.

Photo

Collector

Date _____

Page No. _____

3

[illegible]

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June 18/66

TRAVERSE #1 (Cont'd)

10/ 200 ft NE of stat. #9
same intrusive outcrop.

Strike - 182° { strike - 074°
Dip - 74° to NW. { Dip - 75° to N.W.

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June 19/66

Traverse #2

E-459

1/ West arm of small creek near source. Small channel, not much sand or gravel, mainly small boulders. Silt sample contains much organics. Pan sample - $\frac{1}{10}$ tsp.

2/ E460 East branch of small creek near source. Same conditions as west branch (only 200 ft apart). Pan sample - $\frac{1}{10}$ tsp.

Also limestone & metamorphic outcrop surrounding the creek.

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June 19/66

TRAVERSE #3

1/ E461 & E462 - pan samples $\frac{1}{10}$ tsp.

2/ 1 mile East of Stat. #1 Large granite outcrop. strike - 347°
Dip - 72° to N.E

OVER -

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June 19/66

TRAVERSE #3 (cont'd)

3/ $\frac{1}{2}$ mile west of stat #1

Acres of granitic (intrusive) talus
Granitic outcrop with dark
coloured, fine grained dyke, 8 in.
wide.

Strike - 003°

Dip - 50° to W

Large amount of rusty coloured
rock high on the slope - possibly
a gossan zone.

4/ E463 dry stream bed

Large angular boulders covered
in organics & moss.

Soil sample

5/ E464 pan sample $\frac{1}{4}$ tsp.
- magnetite

6/ $\frac{1}{2}$ mile from E464 on an azimuth
of 075° - intrusive and metamorphic
rock (gneissic, lineations, schist).

Float + possibly outcrop.

7/ E465 pan sample $\frac{1}{10}$ tsp.

Intrusive outcrop beside creek
schist rock, quartz veining 2" wide
Outcrop, jumbled, slabs

Project EMPRESS Photo A1486121 ⁵¹²⁷ Collector D. GOODRICK Date June 19/68 Page No. 5

TRAVERSE No.	(2-W) 3	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
				Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
									or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)
		E461 silt + pan	S 20 cusecs		rocks gvl.			Int.		Flat	Marshy wide deep chan.			
		E462 silt + pan.	S 2 cusecs		gvl. Sand.			Int.		Flat	marshy wide chan.			
		E463 SOIL	DRY		silt - org.			Int. MET		SLOPE 5° HILLS	Buck Brush MOSS			
		E464 silt + pan	M 4 cusecs		Large bldrs. very little gvl. or silt			Int. MET.	pan 1/4	Slope 5° HILLS	Buck Brush MOSS.	Chan. 2' wide		

Project Em press Photo A14 8612128

Photo A14 861 128

Collector D. Goodric

Date June 19/6

Page No. 6

Project No. _____

Photo No. _____

Collector _____

Date _____

Page No. _____

TRAVERSE No.	(2 W)	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS		
				Gvl.	Sand	Silt	Clay	Org.	Horizon	Float			Bedrock	Cold	Hot
										(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
3		E465 Silt + pan	M 6 cusecs.	Small boulders some gvl.					INT. MET.	pan 1/10 tsp magnetite note #7	Slope 5° HILLS	Thick Bush 3' wide chan.			
		E466 Silt + pan	M 20 cusecs	gravel small boulders					int MET	pan 1/10 tsp magnetite	Flat	Buck Brush marshy	5' wide chan.		

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June 19/66

TRAVERSE # 3 (cont'd)

8/ E 466 - pan sample $\frac{1}{20}$ tsp9/ 1500 ft due north of stat #8
Limestone outcrop.

Bedding running East to West

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June 21/66

TRAVERSE # 4

1/ E 467 silt and E 468 pan

- No outcrop, no float.

- Creek in flood state.

2/ E 469 - silt and E 470 - pan

- No outcrop, no float.

- Creek exists mainly because of heavy rain yesterday and day before.

3/ E 471 - silt & E 472 - pan.

- Int. & met. gvl.

- creek high because of rain.

- main stream draining Lake.

4/ E 473 - silt & E 474 - pan

- Int. & met. small rocks and gvl.

- Very small trickle in dry weather

5/ 600 ft N.E. of sample site #4 granitic float - quartz veining. - Some schist.

- also limestone float? (OVER)

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June 21/66

Traverse #4 (cont'd)

- 6/ 400 ft N.E. of sample
501 (soil) - granitic Boulders
- int. outcrop (schist)
Dip to SW.
Runs South to North
- 7/ 200 ft. N.E. of site #6
Light colored fine grain outcrop
possibly rhyolite
- 8/ 200 ft N.E. of site #7
int. met. outcrop - schist
Dipping S.E. at about 30°
Running SW. to N.E.
- 9/ E502
DARK BROWN WATER, WITH
SLIGHT REDDISH TINGE
- 10/ E505 pan granular sugar like
species in sample?
- 11/ E508 - 509 - much schist rock
on lake shore and at mouth of
stream - mainly rounded rocks

scab Lake (6W46E)
drainage

Project EMPRESS Photo A15 739-72 Collector D. Goodrich Date June 21/66 Page No. 8

scab Lake drainage

TRAVERSE No. 4

Sample No.	Flow P.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS		
		Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Bedrock	Cold Cu, H.M., Cu, Mo, Pb, Zn	Hot
			or A, B, C Horizon									
E467 silt	R 30 cu secs		sand				FLOAT VISIBLE	NOT VISIBLE	FLAT	MARSH w/CHAN. STREAM FLOODING		
E468 PAN ¹ / ₁₀ top												
E469 SILT	M 2 cu secs		sand				NO FLOAT	*	FLAT	Buck Brush MOSS		
E470 PAN								probably	very	little or no flow in dry weather		

Scab Lake
Drainage East
End.

4
(6W+6E)
TRAVERSE No.

Project EMPRESS Photo AIS 739-72 Collector D. Goodrich Date June 21/66 Page No. 9

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cu, H.M., Cu, Mn, Pb, Zn	
		or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)					
E471 SILT	M. 50 cusecs.	sand & gvl.					INT. & Met.		Flat	wide chan. marshy Buck Brush		
E472 pan												
E473 SILT	M to F 3 cusecs	sand gvl.					INT. MET.		small HILLS. 30°	Marshy Buck Brush		
E474 pan												

Project EMPRESS Photo A15-739-72 Collector D. Goodrich Date June 21/66 Page No. 10

(GW + 6E)

TRAVERSE No. 4

Sample No.	Flow P.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float Bedrock (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Hol	Cu, H.M., Cu, Mo, Pb, Zn
			or A, B, C Horizon								
E475 silt	1 cu. sec. M		sand + silt				NOTHING VISIBLE	ROLLING	CHAN 1.5' W		
E476 pan			1/10 tsp.						SCRUB		
E477 silt	M 6 cusecs.						INT. Met.	ROLLING HILLS	chan. 3' wide scrub.		
E478 pan			1/10 tsp.								

Project EMPRESS Photo A15739-72 Collector D. Goodrich Date June 21/66 Page No. 11

(6W & 6E)

4 TRAVERSE No.

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
		or A, B, C Horizon										
E501 SOIL	DRY.		Sandy soil				INT. Met.		Rolling HILLS Thin Bush			
E502 SILT	R 150 cu sec		sandy				NOTHING VISIBLE		FLAT TREES SCRUB	MARSHY CHAN 10' W		
E503 PAN	to top											

Project EMPRESS Photo A15739-72 Collector D. Goodrich Date June 27/66 Page No. 12

Project _____

Photo _____

Collector _____

Date _____

Page No. _____

(6W + 6E)

TRAVERSE No.

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS		
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot	
							(Intr., Volc., Sed.) (Met., Pl., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn		
E504	F						Large blders	INT		HILLS	NARROW		
SILT	5 cusecs						very little gvl.	MET		15° slope	chem. MOSS Big Blders.		
E505													
pan	1/10 top												
E506	F						rocks gravel sand	Int		HILL	5' CHAN		
SILT	20 cusecs							met		5° N SLOPE	MOSS TREES		
E507													
PAN	1/10 top												

Project EMPRESS Photo A15 739-72 Collector D. Goodrich Date June 21/66 Page No. 13

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
4	ES08 silt	M 30 cusecs (at mouth)	sand & gvl.					int'		2° slope Fairly Flat	Mouth of creek - Bush		
	ES09 pan	1/4 tsp.											

(6W & 6E)

Project EMPRESS Photo A11015-118 Collector D.G. Date June 23/66 Page No. 14

(GE)

TRAVERSE No.

5

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
						or A, B, C Horizon	(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
E414 SILT	S 0.2 cusecs.					SILT	None	meta-sed outcrop nearby	HILLS 5° slope	MOSS partially sub surface drainage		
E415 SILT	M 1 cusec.					organic	Metsed	4	HILLS 5° slope	MOSS Bush.		
E416 SILT	F 4 cusecs					half organic	Volc. mt. metl.	11	HILLS 10° slope	MOSS Bush		
E417 SILT	S 0.5 cusecs					SILT org.	None	"	HILL 5° slope	MOSS Bush		

Project EMPRESS Photo A11015-118 Collector D. Goodrich Date June 23 Page No. 15

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
(6E)	E418 SOIL	—	gossan zone					Note page 17.	Volc. light color fine grain	25° slope	deep.		
	E419 SOIL	—	gossan zone					"	"	"	"		
	E420 SOIL	—	gossan zone					"	"	"	"		
	E421 SOIL	—	gossan zone					"	"	"	"		
	E422 SOIL	—	gossan zone										

June 23/66

TRAVERSE # 5 - D.G.

1/ $\Delta 1$ - Bedding striking 305°
Dipping to SW
(shallow)

Schist
quartz veining
limestone } mag. defl.
nil

2/ $\Delta 2$ 500 ft south of $\Delta 1$

Biotite schist
Strike - 350°
Shallow Dip to S.W. } Mag. defl.
nil

$\Delta 1$ + $\Delta 2$ same strata level

3/ $\Delta 3$ 700 ft East of $\Delta 2$

Schist - same stratification
as $\Delta 1$ + $\Delta 2$ but strata -
graphically lower.

mag. defl.
nil

4/ $\Delta 4$ 200 East of $\Delta 3$.

Schist - lineations
strike - 350°
Dip to NE. (almost
vertical)

5/ $\Delta 5$ 300 ft N.E. of $\Delta 4$

same schist rock

striking 350°
Dip more shallow to N.E.
over $\rightarrow$

D.G. - TRAVERSE #5

June 23/66

ΔG - EM 418-22 (SOILS - gossan)

- mag. deflection 1-2 inches.
- light colored fine grained rock.
- pyrite mineralization
- reddish brown soil.

- Main rock type in area consists of silica rich meta sediments - limestone banding quartz veining.

Project EMPRESS Photo A11002-228 Collector D. Goodrich Date June 24/66 Page No. 18

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cold	Hot
			or A, B, C Horizon								Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 6	E429	M		sand					Flat	Buck Brush narrow deep chn		
	Silt	20 cuses						None				
	E430	1/10 tsp.		Small amt. of magnetite				Int. Met.	Flat	Buck Brush Moss	shallow narrow channels	
	pan											
	E431	S		small rocks				Int	Flat	Buck Brush	shallow narrow	
	Silt	0.5 cuses		very little gvl.				met		Moss	channels	
	E432	1/4 tsp		Large amt. of magnetite								
	pan											

Project EMPRESS Photo A11002-227 Collector D. Goodrich Date June 24/66 Page No. 19

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., A.I., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
ZW 6	E 433 SILT	M	Small rocks					INT.		Flat	Narrow		
	E 434 pan	5 cusec	1/20 + sp. (pan)					MET.			Shallow channel		
	E 435 SILT	S 0.5 cusec	org.					None		Flat	Buck Brush Shallow narrow chan.		
	E 436 SILT	S 0.5 cusec	org.					None		Flat	Buck- brush Shallow chan.		
	E 437 SILT	M 2 cusec	org. some rocks					INT. MET.		Flat	Buck- brush shallow chan.		

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Photo

A11002-228

Collector

D. Goodrich

Date

June 24/66

Page No.

20

ZW

TRAVERSE No. 6

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock			Cold	Hot
						or A, B, C Horizon					Cu, H.M., Cu, Mo, Pb, Zn	
E438 SILT	M	Boulders - gvl.					INT.		Flat	Buck-brush		
E439 pan	40 cusec.	pan - 1/20 tsp.					MET.			Wide chan.		
E440 SILT	S	gvl.					INT.		Rolling			
E441 pan	0.5 cusec.	Pan (1/10 tsp.)					MET.		10° slope			
E442 SILT	M	org.					None		Flat	Buck-brush Moss		
	12 cusec.											

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A11447-412

Collector

D. Goodrich

Date

June 30/66

Page No.

21

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock			Cold Cu, H.M., Cu, Mo, Pb, Zn	Hot
7	E525 SILT E526 pan	M 5 cusecs.	Gvl.					INT. MET.	—	HILLS 10° slope	shallow channel, Bush & scrub.		
	E527 SOIL	—	gossan					—	Volc. (pyrite)	HILLS 25° slope	Bush & scrub.		
	E528 SOIL	—	gossan					—	"	"	"		
	E529 SOIL	—	gossan					—	"	"	"		

Project EMPRESS Photo A11447-412 Collector D. Goodrich Date June 30/61 Page No. 22

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
7	E530 SOIL	—	gossan					—	Volc. outcrop. (pyrite)	25° slope	deep		
	E531 SOIL	—	gossan					—	"	"	"		
	E532 SOIL	—	gossan					—	"	"	"		
	E533 SOIL	—	gossan					—	"	"	"		

D.G. - 7

June 30/66

1. $\Delta 1$ - quartz-biotite schist
Photo - A11447-412

Attitude of schist -

Strike - 133° Dip - 20° to SW.

- 2/ $\Delta 2$ - silica rich schist

- Flow banding

Attitude of schist -

Strike 220° Dip - 30° to NW $\Delta 2$ bedding higherstratigraphically than $\Delta 1$ bedding

Above schist at $\Delta 2$ - darker
fine grain rock with no
obvious lineations (volc.)

(photo A11447-412)

3. $\Delta 3$ - granitic outcrop
no obvious attitude
(may be diorite)

4. $\Delta 4$ - Dark gray color outcrop
fine grain - with feldspar
Tertiary $\rightarrow$ or calcite phenocrysts.
volc.

Attitude - Strike, 223° Dip, 85° to SE.

Mag. defl. - 1 inch

(photo - A11447-412)

5. $\Delta 5$ - same outcrop as $\Delta 4$

Limy streaks on weathered
surface.At least 3 shear planes - 1. { Strike - 175°
Dip 90° 2. { Strike - 125° 3. { Strike - 108°
Dip - 90° OVER $\rightarrow$ (Dip - 30° to SW.)

D. G. -7 (cont'd)

June 30/66

6. $\Delta 6$ - same rock type as $\Delta 4$
+ $\Delta 5$ - more purple coloring
though.

7. $\Delta 8$ - gossan zone [EM 527-29]

Approx. 1 Acre in size

Strike - 072°

Dip - 85° to N.W.

- pyrite mineralization

- light color, fine grain rock - volc.

8. $\Delta 9$ - gossan N.E. of $\Delta 8$ across
gully. [EM 530-32]

- same rock type as $\Delta 8$

9. $\Delta 10$ - gossan N.E. of $\Delta 9$ across
next gully. [EM 533-34]

- same rock type as $\Delta 8$ +
 $\Delta 9$.

Project EMPRESS Photo A11447-412 Collector D. Goodrich Date June 30/66 Page No. 23

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock			Cold	Hot
			or A, B, C Horizon									Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 7	E534		gossan										
	SOIL												
	E535	M	Gvl - Boulders					INT.		HILLS	Shallow		
	SILT	10 cusec						MET.		20° slope	Chan. Bush.		
	E536		pan 1/4 tsp.										
	pan	-											

Project EMPRESS Photo A11537-3433 Collector D. Goodrich Date July 8/66 Page No. 25

TRAVERSE No.	13E	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
				Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
									(Intr., Volc., Sed.) (Met., A.I., Fract.) (Sulphides)	Cu, H.M., Cu, Mo, Pb, Zn				
				or A, B, C Horizon										
8		EM350 SILT	M	Gvl.					INT.	pan 1/2 tsp + magnetite	Flat	Ext.	Gvl. bars	
		EM351 pan	70 cusecs						MET	- lots of color		+ Deep	scrub, wide shallow chan	
		EM352 SILT	F	Sand. - Gvl.					INT.	pan 1/2 tsp	Flat.	Ext.	narrow deep chan	
		EM353 pan	15 cusecs						MET.	- magnetite much color		Deep.	Bush + scrub.	
		EM354 SILT	M	Gvl. - some org.					INT.	pan 1/8 tsp	Flat.	Ext.	Bush + scrub.	
		EM355 pan	20 cusecs						MET.	- magnetite some color		+ Deep	chan's wide	
		EM356 SILT only	M 5 cusecs	org.					None	no pan	3° slope	Ext. + Deep	several little chan marshy scrub.	

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Photo

A11537-34,35

Collector

D. Goodrich

Date

July 8/66

Page No.

26

TRAVERSE No.	13E	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
				Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., All., Fract.) (Sulphides)	Bedrock			Cold Cu, H.M., Cu, Mo, Pb, Zn	Hot
8		EM357 SILT EM358 pan	M 3 cusecs		sand.				Int.	pan - 1/2 tsp - magnetite - much color	3° slope	Deep + Ext.	Bush scrub. Edge of marsh	} 100' from EM 356
		EM359 SILT EM 360 pan	still 1 cusec. in places		GVL.				INT. MET	pan 1/4 tsp. - magnetite - some color	Flat Edge of 40 banks.	Deep + Ext.	Bush	
		EM361 SILT EM 362 pan	S 0.2 cusec.		sand. drainage thru moss				None	pan 1/20 tsp some mag. little color.	5° slope	Deep + Ext.	Bush	
		EM363 SILT EM 364 pan	M 6 cusec.		GVL.				INT. MET.	pan - 1/4 tsp - magnetite - much color	3° slope	Deep + Ext.	Bush scrub A little marsh	

D.G.-8

July 8/66

$\Delta 9$ Dark fine grain rock (~~rock~~)
Schist

Strike - 235° Dip - 30° to N.W.

Magnetic Deflection - nil

[EM 367-68]

$\Delta 10$ - schist - EM 369

Strike 275° Dip. 35° to N.E.

Magnetic Deflection - nil

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D. Goodrich

Date

July 10/66

Page No

29115°H
10W 4 11ETRAVERSE NO.
9

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock			Cold Cu, P.M., Cu, Mo, Pb, Zn	Hot
		or A, B, C Horizon										
EM1506 SILT	M	Gvl. - rocks up to 8 in ind. Heavily stained surface					INT.	pan - 1/8 tsp - magnetite - rust color sand	Gentle Slope.	Deep + Ext.	Moss + Buck- brush	
EM1507 pan	3 cusec.											
EM1508 SILT	S	Gvl					INT	pan - 1/4 tsp. - magnetite	Gentle Slope	Deep + Ext	Moss + Tan buckbrush	
EM1509 pan	1 cusec.											
EM1510 SILT	M	Sand					INT.	pan - 1/4 tsp - magnetite	Gentle Slope	Deep + Ext.	Moss + Buck- brush	
EM1511 pan	2 cusec.											
EM1512 SILT ONLY	S .5 cusec.	ORG. - some silt					None granitic rock nearby	No pan	5° slope	Deep + Ext.	Moss + buck brush	

Project EMPRESS Photo _____ Collector D. Goodrich Date July 10/66 Page No. 30

TRAVERSE No.	10W 211E	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
				Gvl.	Sand	Silt	Clay	Org.				Cold	Hot
				or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cu, H.M., Cu, Mo, Pb, Zn	
9		EM 1513 SOIL	—	white ash or sand.				—	None	Flat	Deep & Ext.		
		EM 1514 SILT	M	sand				INT	pan - 1/8 tsp	Flat	Deep & Ext.	Marshy Moss	
		EM 1515 pan	2 cusecs					pebbles	magnetite			Buckbrush	
		EM 1516 SILT ONLY	M 2 cusecs	org.				None	No pan	Gently Slope	Deep & Ext.	Marshy Moss	
		EM 1517 SILT only	M 16 cusecs	sand				Int. pebbles	No pan	Flat	Deep & Ext.	Buck- Brush	

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D. Goodrich

Date

July 10/66

Page No.

31

115 ^H 10 ^W + 11 ^E		Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
Gvl. Sand Silt Clay Org. or A, B, C Horizon					Float (Intr., Volc., Sed.) (Met., Alk., Flact.) (Sulphides)	Bedrock	Cold Cu, H.M., Cu, Mo, Pb, Zn	Hot						
TRAVERSE No. 9	EM1518 SILT ONLY	M 3 cusecs.	ORG - some SILT					None	No pan	Flat	Deep + Ext	Marshy Buck Brush		
	EM1519 SILT ONLY	M 2 cusecs.	SILT + org.					None	No pan	Flat	Deep + Ext.	Marshy Moss + Buck-brush		
	EM1520 SILT	M	Sand + org					INT. + met	pan 1/4 tp - magnetite	Flat	Deep + Ext	Moss + Buck-brush		
	EM1521 pani	3 cusecs.												
	EM1522 SILT ONLY	M 2 cusecs.	ORG.					None	—	Flat	Deep + Ext	Grass Moss		

D. G. - 9

July 10/66

Δ1. - INT. Float, angular in shape,
 EM1506 heavily coated with dark,
 1507 rusty stain. General color
 of creek bottom is rusty-brown
 Marshy area

Δ2 - EM1508-09 - Float mainly intrusive,
 angular. Some met. ?
 Marshy area.

Δ5 - EM1513 south bank of mainstream
 white ash or sand - hard 1 ft.
 below surface

Δ8 - EM1516 silt organic - Very bright
 red color in roots & silt.

D.G. 10

July 13/66

 $\Delta 1$ - samples 410 + 411 (silt + pan)

20 M - gentle slope

Gvl - small boulders

Float - int + met.

wide - shallow channel

Tall - sparse buckbrush
out crop 300' up from ck. $\Delta 2$ - samples 413 + 419 (silt + pan)

10 M - gentle slope

Float - int + met

shallow channel

Gvl - small boulders

Tall sparse buckbrush
outcrop 300' up from ck $\Delta 3$ - samples 480 + 499 (silt + pan)pan taken at side of ck
in soil.

- 0.5 M - steep slope

- Outcrop 500' above sample
site

- Float - int + met

- Deep narrow channel,
very little waters

- Moss with a little sand

- Buck brush

OVER -

D.C. 10

July 13/66

- Δ4 - Samples 500 + 515 (silt + sand)
- 1 M - steep slope
- INT. Float.
- Odd large boulder
mainly moss with little sand
- shallow channel small
buck brush.
- outcrop 300' above ck

- Δ5 - Samples 524 + 557. (silt + sand)
- 2 M steep slope
- Float - int & med.
- Deep channel
- Boulders - some gvl.
- Buck brush & moss

- Δ6 - Samples ~~558 + 568~~ (silt + sand)
- 3 M - steep slope
- Float - int boulders
- very little sand or
gvl
- Buck brush & moss
outcrop 300' above ck.

- Δ7 - EM 569 (silt only) - sandy.
- 1 M - steep slope
- Float (intrusive)
- little sand
- moss & buck brush
- outcrop 500' above ck

D.G. 10

- 35 -

July 13/66

Δ8 - EM 579 (SILT ONLY) - sandy

- Dry creek bed
- int. & met float
- Boulders - some gravel + sand
- Buck brush
- Outcrop 300' above site

Δ9 - EM 580-81 (SILT & pan)
sandy

3M - moderate slope

- int. & met float
- Boulders - some sand & gravel
- Buck brush
- outcrop 100' above site

Δ10 - EM 582-83 silt & pan
(sandy)

- 1 M - moderate slope
- int. float
- small boulders beneath rocks
- moss & tall buckbrush
- outcrop 600' above site

in rocks - down hill

Δ11 - EM 584-85 (SILT & pan)
sandy

- 3M - moderate slope
- int & met float
- Boulders - some sand & gravel
- outcrop 600' above site
- Buck brush

OVER →

D.G. - 10

July 13/66

Δ12 - EM 586-87 (silt + pan)

Sandy

- 3M - moderate slope
- int & met float
- Boulders - very little sand.
- buck brush
- outcrop 300' above site

Δ13 - EM 588-89 (silt + pan)

Slightly

- 2 cusec

organic

Sandy.

- int & met float
- Gul & moss
- buck brush
- moderate slope
- outcrop 200' above site

Δ14 - EM 590 & 594 (silt + pan)

sandy

- int & met float
- Gul & small boulders
- gentle slope
- 2 cusec EM
- buck brush

Δ15 - EM 595 (silt + only)

slightly org.

- int. float
- 0.5 cusec S - gentle slope
- moss & buck brush (marshy)
- overburden est.

D. G. - 10⁻³⁶ -

July 13/66

Δ 16 - EM 596 & 623 (SILT 6 pan)

- 1 core - slow
- gentle slope
- int & met float
- Gvl - small boulders
- backbrush
- overburden ext.

Δ 7 - EM 624 - SILT only

- organic
- 2 core - slow - flat
- marshy - backbrush
- overburden - deep & ext.
- no float

D.C. - 11

- 37 -

July 17/66

 $\Delta 1$. EM 625-26 (silt & pan)

- 3 M - gentle slope
 - Float - int. & met.
 - Small boulders & gravel
 - Buck brush & scrub.
- (sandy clay)

- overburden deep, but outcrop $\frac{1}{2}$ mile north
- pan - $\frac{1}{4}$ tsp - magnetite - much color

 $\Delta 2$. EM 627 (silt only)

- sandy clay [magnetite]
- 10 S - Flat.
- Int. & met float
- Buck brush - swamp grass
- overburden deep but outcrop $\frac{1}{4}$ mile north

 $\Delta 3$ - EM 628 (silt)

- pink, fine grain outcrop with quartz veining.
- attitude - strike - 190°
Dip - 55° to NW.
- magnetic deflection
nil to $\frac{1}{2}$ in.

 $\Delta 4$ - EM 629-30 (silt & pan)

- pan - magnetite - much color:
- Less than 1 cusec. (draining out of moss)
 - Moderate slope
 - trees (sparse) - buck brush
 - pink intr. float (gravel - clay mud)
 - overburden deep & exp. OVER-

D.G - II

July 17/66

Δ5 - EM 631 (SILT ONLY)

- less than 1 cu sec.
- sandy silt
- gentle slope
- marshy - buck brush & swamp grass
- no float
- overburden deep & ext

Δ6 - EM 650-S1 (SILT & pan)

- Less than 1 cu sec.
- water running only in lower part of creek
- int & met & volc float.
- int outcrop 600' above site
- Gvl. and small boulders
- buck brush.
- pan - $\frac{1}{4}$ tsp - magnetite
much color

Δ7 - EM 652-53 (SILT & pan)

- fine sandy silt.
- 2 cu sec M - gentle slope.
- int & met & volc float
- Gvl - rocks - sandy clay, muck.
- overburden shallow & ext.
- buck brush
- pan - $\frac{1}{4}$ tsp - magnetite
much color

Δ8 - EM 654 (SILT only)

- 2 cu sec M. - gentle slope
- sandy silt
- int; met & volc float.
- small boulders -
- overburden ext.
- weak gossan 2 miles N. up creek
- buck brush

July 17/66

 $\Delta 9$ - EM 655 (SILT ONLY)

- 1 cusec. - Moderate slope
- No float
- Sandy SILT & moss
- buck brush
- overburden deep & ext.

 $\Delta 10$ - EM 656 (SILT ONLY)

- Sandy - small boulders & ark
- 15 cusec. flat.
- int. med & volc. float
- buck brush
- overburden ext.

D.G. - 12

- 39 -

July 18/66

Δ1 - EM 657-58 (silt + pan)

- Dry ck bed - Flat.
- coarse sand
- no float.
- moss + buckbrush
- overburden deep + ext.
- pan - $\frac{1}{8}$ tsp - magnetite
- not much color.

Δ2 - outcrop - granitic

- high percentage of dark minerals
- 1000' East of (Δ1 EM 657-58) (biotite and/or hornblende)
- magnetic deflection 1 to 2 inches
- altitude (highly contorted)

Δ3 - EM 659-60 (SILT + pan)

- 1 cusec, gentle slope.
 - int & met float.
 - sandy silt.
 - rocks, gravel, sand.
 - rust color slime & stain.
 - overburden deep but outcrop beside crk. (Δ4)
 - marshy, buckbrush, moss + grass
- pan - 1 tsp
- magnetite
- color
- possibly gold

Δ4 - outcrop - granitic (same as Δ2)

- mag. deflection, 1 to 2 in.
- 100' East of (Δ3 EM 659-60) - badly weathered - no sharp edges (well rounded)

OVER →

D.G. - 12

July 18/66

- Δ5 - EM 661-62 (silt & pan)
- sandy silt
 - 2 cusec - gentle slope
 - no float. (granitic outcrop 300' East) - Δ6
 - coarse sand.
 - overburden deep.
 - pan - $\frac{1}{4}$ tsp - magnetite
 - some color
 - marshy - grass and buckbrush

Δ6 - granitic outcrop

Same as Δ2 & Δ4
500' East of Δ5 EM 661-62

- Δ7 - EM 663 - silt only
- 0.5 cusec - Flat
 - no float.
 - sandy silt
 - rust color slime
 - marshy; buckbrush - grass
 - overburden deep & ext

- Δ8 - EM 664-65 (silt & pan)
- 3 cusec - gentle slope
 - sandy silt.
 - no float, coarse sand
 - marshy - buckbrush & grass
 - overburden, deep & ext
- [pan - $\frac{1}{4}$ tsp.
- magnetite]

- Δ9 - EM 666-67 (silt & pan) sandy silt
- no float (coarse sand)
 - 5 cusec - gentle slope
 - marshy (grass & buckbrush)
 - overburden (deep & ext.)
- [pan - $\frac{1}{4}$ tsp
- magnetite]

D.G. - 12 - 40 - July 18/66

Δ 10 - EM 668 (SILT only)

- 1 cusec - gentle slope
- sandy silt.
- no float (sand)
- marshy (grass + buckbrush)
- rust color slime
- overburden deep & ext.

Granitic rock was observed throughout the general area.

D.G. - 13

- 41 -

July 20/66

Δ1. - EM 669 - 70 (silt + pan)

- sandy silt

- 2 cu. - gentle slope

- no float

- sand

- marshy - buckbrush moss + grass

- pan - $\frac{1}{4}$ tsp - magnetite.

(overburden
deep + ext.)

Δ2 - EM 671 (silt only)

- sandy

- 0.5 cu. - gentle slope.

- no float.

- sand + moss

- marshy - buckbrush + grass.

(overburden
deep + ext.)

Δ3 - EM 672 - 73 (silt + pan)

- sand + SLIGHTLY ORGY

- 2 cu. - slow (gentle slope)

- int float

- moss + buckbrush.

- pan - $\frac{1}{8}$ tsp - magnetite

- overburden deep + ext

Δ4 - EM 674 (silt only)

- sandy + slightly orgy

- int float (small pebbles)

- grass and buckbrush.

- Dry creek bed.

- gentle slope.

- overburden deep + ext

OVER.

D.C. - 13

July 20/66

Δ5 - EM 675-76 (silt + pan)

- 10 cu. medium
- int + met float
- Gvl. + sand.
- buck brush
- pan $\frac{1}{2}$ tsp - magnetite
- overburden deep.

Δ6 - EM 677 (silt only)

- Dry. - gentle
- coarse sand
- Gvl + small rocks
- int float
- tall buckbrush.
- overburden deep.

Δ7 EM 678-9 SILT + PAN

2 cu sec (s)
Int + vol. float.
gvl + sand - sandy silt
pan - $\frac{1}{4}$ TSP. mag.
overburden deep.

Δ8. EM 680-81 SILT + PAN.

Int met. + some vol. float.
5 cu sec (M)
gvl. + sandy. sandy silt.
pan. - $\frac{1}{2}$ TSP mag.
some color.
deep overburden

D.C. -13

-42-

July 20/66

Δ 9 EM 682-3 SILT & PAN

Int, mat & some vol. float.

4 cusec (M)

silt - sl. org. sandy

pan - $\frac{1}{2}$ to 2" mag.

flat area. buckbrush area

Δ 10 EM 684 SILT ONLY

no float or bedrock

< 1 cusec (S)

silt - clay, sl. sandy silt

buckbrush area.

overburden deep, cut.

Δ 11 EM 685-6 silt & pan

1 cusec (S)

no float bedrock, sandy bottom

silt - sl. sandy clay.

buckbrush area.

Δ 12 EM 687 - (SILT only)

- 1 cu. - gentle slope

- small rocks

- sandy & slightly orgy silt.

- Float - mat & volc.

- overburden deep feat.

- Buckbrush

OVER-

D.G. - 13

July 20/66

013 EM 688-9 SILT & PAN

10 core (M)

Int & vol float.

silt - sandy.

bulky area.

pan - very sl mag. & TSP

- overburden deep text.

014 EM 690-91 SILT & PAN

DRY GVL BOTTOM

Int & vol float

sandy silt

pan & TSP - slight mag.

bulky area.

- overburden deep text.

015 EM 692-3 SILT & PAN

2 core (M)

no float bedrock sandy bottom

silt - fine sand

pan - TSP. GOOD MAG. CONTENT

marshy area.

deep det. overburden.

D.G. - 14

July 24/66

 $\Delta 1$ - EM 694 (silt only)

- Dry ck. (boulders, gravel + sand)
- sandy silt.
- Float Int + volc.
- gentle slope.
- Bush + moss
- Overburden deep + ext

 $\Delta 2$ - EM 695 (ORG-SILT)

- couldn't find ck.
- ORGANIC CLAY
- Swampy
- flat.
- Overburden deep + ext.

 $\Delta 3$ - EM 696 (silt only) (sandy silt)

- 2 cusec. (gentle slope).
- Int + volc float.
- marshy
- Overburden deep + ext

 $\Delta 4$ - EM 698-99 (silt + pan)

- 1 cusec. (moderate slope)
- sandy silt.
- Int + volc float.
- Grv
- Overburden deep + ext.
- bush area.

[pan = $\frac{1}{8}$ tsp
- slight mag-
netite]

 $\Delta 5$ - EM 697 + EM 1425 (SILT + SOIL)

- Trickle - pools.
- organic silt.
- No float.
- Volc. outcrop in area.
- gentle slope

OVER

D.G. - 14

July 24/66

ΔG - 1426 + 1428 (both silt)

- < 1 cusec (gentle slope)
- no float.
- marsh.
- sandy silts

Δ7 - EM 1427 (silt only)

- 1 cusec. (flat)
- organic silt.
- Scrub bush and moss
- No float.
- overburden deep end

D.G.-15

July 25/66

Δ1 - EM 1429 (silt only)

- 0.5 cusec. - flat.
- NO float.
- Marsh - moss & buck brush.
- organic silt sample.
- overburden deep & ext.

Δ2 - EM 1430 (silt only)

- Dry creek - flat.
- sandy silt.
- grass - burned off area.
- no float
- overburden deep & ext.

Δ3 - EM 1432 (soil)

- slightly organic (light brown color)
- marshy area.

Δ4 - EM 1433-34 (silt + pan)

- 4 cusec. - gentle slope.
- sandy silt
- int, med, & volc float.
- gvl & small boulders.
- pan 1/2 top - slight magnetite.
- grass - burned off area.
- overburden deep & ext.

Δ5 - EM 1431 (silt only)

- Dry creek - gentle slope
- sandy silt - gvl
- int, med & volc float.
- overburden deep & ext.
- Bush area.

OVER

D.G. - 15

July 25/66

Δ6 - EM 1435 (SILT ONLY)

- 5 cu sec. - gentle slopes
- boulders
- Int + volc float.
- sandy silt.
- overburden deep text.

Δ7 - EM 1437 (SOIL)

- Dry gully
- moss bottom
- brown soil (dark)
- steep slope.
- overburden deep text.
- bush area.

Δ8 EM 1438-9 (SILT + PAN)

5 cu sec. - gentle slope

- mossy area
- gul & sand bottom
- no float, bedrock
- sl. org. silt
- pan - sl. mag. $\frac{1}{8}$ YSP.
- deep silt overburden
- gosse zone downstream.

Δ9 EM 1440 SILT ONLY.

- < 1 cu sec.
- gentle slope
- sandy, sl. org. silt
- no float or bedrock.
- deep silt overburden
- marshy, buckbrush area.

D.G. - 15

- 45 -

July 25/66

Δ10 - EM 1442-43 (silt & pm)

- D. 5 m. - pools - gentle slope.
- sandy-organic silt.
- float - int, met & volc. [pm 1/8 tsp slight magnetite]
- gvl
- Back brush & scrub.
- overburden deep text.

Δ11 - EM 1436 silt (only)

- trickle - gentle slope
- no float
- Outcrop nearby - fine grained int. (sample taken)
- sandy silt
- moss & sand bottom
- bush & scrub.

Δ12 - EM 1441 (silt only)

- Dry - sandy silt (sand bottom - shallow)
Crk - moderate slope.
- no float
 - overburden deep text
 - bush area.

Δ13 - EM 1444 (silt only)

- Dry creek
- sandy silt
- gvl bottom - shallow
- int, met, & volc float.
- overburden deep text.
- Bush area.

Δ14 - EM 1445 (silt only)

- Dry - sandy silt - sand bottom
- small gully,
- no float.
- overburden deep text.
- Bush area - moss

OVER

DG 16

JULY 31/66

Δ1) EM 900-1 sub-aq. pan.

15 cu. ft. - gentle slope.
no float or bedrock
sandy bottom
silt - sl. sandy
pan - good mfg. to TSP
backwash area flat.
deep pit overburden

Δ2) EM 902 silt only

1 cu. ft. - gentle slope.
silt - and ash, sl. org.
no float or bedrock.
backwash, marshy area
deep pit overburden

Δ3 - EM 905 (5014)

- intrusive outcrop
- magnetic defl. - 0 to 1 inch
- 50% dark minerals - biotite
- well weathered - rounded
- rock sitting in layers with
a strike of 240°
and dip - 30° to NW.
- also nearly vertical layering
with strike of 170°
and dip - 80° to NE

D.C. - 16

July 31/66

Δ4 - EM 903-04 (silt + pan)

- 5 cu sec - gentle slope
- coarse sandy bottom
- some int. + volc float.
- sandy silt.
- pan - $\frac{1}{8}$ tsp - slight magnetite
- Buckbrush + grassy area.
- int. outcrop 100 ft N 20 E
 of site.

D.G.-17

Aug. 4/66

Δ1 - EM 906-07 (silt + pan)

- Dry - 2 cubic gvl + sand

- sandy-clay silt

- met + volc float. [pan $\frac{1}{4}$ tsp. magnetite]

- steep slope

- overburden deep

- Bush area - moss

Δ2 - EM 908-09 (silt + pan)

- 4 cubic gvl. small boulders

- sandy silt

- Int met + volc. float

- gentle slope

- overburden deep + ext

- pan $\frac{1}{8}$ tsp. slight magnetite

- Bush area, moss

Δ3 - EM 910-11 (silt + pan) - sandy silt

- 3 cubic - steep slope

- Boulders + gvl

- Int met + volc. float.

- overburden deep outcrop across
Kinkland - main stream

- Bush area - moss

pan - $\frac{1}{8}$ tsp - slight mag -
netite

Δ4 - EM 912-13 (silt + pan) - sandy silt

- 2 cubic - mod slope - gvl + small boulders

- Int. met. + volc float

- overburden deep - outcrop across main

- Bush area - moss

OVER →

D.G. - 17

Aug. 4/66

Δ5 - Int. outcrop 600' NE of EM 906-07

- pink large grain rock.

- strike - 095°

Dip - 75° to NE

- magnetic deflection 0 to 1 inch

Δ6 - Vol. outcrop 50' due North of EM 912-13

- dark gray-blue fine grain rock

- strike 160°

Dip 75° to SW

- magnetic deflection nil

D.G.-18

Aug. 5/66

 $\Delta 1$ - EM 914-15 (silt + pan) sandy-clay silt.

- 3 cu sec. gentle slope.
- gvl. + sand
- Int. met + volc pebbles.
- overburden deep + ext.
- Buckbrush, some trees.
- pan $\frac{1}{2}$ tsp - magnetite
- much color.

 $\Delta 2$ - EM 916 (silt only) No float.

- sandy organic silt with some volc. ash
- gentle slope.
- less than 1 cu sec (trickle)
- marshy (moss, sand + organic)
- overburden deep + ext.
- grass + buckbrush - some trees

 $\Delta 3$ - EM 917-18 (silt + pan)

- sandy silt.
- Int. met. + volc float
- gvl. + boulders.
- moderate slope - 3 cu sec.
- some trees, grass + scrub.
- pan $\frac{1}{4}$ tsp - magnetite, some color
- Volc. outcrop beside creek

- dark fine grain
- magnetic deflection 2" to 5"
- strike 215°

Dip 50° to SE.

 $\Delta 4$ - EM 919 (silt only) outcrop

- sandy + organic silt.
- no float.
- 2 cu sec. - mod. slope
- moss + organics with sand.
- overburden deep + ext.

OVER

D.G.-18

Aug. 5/66

- Δ5 - EM 920-21 (silt + pan)
- 100 cu. sec. - gentle, almost flat.
 - Int. volc + sea. float
 - Sandy silt.
 - gravel + small boulders.
 - Buck brush + grass
 - pan - 1 tsp - magnetite
 - much color
 - overburden deep + ext.

Aug. 7/66

D.C. - 19

 $\Delta 1$ - EM 922 (silt only)

- sandy silt.
- coarse sand & gravel.
- Int. + vol. float
- Dry creek - 2 cur.
- moderate slope
- overburden deep & ext.
- Bush area, moss.

 $\Delta 2$ - EM 923-24 (silt & pan)

- 10 cur. - gentle slopes.
- gravel (sandy silt)
- Int. & sed. float.
- overburden deep & ext.
- Bush & scrub.
- pan $\frac{1}{4}$ tsp. - slight magnetite
- some color

 $\Delta 3$ - EM 925-26 (silt & pan)

- sandy silt.
- 4 cur. - gentle slopes.
- gravel.
- Int. mud + vol. float.
- overburden deep & ext.
- Bush area
- pan $\frac{1}{4}$ tsp - slight
magnetite
- some color

 $\Delta 4$ - EM 927 (silt) sandy + organic

- Marshy - no flow
- moderate slope.
- no float.
- overburden deep & ext.
- grass + scrub

OVER

D. G. - 19

Aug. 7/66

- Δ5 - EM 928 (SOIL) clay + organics
- Barely a trickle
 - moderate slope.
 - mossy channel
 - no float
 - grass + scrub.

- Δ6 - Claim posts - ~1500' North of Δ7
- post No. 1 Claim no. 91711
 - post No. 1 Claim no. 91712
 - post No. 2 Claim no. 91709
 - post No. 2 Claim no. 91710

- Δ7 - Claim posts - ~1500' North of Δ8
- post No. 1 Claim no. 91709
 - [post No. 2 Claim no. 91707
 - post No. 2 Claim no. 91708
- post #2
Ross
MGI
March 7, 1965
A FEKETE

- Δ8 - Claim posts - ~1500' North of Δ9
- [post No. 1 Claim No. 91707
 - post No. 1 Claim No. 91708
 - post No. 2 Claim No. 91706
 - post No. 2 Claim No. 91705
- post #1
Ross, MGI
1500 N
1500 E
March 7, 1965
A FEKETE

D.G. - 19

Aug 7/66

 $\Delta 9$ - claim posts - ~1500' North of $\Delta 10$

- Post #1, Claim # 91706
 - Post #1, Claim # 91705
 - Post #2, Claim # 91703
 - Post #2, Claim # 91704
- Post #1

Ross

M.G. (quite faded)

1500 N

1500 W

March 6, 1965

(unable to read name).

could be M. LAING.

 $\Delta 10$ - claim posts - ~500' North of $\Delta 11$

Post No. 1, Claim # 91703

(Em. 929-936)

Post #1, Claim # 91704

Post #2, Claim # 91730

Post #2, Claim # 91729

Post #2

A.E.F.N.

M.G. 7

M

1965

M. LAING.

 $\Delta 11$ - EM. 929-30 (silt + pan)

- trickle - mod. slope.

- moss + sand.

- sandy silt.

- no float

- overburden deep text.

- pan 1 tsp - very little magnetite

TRAVERSE.

AUG. 7, 1966.

D. J. 17.

SEE MAP 115H-9W.

PAGE 26.

A1 CREEK INACTIVE. SOIL.

- ORGANIC EM-737
- SI. SANDY.

FLOAT - VOL. - INT.

BUCK BRUSH - SLOPE $+10^{\circ}$ NORTH.

OVERBURDEN EXT. & DEEP.

PAN - EM-738 - NOT MUCH COLOR

A2 SED - COARSE SAND WITH
SILT. EM-739.

FLOAT - VOL. & INT.

SOME MET. & CONGLOMERATE.

BUCK BRUSH - SLOPE $+15^{\circ}$ EAST.

OVERBURDEN EXT. & DEEP.

PAN - EM-740 - LITTLE COLOR.

@ 3 C.F.S. M.

A3 SED - SANDY & SI. GEL.

@ 3 C.F.S. M.

SAME AS A2.

A4 INACTIVE - SOIL - SANDY CLAY
EM-743-44

FLOAT - VOL. & INT.

BUCK BRUSH - SLOPE 8° NORTH.

PAN - NO COLOR EM-744

A5 2 C.F.S. - SED - SILT - SANDY.

FLOAT - VOL. & INT.

SAME AS A2 EM-745-6.

INDEX

EMPRESS CREW

FIELD SAMPLES.

Arnie Reinsbakken:

No's 1000-1018

INDEX

EMPRESS CREW FIELD SAMPLES

Don Goodrich:

No's 456-478
501-509
414-423
429-442
525-536

INDEX

EMPRESS CREW

FIELD SAMPLES

Don Jarvos:

No.'s 550-556

559-564

443-455

520-523

541-549

571-578

591-593

INDEX

EMPRESS CREW

FIELD SAMPLES

Dan Wasylyk:

1300 -

Dan Wasyluk

1300 - 1399

AC ARCHER

EM 1064 -65

INDEX

EMPRESS CREW

FIELD NOTES

ERK JACKSON:

INDEX

EMPRESS CREW FIELD SAMPLES

Bob Chaplin:

No.'s 406-409

412

565-567

570

1083

INDEX

EMPRESS CREW FIELD SAMPLES

Eric Jackson:

No.'s 424 - 428 1446-1453
400 - 405 1460-1470
481 - 498 1600-1635
633 - 639 1471-1499
641 - 649
599 - 622
1200 - 1205
1207 - 1213
1214 - 1221
1223 - 1225
1227 - 1241
1242 - 1252
1253 - 1285
1527 - 1599
1286 - 1299
1400 - 1403
1404 - 1415
1416 - 1424
1454 - 1459

1425-1445 in Don
Kendrick notes.

INDEX

EMPRESS CREW

FIELD SAMPLES

Ian Franklin:

No.s 1100-1108

1111-1134

1135-1150

510-514

516-519

1151-1199

800-894

899

AUG. 23, 1966.

CLAIM STAKING.

CREW: D. JARVOS.
E. JACKSON.

DERICON CLAIMS. - 16 CLAIMS.

CLAIMS 1-8 E. JACKSON.

CLAIMS 9-16 D. JARVOS.

REFERENCE: SEE MAP 115H-6E.

FIRST LOCATION LINE RUNS FOUR CLAIM LENGTHS AND HAS A BEARING OF S 47° W.

SECOND LOCATION LINE LIES 2800 FEET TO THE NORTH. IT ALSO RUNS FOUR CLAIM LENGTHS AND HAS A BEARING OF N 47° E.

EACH RESPECTIVE NO. 2 POST WAS PLACED 1450' ROUGH MEASURE FROM THEIR NUMBER ONE POSTS, ALONG THE LOCATION LINES.

Project EMPRESS Photo — Collector D. JARVIS Date JUNE 23/66 Page No. 1

Sheet
1154-7W

TRANSVERSE NO. 1

Sample No.	Flow R.M.B. Cusecs.	SED. OR SOIL Grl Sand Silt Clay Org. or A, B, C Horizon	GEOLOGY <u>Float</u> <u>Bedrock</u> (Intr., Vols., Sed.) (Met., Alt., Fract.) (Sulphides)		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS Cold Hot Cu, H.M., Cu, Mo, Pb, Zn	
ES64 SILT NO PAN	25 CUSECS M	SED. CLAY.	NO BEDROCK OR FLOAT		FLAT	EXT. DEEP.	SEE MAP 7W	
ES63 SOIL NO SILT NO PAN	10 CUSECS F	FAIRLY ^{SOIL} ORGANIC ABOUT 1 FOOT FROM CREEK.	NO BEDROCK OR FLOAT USABLE TO GET PAN OR SILT		FLAT	EXT DEEP.	SEE MAP 7W	
ES62 SILT NO PAN	2 CUSECS S	SED. ORGANIC	NO BEDROCK OR FLOAT		SLOPE @ 20%	EXT. DEEP.	"	
ES61 ORG. SOIL NO PAN	8 CUSECS M	SOIL - ORGANIC ABOUT 1 FOOT FROM CREEK.	NO BEDROCK OR FLOAT		SMALL VALLEY	EXT. DEEP.	"	

TRAVERSE NO.

EMPRESS

Photo

Collector

D JAROS

Date: _____

JUNE 23/66

Page No

2

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock			Cold	Hot
		or A, B, C Horizon										
ES60 SILT NO PAN	5 CUSECS M	SILT CLAY & ORG.					NONE		FLAT	EXT DEEP	SEE	MAP 7W
ES59 SILT NO PAN	5 CUSECS M	SILT ORGANIC SURROUNDING CLAY COMPOURE					NONE		VALLEY SLOPE 10%	EXT DEEP	21	

EMPRESS
TRAVERSE #2.

JUNE 24/6
DAN. JARVIS

GEOLOGY NOTES:

REFERENCE MAP 115H-7W

Δ1 - POSSIBLE OUTCROP AS FAIRLY
SMALL - STAINED RUST WITH GREEN
AND SOME BLUE. BADLY CONTORTED.

Project EMPRESSPhoto A14861-38Collector D. JARVISDate JUNE 24/64Page No. 3

115H-7W 2W	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock			Cold	Hot
							or A, B, C Horizon					Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 2	E550 SILT NO PAN	1 cusec M	SED. - SILT					NONE		HILLY	VAST & DEEP		
	E551 SILT	5 cusecs M	SED. - SILT - ORGANIC PRESENT					INT.	SOME FLOAT SMALL O.C. PRESENT	VALLEY @ 15%	EXT. SHALLOW		
	E552 PAN	"	"					"	"	"	"		
	E553 SOIL	8 cusecs F	SOIL - ORGANIC					NONE		SLOPE @ 20%	VAST & DEEP		

Project EMPRESS Photo A14861-38 Collector D. JARJOS Date JUNE 24/66 Page No. 4

SEE MAPS
1154-7W
2N

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock			Cold Cu, H.M., Cu, Mo, Pb, Zn	Hot
2	E554 SILT NO PAN	3 cusecs M	SED - SILT WITH ORGANIC PRESENT					NONE		SLOPE @ 15°/2	VAST & DEEP		
	E555 PAN	4 cusecs M	PAN - GVL.						SMALL INT.	FLAT	EXT DEEP		
	E556 SILT	1 cusec S	SED - SILT SI. ORGANIC					NONE		FLAT	EXT. DEEP		

North end Archibik Road
115H-11W

Project EMPRESS Photo _____ Collector D.J. - 3 Date JUNE 28/66 Page No. 5

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.				Cold	Hot
			or A, B, C Horizon								Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. D.J. - 3	E443	6 cusecs	SED - SILT WITH SAND						FLAT MARSHY	EXT. & DEEP		
	SILT	M						NONE				
	E444	"	MAGNETITE @ 1/4 TSP.						FLAT MARSHY	EXT & DEEP		
	PAN							NONE				
42	E445	1/2 cusecs	SED - SILT CLAY						FLAT MARSHY	EXT & DEEP		
	SILT	S						NONE				
	E446-47	S	gvl. PAN - 1/2 TSP. GARNERS PRESENT						Flat	Scrub shallow narrow channel	ovrbrn. ext & deep	
	SILT + Pan	2 cusecs						Int. Met.				

Project	EMPRESS	Photo	Collector	D.J. - 3	Date	JUNE 28/66	Page No.	6				
Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)					Cu, H.M., Cu, Mo, Pb, Zn
		or A, B, C Horizon										
E448 SILT	10 cusecs	SILT - SANDY					NONE	FLAT	EXT.			
E449 PAN	M	PAN - 1/2 TSP-MAG						SCRUB NARROW DEEP CHAN.	\$ DEEP.			
E450-S1	F	Boulders very little gvl						30° slope	EXT	wide chan.		
SILT + pan	150 cusecs.						MET.			Scrub.		
E452	—	SOIL slight iron stain						volc. dark fine grain	Rolling Hills 50° slope	* Note on Traverse	3	
E453		SOIL - TAKEN BY						volc.	HILLS	* NOTE		
E454	—	GOSSAN ZONE						dark fine grain		ON TRAVERSE	3	
SOILS												

D. J. 3

June 28/66

1/ $\Delta 6$ Mile 59 Aishihik road
east side. Dark, fine grain
outcrop (volc.) slight iron stain
Strike 020° , Dip - 50° to SE.
Magnetic deflection 1 inch

2. $\Delta 7$ - DARK FINE GRAIN
OUTCROP - BADLY WEATHERED.
STRIKE 280° DIP - 045° N.E.
MAGNETIC DEFLECTION - 1 INCH.
LOCATION - MILE 58 AISHIHIK
ROAD - EAST SIDE.
2 SOIL SAMPLES TAKEN
E453 - 454.

Project EMPRESS Photo _____ Collector D. JARVIS Date JUNE 29/66 Page No. 7

115-H

TRAVERSE No D.J. - 4

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
						or A, B, C Horizon	(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
E555 SILT E520 PAN	F 180 CUSECS						NO GEOLOGY		FLAT	EXT	Δ 1	
							DEEP WIDE		SCRUB	+	200 FT	
							CHANNEL			DEEP	FROM RD.	
E521 E522 SILT + PAN	M 10 cusecs						NO GEOLOGY		Flat	Ext.	Δ 2	
							narrow deep		Scrub	+	1200 ft	
							channel		marshy	Deep	from rd	
E523 SILT ORG.	.5 cusecs S						NO GEOLOGY		FLAT	EXT.	Δ 3	
							MARSHY		scrub	+	400 ft	
									trees	DEEP	No lake	
E541 SILT ORG.	.5 cusecs S						NO GEOLOGY		FLAT	EXT.	Δ 3	
							MARSHY		SCRUB	+	EAST	
									TREES	DEEP	SIDE OF LAKE	

* see note page 5 GEOLOGY NOTES #1.

GEOLOGY NOTES

JUNE 29/66

DON JARVIS
TRAVERSE 4.

1/ $\Delta 3$ OUTCROP - LOCATED
NORTH OF LAKE - EAST SIDE
OF AISHIHIK ROAD @ MILE 51
STRIKE 260° DIPPING 70° S.E.
GRANETIC INTRUSIVE

SILT SAMPLE E523 TAKEN
NORTH OF SMALL LAKE EAST
SIDE OF ROAD. @ MILE 51.
LAKE IS ABOUT 600 FT IN
FROM ROAD.

SAMPLE # E541 TAKEN FROM
SMALL MARSHY CREEK FLOWING
INTO EAST SIDE OF LAKE.

Project EMPRESSPhoto —Collector DON JARVISDate JUNE 30/66Page No. 8

115H-6E

TRAVERSE No. 5

43

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
		or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Ait., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
E542 SOIL	—	SOIL - SANDY					BEDROCK SEE NOTE 41 PAGE 89a		HILLS TREES GRASS	VAST BUT APPEARS SHALLOW	MILE 51.5 OF AISHIHIK ROAD	
E543 SILT E544 PAN	1.5 CUSECS M	SILT - SAND & CLAY MIXTURE. PAN - 1 TSP. MAG.					INT. MET.	NARROW SHALLOW CHANNEL. 100' EAST OF RD.	HILL SLOPE 10°	VAST & DEEP	MILE 52 OF AISHIHIK ROAD.	
E545 SILT NO PAN	.25 CUSECS S	SILT - SOME ORGANIC LITTLE SAND.					NO GEOLOGY MARSHY - SCRUB SMALL TREES.		HILL SLOPE 6°	VAST & DEEP	SEE PAGE 89a FOR NOTE	
E546 SILT E547 PAN	2 CUSECS M	SILT - SOME ORG. SOME SAND. PAN - 1/2 TSP. (GVL)					NO GEOLOGY SCRUB - NARROW CHANNEL.		HILL SLOPE 60°	EXT. & DEEP	SEE PAGE 89a FOR NOTE.	

Project EMPRESS Photo — Collector DON JARVIS Date JUNE 30/66 Page No. 9

Sample No.	Flow P. V.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
							(Int., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)					
		or A, B, C Horizon										
E548 E549 SOILS	-	SOIL - A BIT SANDY					BEDROCK - SEE GEOLOGY NOTES PAGE 8		EAST SIDE AISHING ROAD MILE 54	VAST BUT APPEARS SHALLOW		
E571 SILT NO PAN	2 cusecs S	SILT - SANDY					NO GEOLOGY. SMALL NARROW CHANNEL.		FLAT SCRUB TREES	EXT ↓ DEEP.		
E591 PAN E592 SILT	.5 cusecs S	SILT - SANDY PAN - 1/3 TSP					NO GEOLOGY SMALL SHALLOW CHANNEL		FLAT TREES MOSS.	EXT ↓ DEEP.		
E593 SOIL	-	SOIL - WITH SAND AND SL. ORGANIC.					OUTCROP SEE 46 PAGE 9		EAST SIDE AISHING MILE 55	VAST BUT SHALLOW		

1154-1111

TRAVERSE No. D.J. 5

DO

A1. GRANETIC INTRUSIVE - BADLY WEATHERED AND CONTORTED BUT GENERAL TREND SEEMS TO STRIKE 210° AND DIP 61° N.W. THE OUTCROP IS LOCATED ON THE EAST SIDE OF AISHINIK ROAD AT MILE 51.5. SOIL SAMPLE TAKEN. SEE PAGE 6. - E542. NO MAGNETIC DEFLECTION.

A3 CREEK AT MILE 53 ON AISHINIK ROAD. SAMPLES TAKEN UP CREEK AND FROM THE 2 FORKS THAT JOIN ABOUT 150' FROM THE ROAD. NO PAN WAS OBTAINABLE FROM THE NORTH ARM. SEE PAGE 6 SAMPLES E545. E546. E547.

A4 APPEARS TO BE A FOLD OR SKARN ZONE. FACING EAST THE LEFT SIDE OUTCROP, SAMPLE #1, STRIKES 014° DIPS 55° SE. NO MAGNETIC DEFLECTION. ROCK IS AN INTRUSIVE - WITH EITHER A CALCITE OR FELDSPAR CRYSTAL.

SEE OVER PAGE.

9.

A4 RIGHT SIDE OF OUTCROP
APPEARS VOLCANIC ONLY
ABSENT OF THE CRYSTALS
PRESENT IN LEFT SIDE OF O.C.
MAGNETIC DEFLECTION IS
PRESENT UP TO 3 - 4 INCHES.
THE STRIKE IS 276° AND THE
DIP IS 52° N.E.

A6 OUTCROP - BADLY CONTORTED
AND WEATHERED, SLIGHT
MAGNETIC DEFLECTION - ABOUT
 $\frac{1}{2}$ INCH. VOLCANIC.
LARGE OUTCROP - MILE 55
EAST SIDE AISHINIK ROAD.

Project EMPRESS Photo — Collector D. JARVIS Date JULY 4/66 Page No. 10
D. GOODRICH

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Gr.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Pl., F. act.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
115H-11W													
TRAVERSE No. 6 Δm	E572 SILT E573 PAN	.5 cusecs M	SILT - SANDY-FINE PAN. - 1/2 TSP.					NO SMALL CREEK	GEOLOGY SHALLOW	SLOPE 35% TREES	EXT. \$ DEEP.	MILE 56 AISHIHIK ROAD.	
	E574 SILT NO PAN	.25 cusecs S	SILT - FINE, BLACK NO PAN					NO SMALL, MOSTLY UNDER- GROUND	GEOLOGY CREEK	MARSH, FLAT. SERUB.	EXT. \$ DEEP.	MILE 56.5 AISHIHIK ROAD	
	E575 SOIL	—	SOIL - SANDY					OUTCROP SEE NOTES PAGE 10a		STEEP HILL	EXT BUT SHALLOW	11	
	E576 SOIL	—	WEAK SOIL - COSSAN					OUTCROP SEE NOTES PAGE 10a		STEEP HILL	EXT \$ DEEP.	MILE 58 AISHIHIK ROAD.	

Project EMPRESS Photo _____ Collector D. JARVOS Date July 4/66 Page No. 11

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Bedrock			Cold	Hot
6	E577	M	GVL.					INT.		Flat	Deep	MARSHY	
	SILT	3 cusecs											
	E578	—	pan (magnetite) 1/4 tsp.					—	—	—	—	—	
	pan												

1154-12E

GEOLOGY NOTES

TRAVERSE 6.

JULY 4, 1966

DON JARVIS

DON GOODRICH

A1 OUTCROP - STRIKING 213° DIPPING 25° N/W. MAGNETIC DEFLECTION ABOUT 1 TO 2 INCHES. FINE GRAINED ROCK WITH POSSIBLE QUARTZ OR CALCITE. OUTCROP BEGINS AT MILE 55.5 OF AISHIHIK RD. ON THE EAST SIDE AND EXTENDS ALONG THE EAST SIDE FOR ABOUT $\frac{1}{4}$ MILE.

A3 OUTCROP - FINE GRAINED ROCK WITH INCLUSIONS. MAGNETIC DEFLECTION ABOUT ONE INCH. ROCK SEEMS TO SHEAR IN TWO PLANES, STRIKE OF 1 PLANE IS 277° DIP IS VERTICAL. STRIKE OF 2ND PLANE 200° DIP IS ALSO VERTICAL. OUTCROP IS VAST AND LOCATED ON THE EAST SIDE OF AISHIHIK RD AT MILE 56.5

A4 OUTCROP - FINE GRAINED ROCK. BADLY CONTORTED - (OVER PAGE) MAGNETIC DEFLECTION ONE - TWO INCHES. SOIL SAMPLE E576 TAKEN. EAST SIDE AISHIHIK RD. MILE 58 - 10a.

44 BADLY CONTORTED BUT
GENERAL STRIKE IS 190°
AND DIP IS 10° S.E.,
WEAK GOSSAN ZONE.

45 OUTCROP - FINE GRAINED ROCK
MAGNETIC DEFLECTION 1-2 INCHES.
STRIKE - 315°
DIP - 70° S.W.
WEST SIDE AISHIHIK ROAD
MILE 58.7
RUST-STAINED ROCK.

Project EMPRESS Photo 115- Collector D. JARVOS Date JULY 6, 1966 Page No. 12

D. GOODRICH

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
							or A, B, C Horizon					(Intr., Volc., Sed.) (Met., M., Fract.) (Sulphides)
EM 303 SILT NO PAN	1 cusec S	SED. - SILT WITH COARSE SAND					NO GEOLOGY SMALL SHALLOW CHANNEL	FLAT MARSHY SCRUB.	EXT & DEEP	500 YDS. EAST OF LAKE NORTH STREAM		
EM304 SILT EM305 pan	M 10 cusec	SED. - sand + muck. pan - magnetite (1/4 tsp)					None	Flat Marshy scrub	Ext. & Deep	1 MILE UPSTREAM CREEK SOUTH END OF LAKE		
EM306 SILT EM307 PAN	M 10 cusec	SED - SAND & ORG. Pan - magnetite					NO GEOLOGY MARSHY CHANNEL	Flat Marshy scrub	Ext & Deep.	400 YDS. UPSTREAM FROM TRAIL		
EM 308 SILT EM 309 pan	S 1 cusec.	Some gvl. mostly org.					NONE	Flat. Marshy Scrub	Ext. & Deep			

SEE MAP

1154 - 14W

TRAVERSE No. D. J. 7

EMPERESS

Phyto

Collector: D. JARVIS
D. BOODER

D. BOONBY CVT

Date 10/24 6/66

Page No. 13

1151f-14w

TRAVERSE-NO: D.J. 7

[illegible]

SEE MAP
1154-7W

TRAVERSE No. DJ-8

135
to

Project EMPRESS Photo 11522-137 Collector DON JARVIS Date JULY 7/66 Page No. 14

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
		or A, B, C Horizon										
							Float	Bedrock				
							(Intr., Volc., Sed.)					
							(Met., Alt., Fract.)					
							(Sulphides)					
EM 312 SILT	2 CUSECS.	SED. - SILT & FINE SAND GVL.					FLOAT INT.	NONE SHALLOW	SLOPE 5° EAST	EXT ↓ DEEP		
EM 313 PAN	M											

115 H - 7 W

TRAVERSE NO. 00.0

135°
to

Timber

Project EMPRESS Photo A11522 ¹³⁵₄₀ ¹³⁸ Collector DON JARVIS Date July 8/66 Page No. 15

SEE MAP
115H-13W

TRAVERSE A. J. 9

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
							(Intr., Volc., Sed.)	(Met., Alt., Fract.)			Cu, H.M., Cu, Mo, Pb, Zn	
		or A, B, C Horizon					(Sulphides)					
A2 EM 314 SILT EM 315 PAN	8 C.F.S. M	SED. - SILT & FINE SAND GVL. PAN - GARNETS PRESENT.					INT.	NONE.	SLOPE 5° NORTH	EXT & DEEP.		
A4 EM 316 SILT EM 317 PAN	6 C.F.S. M	SED. - FINE SAND. NO GVL. PAN - WHITE CRYSTALS PRESENT.					TREES, MOSS, SURROUNDINGS	NONE.	SLOPE 5° NORTH	EXT & DEEP.		
A5 EM 318 SILT EM 319 PAN	5 C.F.S. M	SED. - FINE SAND. GVL. PAN - MAGNETITE					INT.	NONE.	SLOPE 5° NORTH	EXT & DEEP.		
A6 EM 320 SILT EM 321 PAN	2 C.F.S. M	SED. FINE SAND GVL. PAN - MAGNETITE.					INT.	NONE.	SLOPE 5° NORTH	EXT & DEEP.		

A1 OUTCROP - STRIKES IN AN EAST-WEST DIRECTION AND DIPS TO THE NORTH. A METAMORPHOSED ROCK - THREE SAMPLES TAKEN - #1 A SCHIST TYPE TYPE ROCK. - NO MINERALIZATION.

#2. ANOTHER SCHIST - NO MINERALIZATION

#3. QUARTZ

QUARTZ VEINS ARE PRESENT.

A3 OUTCROP - SMALL. - STRIKES IN AN EAST-WEST DIRECTION DIPS TO THE NORTH - NO MAGNETIC DEFLECTION. - POSSIBLE MINERALIZATION CONTAINS SOME QUARTZ.

Project EMPRESS Photo A11015-201 Collector D. J. Date JULY 10/66 Page No. 17

SEE MAP
1154 - 14E.

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
		or A, B, C Horizon										
EM330 SILT NO PAN	6 C.F.S. M	SED. SILT ORG.					INT BOULDERS	NONE	FLAT SCRUB MARSHY	EXT 1/2 DEEP		
EM331 PAN EM332 SILT	5 C.F.S. M.	PAN - MAG. GARNETS PRES. GVL SED - FINE SAND & SILT					INT MET.	NONE	SLOPE SCRUB 5°	EXT 1/2 DEEP		

TRAVERSE No. 10.

GEOLOGY NOTES.

JULY 10/66

DON JARVIS

TRAVERSE 10.

Δ1 OUTCROP - STRIKES - 070°
DIPS - 18° SE

MAGNETIC DEFLECTION - NONE.

METAMORPHIC ROCK WITH QUARTZ
PRESENT. DOES NOT APPEAR TO
BE IN VEINS. A SCHIST,

Project EMPRESS Photo A 11364⁴⁴⁷ Collector D. JARVIS Date JULY 17/66 Page No. 18

SEE MAP
115H-9W

TRAVERSE No. A. 1. 1. 1

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) Bedrock (Met., Alt., Fract.) (Sulphides)			Cold	Hot
										Cu, H.M., Cu, Mo, Pb, Zn	
EM 333 SOIL.	DRY		SOIL - SANDY				INT	NONE	SLOPE 5° EAST	EXT 1 DEEP.	
EM 334 SOIL	DRY		SOIL - SANDY				INT	NONE	FLAT BUCK BRUSH	EXT. 1 DEEP.	
EM 335 SOIL	DRY		SOIL - SANDY - CLAY				INT	NONE	SLOPE 80 WEST	EXT 1 DEEP.	
EM 336 SILT EM 337 PAN	5 C.F.S. M.		SED - SILT - SI. ORG. GVL. PAN - MAG. NOT MUCH COLOR				INT	NONE	SLOPE 50 WEST	EXT 1 DEEP	

Project EMPRESS Photo 411364-447 Collector D. JARVIS Date JULY 17/66 Page No. 19

TRAVERSE No.	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
115H-5W D.J.11	EM340 SILT EM341 PAN	8 C.F.S. M.	SED - SILT sl. org. gvl. PAN - Mag. not much					INT	NONE	FLAT BUCK BRUSH	EXT & DEEP.		
	EM342 SILT NO PAN	1 C.F.S. S	SED. - SILT - SAND					NONE		FLAT BUCK BRUSH	EXT & DEEP		
	EM338 SILT EM339 PAN	1 C.F.S. S	SED. - sl. org. PAN - not much colour					NONE.		Slope 5° west	Ext. & deep.		

Project EMPRESS Photo — Collector D. JARVIS Date JULY 20/64 Page No. 20

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. <u>Q.J. 12</u>	EM 343 SOIL	DRY	SOIL - CLAY SI. ORG.					NONE		FLAT BUCK BRUSH	EXT 1/2 DEEP.		
	EM 344 SILT NO PAN	1/4 C.F.S. S.	SILT - ORGANIC.					NONE		SLOPE 100 SCRUB	EXT 1/2 DEEP		
	EM 345 SILT NO PAN	1/2 C.F.S. M	SILT - SANDY SI. ORG. BOULDERS.					INT.	NONE	SLOPE 5° SCRUB	EXT. 1/2 DEEP.		
	EM 346 SOIL	DRY	SOIL - SANDY CLAY SI. ORG.					NONE		FLAT BUCK BRUSH	EXT 1/2 DEEP		

10E
115H - 9W

Project EMPRESS Photo — Collector DON JARVIS Date JULY 20/66 Page No. 21

115H-10E
9W

TRAVERSE NO. 12

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
						or A, B, C Horizon	(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
EM 347 SOIL	DRY	SOIL - SANDY CLAY SOME ORG.					NONE		FLAT BUCK BRUSH	EXT & DEEP.		
EM 348 SILT EM 349 PAN	1 2 C.F.S. M.	SED. - SANDY ORG. PAN - BUL. NO. ... - MAG. COLOR					INT. MET.	NONE	SLOPE 5° SCRUB	EXT. & DEEP.		
EM 700 SOIL	DRY	SOIL - SANDY ORGANIC					INT. MET.	NONE	FLAT BUCK BRUSH	EXT & DEEP.		
EM 701 SILT NO PAN	TRICKLE	SILT - SI, CLAY & ORG. (SPRING)					NONE		SLOPE 5° SCRUB	EXT & DEEP.		
EM 702 SOIL	DRY	SOIL - ORGANIC CLAY					NONE		FLAT BUCK OR	EXT & DEEP		

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TRAVERSE No. <u>D.J. 13.</u>	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alth. Fract.) (Sulphides)	Bedrock			Cold	Hot
			or A, B, C Horizon									Cu, H.M., Cu, Mo, Pb, Zn	
	703 SOIL	INACTIVE	SOIL CLAY ORG.					INT. MET.	—	SLOPE 50 TREES	EXT & DEEP		
	704 SILT	TRICKLE	SED. ORG. SL. CLAY. APPEARS TO BE SPRING. RED STAINING					NONE	—	FLAT SCRUB TREES	"		
	705 SILT 706 PAN	TRICKLE	SED - SILT - SL. ORG. BUL. PAN. - MAG. No COLOR.					INT VOL.	—	SLOPE 50 TREES.	"		
	707 SOIL	INACTIVE	SOIL - ORGANIC SL. sand.					INT.	—	SLOPE 50 TREES SCRUB.	"		
	708 SOIL	"	SOIL - CLAY SL. Org.					NONE	—	FLAT SCRUB	"		

Project EMPRESS Photo Collector DON JARVIS Date JULY 31/66 Page No. 23

SEE MAP
115A - 15E

TRAVERSE NO. 14

Sample No.		Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvt.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
EM													
709 SILT 710 PAN	2 C.F.S. M	SED - SAND ALT SL. ORG. BUL.						Vol. int.	—	Small valley slopes so Buck Brush	EXT. & deep.		
711 PAN 712 SOL	6 C.F.S. M	PAN - MAG. LITTLE COLOR						Vol. int.	—	"	"		
713 SILT 714 PAN	2 C.F.S. M.	SILT - SANDY CLAY SL. ORG. BUL						Int. Vol. (met.)	—	"	"		
715 SILT 716 PAN	3 C.F.S. M.	SILT - SANDY BUL. ORG.						Vol. int. (met.)	—	Flat. Buck Brush	"		
		PAN - MCH MAG COLOR.											

SEE MAP 115H
14-E

TRAVERSE No. DJ. 15

Project EMPRESS

Photo

Collector DON JARVISDate AUG. 4/66Page No. 24.

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
						or A, B, C Horizon						
717 SILT NO PAN	TRICKLE					SILT - ORGANIC.	NONE GRASS LITTLE	NONE MARSHY BUCK BRUSH	SLOPE +5° EAST	EXT & DEEP		
718 SILT NO PAN	"					SILT - ORGANIC DEEP RED - BROWN COLOR	NONE GRASS LITTLE	NONE MARSHY BUCK BRUSH	"	"		
719 SILT NO PAN	"					SILT - ORGANIC	"	"	"	"		
720 SILT NO PAN	"					SILT - ORGANIC	"	"	N.E. SLOPE +5° NORTH	"		

OVER-

EM

721
SILT
NOPAN.

INACTIVE

SILT - VERY
ORGANIC

722
SILT
NOPAN

"

"

WANE

GRASS - MARSHY
LITTLE PUCK BRUSH

"

SLOPE

+5°

NORTH

SLOPE

+5°

SOUTH

EXT

↑

DEEP.

"

SEE MAP 115H
10W

TRAVERSE No. D. 3. 16

Project EMPRESS Photo 11447-424 Collector RON JARVIS Date AUG. 5/66 Page No. 25
11364-438

Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extant of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Hot Co, Fe, Mn, Cu, Mo, Pb, Zn	
						or A, B, C Horizon	(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)					
EM.												
723 SILT	1/2 C.F.S. M.					SED. - SILT.	NONE	BUCK BRUSH	SLOPE - 50 NORTH	EXT 1/2 DEEP		
724 SILT	TRICKLE					SED - SILT - sl. org. sl. sandy	NONE	BUCK BRUSH	"	"		
725 SILT	INACTIVE					SED - SILT - clay	NONE	GRASS - BUCK BRUSH	SLOPE + 50 EAST	"		
11364-438 726 SILT	4 slow					SED - SILT - sl. organic	NONE	"	FLAT BUCK BRUSH	"		

727 SLOW
SILT TRICKLE. SED - SILT
- ORGANIC

"

SLOPE
@ 450
WEST

"

OVER

728	TRICKLE	SED - SILT - SANDY	NONE SOME REA SPANNING BUCK BRUSH.	SLOPE 8180 WEST	EXT 3 DEEP.
729	SILT INACTIVE	SED - SILT - SL. ORG.	NONE BUCK BRUSH GRASS,	"	"
730	SILT "	SEA - SILT	"	SLOPE 150° E	"
731	TRICKLE	SED - SILT - SANDY	FLOAT - INT. BUCK BRUSH.	SLOPE 880 WEST	"
732	SILT "	SED - SILT - ORG.	NONE. BUCK BRUSH.	850 SOUTH.	"
733	SILT "	"	FLOAT - INT.	50 EAST	"
734	SILT "	"	NONE BUCK BRUSH	50 WEST	"
735	SILT "	SED - SILT - SANDY - ASH	FLOAT - INT BUCK BRUSH	50 SOUTH	"
736	SILT "	SED - SILT SL. ORG.	NONE BUCK BRUSH	"	"

Project EMPRESS Photo — Collector D. JARVIS Date AUG 1966 Page No. 27

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL				GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			Cold	Hot
			or A, B, C Horizon								Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 19	115H-9W											
	EM											
	759 SOIL	TRICKLE	SOIL - SANDY SL. ORGANIC					NONE SAMPLE TAKEN BELOW MOSS COVERING RED BROWN STAIN.	SLOPE 75° NORTH	EXT 1' DEEP.		
	760 SILT	"	SED - SILT FINE CLAY					NONE BUCK-BRUSH - SMALL MARSHY CHANNEL	17	"		
	761 SILT	"	SED - FINE SILT SL. ORGANIC				"	"				
	762 SILT	"	"				"	"	"	"		
	763 SILT	INACTIVE	SED - ORGANIC SILT					"	"	"		

JUNE 25 1966

Traverse AR6

SIFTON Range.

Page 1

AR6-Δ1 - gossan zone

sericite - chlorite Schist.

Contact meta?

Foliation - $110/80^{\circ}$ SE

to west.

Volcanics
trending same direction.

AR6 Δ2(a) ~~Rolling~~ hst. contact to

Vol. on west.

South west corner of 37 mi lake.

Contact trends $065/80^{\circ}$ NW.

hst. has vol. dikes cutting throughout
(no mag. def.)

AR6 Δ2(b) - scum rock (silica rich)

found on east side of hst zone.

gossan zone on east side of mt.

AR6 Δ3 - Vol. Breccia: - angular chunks
of igneous rock.

Trending $295/15^{\circ}$ NE.

seems to occur by the hst.

gd dikes of green angular vol. (Lewis?)

(no mag. def.)

AR6 Δ3(b)

JUNE 28 '66

Traverse AR-7

1 DIVISION ML (8E)

2t₃ pebble Cong. with minor
2t₃ sandstone. - oolitic
trending 140/38° SW.

AR7-Δ1 - 2t₃ pebb. Cong.
clean oolitic matrix

AR7-Δ1(b) 2t₃ ss. — oolitic.

2. ~~AR7-Δ2~~ Brown. lime Rich Vol. Breccia
has veins of 2t₃ xslate through
jointing - close. <1-2")
also shows limy weathering.
flow bands. 355/60° W.

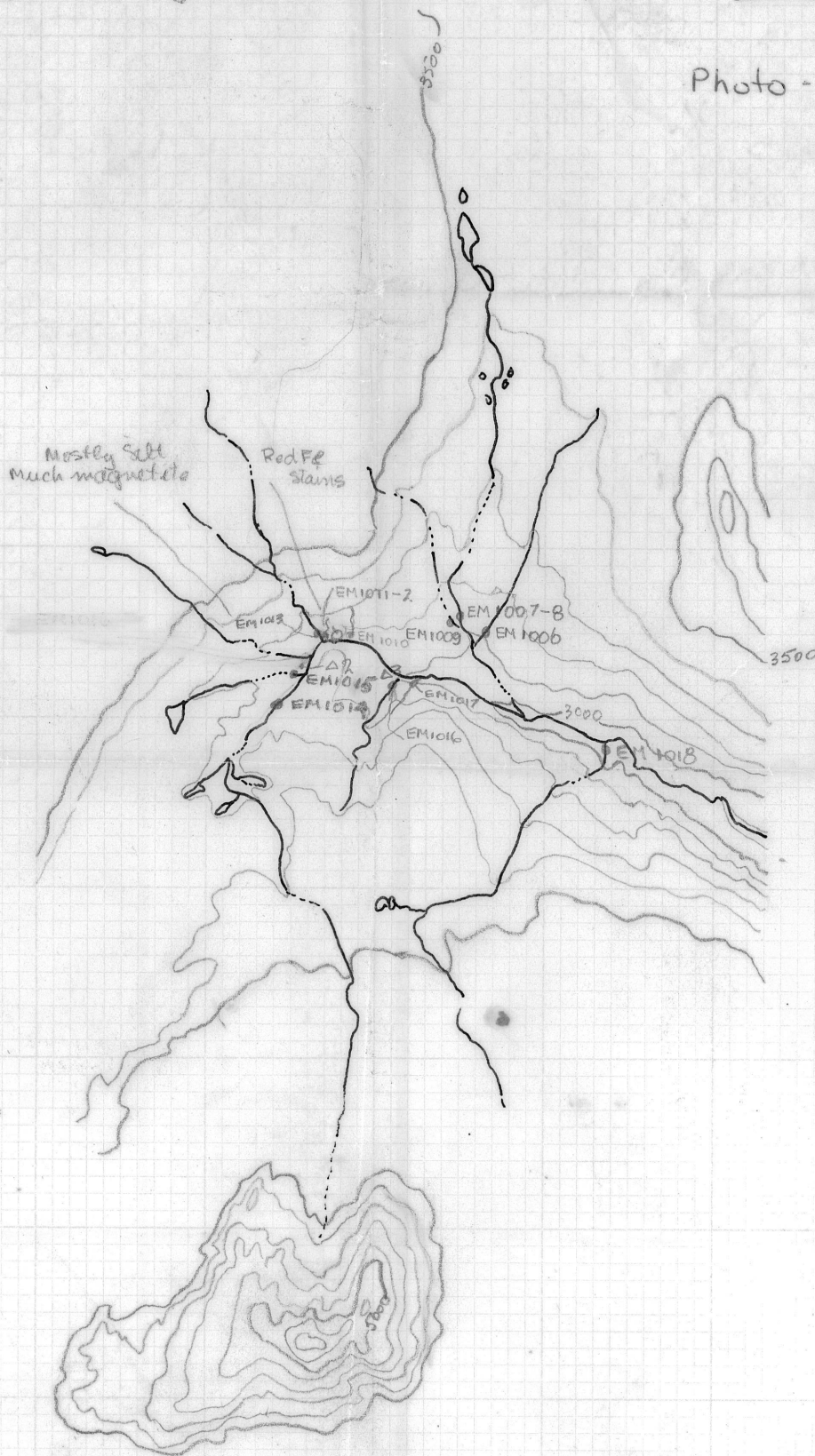
ARNE REINSBAKKEN TRAVERSE NO. ⁹10.

overlay for Page 6.

Photo NO.

11015 NO. 147, 148,
149.

Photo - A14960 No's 58-9



July 1 '66
TRAVERSE - AR-8

Page 2

start sheet 1E - 2 mi NW of SOB lake.

1 AR8 A1. either Pink granit or
~~or Monzonite.~~

- large K-feld Phenocrysts
- slightly magnetic def. 2-4"

Joint - 045/40 NW

- along these joints there has been remobilization of K-feld. - depleted in areas surrounding joints. AR8 A1b
- Joints 2-4" apart in zone 20' wide.

enoties - granitic & gn schist. showing
rust brown colouration.

2. AR8 A2. Vol. no structures such
as joints or flow-banding
visible.

3. AR8 A3 Contact between vol &
Pink Granite.

- Monzonite zone 20' across.

- 2-4" mag. def. in intrusive RX.
Magnetite concentrated in lineations

4. Vol rock containing much Fe.
Mag. def. 3-4"

5. AR8 A5. ^{green fine gr.} Vol. flows. Contain large
Blocks of diff. type of vol.
no mag. def.

Δ5 cont.

volcanic flows (later than qtz Monz.)
found angular inclusion of qtz. Monz.)
dipping gently to the NE

Map 1E N.West

Project EMPRESS Photo _____ Collector A. REINBAKEN Date July 1 1966 Page No. 3

TRAVERSE No. AR-8	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS			
	Loc.		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot		
														(Intr., Volc., Sed.)	(Met., Alt., Fract.)
or A, B, C Horizon															
	EM 1000	4 cfs.	Sed.					Int. Met. Vol.		flat.	ext. mod.				
	1E NN.	Mod.	Boulders.	✓	✓										
	EM 1001	4 cfs	Sed.	✓	✓			mill		flat.	ext. deep.				
	"	Slow													
	EM 1002		soil.					mill.		flat.	ext. deep.				
	soil.		on Top of Vol. ash.												
	EM 1003	1/4 cfs	Sed.					Vol. int.		South +5°	ext. mod.				
	1/4	Mod.	✓	✓											

EM 1004 Pan

P. 2 → over.

AR - 1 to 7
Super Calc.

EM 1005 Soil

- clay material under organics. 2
flat volcanic.

Sheet 1E

- overburden - ext. mod.
- slope - flat.

Map sheet 8W.

TRAVERSE No. AR-9	Project	Photo	Collector	Date	Page No.	ANALYTICAL RESULTS						
	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	Cold Hot Cu, H.M., Cu, Mo, Pb, Zn
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				
or A, B, C Horizon												
	loc.											
	EM1010 8W	Thick	sed. ✓ ✓	nil		N. +5°	ext. deep					
	EM1011 8W	1 cfs. mod.	sed. ✓ ✓	vol. int. sed.			ext. deep.					
	EM1012 "	"	Pan	"		"	"					
	EM1013 "	3 cfs mod.	sed. most silt. much magnetite.	int. vol.			ext. deep.					

TRAVERSE No. AR-9

JULY 2 1966

AR Travers C NO. 9.

start south of rockfield lake.

Sheet 8W

Photos A14960 58-9.

1. AR9 Δ1 - near silt sample EM1007.
 Very angular vol float.
 - Shows rusty band. - Fe stains in creek.
 - Highly mag. 4-6" mag. def. in spots.
 - Creek also has rounded int & qtz pebble cong. float.
2. AR9 Δ2 Gabbro. float. (angular)
 - Fe rich - mag. def. 6".
3. Stream at silt sample EM1014 has much red Fe stains.
4. Sample EM1017 is 1000' down stream from EM1016.
5. Sample EM1013 mostly silt
 - contains much magnetite in stream.
6. AR9 Δ3 - float (angular) Phyllite.
7. Around sample EM1018 - the ice is still present around creek. leaves a white ppt. behind on melting.
 Possible ice.

shows possible presence of CaCO_3
farther up stream.

JULY 4 1966

AR Traverse no. 10

Start in Miner's Range going South
from Copper Lake.

1 AR10 Δ 1 vol. (Lewis?)

mag def. 4-6"

Purple green vol.

some alteration chlorite

Calate filling amygdules.

EM1021 - silo pan.

— minor mag.

1023 - Fe stains

AR II 21 - 2x3 Magnetite.

some 2x3 pieces 1-2" wide contain some Magnetite.

— Slight mag. def.

Traverse. No. 11.

Sample EM1030 Pan.

— much mag. & garnets.

Also. white tail in pan.

2. Sample EM1032 Pan — great amt. of magnetite.

Silica rich with 12x in crack. contain many large grains of mag.

mag. Def. 3"

Project **EMPRESS.**

Photo

A4960 58-9

Collector

AR.

Date

JULY 2 1966

Page No.

6

Sample No.	Flow R.M.S. Success.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Flint	Bedrock			Cold	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Culphides)				Cu, H.M., Cu, Mo, Pb, Zn	
loc.		or A, B, C Horizon										
EM1014 BW	5 cfs slow	sd.	✓				int. vol.		flat.	ext. deep.		
EM1015 "	3 cfs mod.	sd. much magnetite.	✓	✓	✓		int		flat.	ext. deep.		
EM1016 "	1 cfs mod.	sd.	✓	✓		✓	vol.		flat	ext. mod.		
EM1017 "	1 1/2 cfs mod.	sd.	✓	✓			nil		flat	ext. mod.		
EM1018 "	3 cfs mod.	sd.	✓	✓	✓		int. vol.		+5°	ext. mod.		

✓ Map sheet 8W.

Project EMPRESS

Photo

Collector AR

Date JULY 8/66

Page No. 9.

TRAVERSE No. AR 11	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Com. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS			
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cu, H.M., Cu, Mn, Pb, Zn	Co	Mo	Fe
								(Intr., Vels., Sed.)	(Met., Alt., Fract.)						
or A, B, C Horizon															
	EM 1019	TRICKLE	sed	✓			✓	int		NE +5°	ext. clasp.				
	8W	slow													
	EM 1020	3 cfs.	sed	✓	✓		✓	int.		E +5°	ext. Deep				
	8W.	Mod.	+Boulders.												
	EM 1021	2 cfs.	sed	✓				int.		S +10°	ext. Mod.				
	8W	Mod.													
	EM 1022	Swamp	sed	✓	✓		✓	nil.		SE +10°	"				
		1 cfs.													
	EM 1023	2 cfs.	sed	✓	✓	✓	✓	int.		S. +15°	"				
		Mod.													

✓ 14 W Map sheet.

TRAVERSE No. AR 12.	Project	Photo	Collector	Date	Page No.	ANALYTICAL RESULTS	
	EMPRESS		AR.	JULY 11	10	Cold	Hot
	Sample No.	Flow R.M.S. Cuscs.	SED. OR SOIL		GEOLOGY	Cu, H.M., Cu, Mo, Pb, Zn	
			Gvl.	Sand Silt Clay Org.			
			or A, B, C Horizon		Float Bedrock (Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)	Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden
	EM 1024	—	soil ✓ Below vol. ash.		—	flat.	swamp
	EM 1025	—	soil. vol. ash.				
	EM 1026	rots no ash.	sed. ✓ ✓		int. meta.	flat	swamp.
	EM 1027	"	Pan		"	"	"

EM 1033	ices slow	silt. org. & silt.	-	-	+10°	ext mod.	
EM 1034	-	soil. below roc. ash.	-	-	flat	ext. deep.	

✓ 14 W Map sheet.

Project **EM**

Photo

Collector **AR.**Date **JULY 11/60**Page No. **11**

Project	Sample No.	Flow R.M.S. Euses.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS			
			Grill.	Sand	Silt	Clay	Crg.	Fleet	Bedrock			Cold	Hot		
														(Intr., Volc., Gne.)	(Met., Alm., Fract.)
Phase	Collector		of A, B, C Horizon									Cu, H.M., Cu, Mo, Pb, Zn			
TRAVERSE NO. AR12	EM1028	Dry	soil.		✓	✓	nil.	int.?	+50 to 60 East.	ext. mod.					
	EM1029	2 cfs. mod.	soil-silt.		✓	✓	met.	—	+50 E	ext. mod.					
	EM 1030	"	Pan				"	—	"	"					
	EM 1031	1 cfs slow	silt.		✓		int. + mod.	—	+50	ext. mod.					
	EM 1032	"	Pan				"		"	"					

samples 1033-4 on back of sheet 10.

SEKULHON Lake. 12E Mapsheet.

Project EMPRESS Photo.

Collector.

Date _____

Page No.

12.

[illegible]

EMPRESS

JULY 17/66.

ATKA CK.

AR. TRAVERSE NO. 14

Page 13

- 14 Δ1 - E 1039 - soil + silt
 - from dry ck.
 - no outcrop
 - float volc. + intr.
 - gentle - ext + M deep
 - pan sample none.

- 14 Δ2 - E 1040 - silt
 - E 1041 - pan
 - M flow - 3-4 cu/s
 - intr + volc float
 - no o.c.
 - ext + M deep.

- 14 Δ3. E 1042 - silt (sandy)
 - E 1043. - pan.
 - M flow - 2 cu/s
 - intr + volc float
 - no float outcrop.
 - ext + M deep.

14A4 - EM1044 - silt

- " 1045 - par

- inter float, no oc

- ext + deep

- $\frac{1}{3}$ air/s - M

- gentle -

Project **EMPRESS**10-W.
A11364-436-7

Photo

Collector

AR.

Date

JULY 29/66

Page No.

14.

Sample
No.Flow
F.A.S.
Cusecs.

SED. OR SOIL

Gvl.
Sand
Silt
Clay
Org.
or A, B, C
Horizon

GEOLOGY

Float Bedrock
(Intr., Volc., Sed.)
(Met., Alt., Fract.)
(Sulphides)Gen. Topog.
Slope AngleApprox. Depth
& Extent of
OverburdenANALYTICAL RESULTS
Gold Silver
Cu, H.M., Cu, Mo, Pb, Zn

TRAVERSE No. 15

EM
10462 cfs
Mod.

Sed. soil

✓

mil.

- Int.
- met.

-

ext.
Mod.EM
1047

spring

soil.

✓

✓

-

-

Rolling

ext.
Mod.EM
1048

soil.

soil.

✓

✓

✓

-

-

"

"

EM
10492 cfs
Mod.

Silt - silt.

✓

✓

✓

int.

-

"

"

1050

soil.

above

volcanic
organics.

✓

-

-

1/4

1/4

1/4

10 W Map Sheet.

A11364 -436-7

Project EM

Photo

Collector AR

Date

JULY 30 1966

Page No.

15

TRAVERSE No.	Sample No.	Flow R.M.S. Cusces.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold Cu, H.M., Cu, Mo, Pb, Zn	Hot
								(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)					
								or A, B, C Horizon					
15	EM1051	soil	soil. vol. ash.					-	-	flat.	ext. Deep.		
	1052.	2 cfs mod.	silt. ✓✓					met. + int.	-	"	"		
	1053	2 cfs slow	silt. ✓✓					int.	-	gentle	"		
	1054	soil.	vol. ash. + clay.					-	-	gentle	ext. deep.		

Project

EMPRESS

Photo

9E-W Map sheet.

Collector

AREINBAKKEN

Date

JULY 31

Page No.

17

	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cold	Hot
			or A, B, C Horizon					(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
TRAVERSE No. 10	EM 1057	1/2 cfs slow	sed	✓	✓			—	—	flat. gentle	ext. deep.		
	EM 1058	5 cfs. Mod.	sed.	✓	✓	✓		int.	—	"	"		
	1059	5 cfs fast.	sed	✓	✓			int. vol.	—	gentle	"		
	1060	10 cfs Mod	sed			✓	✓	int. vol.	gr. volc. —	gentle	ext. Mod.		
	EM 1061	1 cfs Mod.	soil	✓	✓			—	—	gentle	"		

1064-5 - all archer

9E-W Map sheet.

Project EMPRESS.

Photo

Collector

AR.

Date JULY 31 Vol. 18 Page No. 18

TRAVERSE No. 16	Project	EMPL. NO.	Photo	Collector					Date	ANALYTICAL RESULTS			
	Sample No.	Flow R.M.S. Cusecs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	Cold Hot	
			Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cu, H.M., Cu, Mo, Pb, Zn	
								(Intr., Volc., Sed.)	(Met., Alt., Fract.)				
								(Sulphides)					
or A, B, C Horizon													
EM 1062	3 Cfs Mod.	silt.	✓	—	—	gentle	Ext. Deep.						
1063	8 cfs. Mod.	silt.	✓✓	mt. + Vol.		flat	"						
EM 1064	3 Cfs slow	soil.	✓✓	—	—	gentle	"						
EM 1067	5 Cfs	silt-sand.	✓✓✓	vol. + int.	—	gentle	Ext. Mod.						

ENTRESS

Aug. 4 '66.

Page 19

AR TRAVERSE 17

15E - SW end of L. BUFFALOW

① EM 1068. sed. org - silt.
from Marsh.

- rcts - slow.

- Ext. Deep overburden.

- flat slope.

- vol float - no outcrop.
also int.

2. EM 1069 - Soil

- 400 yds upstream from 1068

taken from Red Fe Stained
Area.

int. float.

int. outcrop.

Fe possibly due to mafic
mineral breakdown in Int. rocks.

3. EM 1070 sed. sandy - silt
trickle. 20° slope?
int. float + outcrop.

Aug. 5 '66

AR TRAVERSE # 18

10W

Anomalous
Area

① EM1071 soil. Below vol. ash.
Clay sample.

- overburden ext. + Deep.

- gentle slope.

- int. outcrop.

Mag. Def - slight 1-2"

2. EM1072 silt- (sandy)

- 1 cfs - slow

- Int. float with much magnetite
in stream

3. EM1073 silt- (slight. organic)

- 4 cfs. - Mod.

- int. float.

- overburden ext. - deep.

4. EM1074 silt. (Sandy + org.)

- 5 cfs. Mod.

- int. float.

5. EM1075 - soil. (damp.)
- no vol ash.
- o.b. ext & Deep.
- gentle slope.

6. EM1076 soil. (+ clay) wet.
- Below vol. ash.
- Sample taken next to stream
- slope gentle.
- o.b. ext. & Deep.

7. EM1077 soil (vol. ash).
- gentle slope.
- o.b. ext + Deep.
- swampy surroundings.
↑

8. EM1078 soil (vol ash + Org),

RPB09

* 9. EM1079 soil (Below vol. ash)
contains sand & organics.

10. EM1080 soil. (some vol. ash)
- int. float
- also some organics - slight

11. EM 1081 silt. (slight org)

- 5 cfs. Mod.

- int float. some Fe
stains in soil.

- slope gentle.

- ob. ext. - Deep.

12. EM 1082 silt. (organic
clay sand.)

- int float. about int outcrop.

- 4 cfs. Mod.

- ob. ext. mod.

- slope - gentle $+1^{\circ}$

Begin SW of Bad Lake. NE

① EM 1084 soil.

- on top of vol. ash.
- slight organics.
- gentle slope.
- stream $\frac{1}{8}$ cts. slow.

2. EM 1085 soil

- trickle
- soil clay + org on top of vol. ash.
- gentle slope.
- int float.

3. EM 1086 soil. - int. oc.

4. EM 1087 soil. - vol. oc.

5. EM 1088 soil

stream $\frac{1}{8}$ cts. vol. oc.
+ float.

6 EM1089 Silt.

- $\frac{1}{2}$ cts mod.
- int. float. + vol float.
- gentle slope.
- o.b. ext. deep.

AR 19 Δ1, Slight Met. Rx.

chloritization of mafics.

- slight alignment of chlorite
- plus some epidote alt.
- No magnetic deflection.

grades into granitic texture
up the hill.

- Med. Grained.
- jointed
- K-felds - remobilized along joints - also epidote
- prominent joints
- 007° / 85° ESE

AR 19 Δ2 Dike 125° / 65° SW.

- fine Grained.
- contains epidote & chlorite.
- Prom. joints - 180° / 80° W.
- 90° / 15° - 20° S.

AR 19 Δ3 vol. dark green fine gr.

matrix
feldspar phenocrysts
bedding 325° / gentle dip NE

- jointing 068/85 SE
174/65 W

AR19 Δ4 vol Breccia.

AR19 Δ5 vol.

Bedding 270/15 N

also has vol Boulders? blocks

Aug 13 / 66.

- ① EM 1090 - silt.
- slight org.
- 5 cfs mod.
- int & vol. float.

- ② EM 1091 - silt.
- 5 cfs mod.
- int. float.
- flat topog.

- ③ EM 1092 Sandy soil.
- Dry Creek bed.

- ④ EM 1093 silt. (slight org.)
- 1 1/2 cfs mod.
- int & vol. float.

- ⑤ EM 1094 silt. (sandy)
8 cfs fast.
- int & vol. float.

- ⑥ EM 1095 soil.
- slight organic.
 - gentle slope.
 - extensive ob. Deep.

- ⑦ EM 1096 - soil.
- 1 cts mod.
 - slight org.

- ⑧ EM 1097 silt. (slight org.)
- 3 cts mod.
 - int. & vol float.
 - gentle slope.
 - ob. ext. + Deep.

- ⑨ EM 1098 soil
- stream 3 cts fast.
 - ob. ext. + Deep.

- ⑩ EM 1099 soil.
- clay + org. above vol ash.

(11) EM 1900

same as EM 1099.

(12) EM 1901 soil.

- org & vol ash.
- ab. ext & deep.
- gentle slope.

(13) EM 1902

same as above

14 EM 1903 - same

- scts. mod.

Aug. 14/66

Follow up around Mack's Co.Photo A11364 - 395

① EM 1904 - silt. (clay from seepage.

- $+10^{\circ}$ slope.

- ob. ext. Deep.

- solid magnetite o.c.

2. EM 1905 soil (sandy)

- from Trench in south end of Mack's Co.

- on top of knob.

- vol. outcrop.

③ EM 1906 soil (B+C horizon) in Trench below ^{30 ft.} EM 1905

- above atz - felds. porphyry outcrop.

④ EM 1907 - silt. (clay + sand)

- down road from Mack's Co.

showing - southernmost.

Photo 11304 - ~~453~~

Mack's Cu.

- ⑤ EM 1908 - Sandy - org silt.
- from trickle.
 - East of Mack showings.
 - Swampy area
 - ob. ext. Deep.
 - no outcrop.
 - Vol (green) float.
 - gentle slope.

- ⑥ EM 1909 - soil slight org.
- (prob. active.)
- Below organics.
 - ob. ext. deep.

Claim post Joe 385

Feb 1966.

- Rather short post?

AR TRAVERSE # 21

Page.

Aug. 17 '66.

Photo A11364 - 452

Macks Cu.

① AR 19 Δ1 green med. gr. volcanics

- Pyrite in stringers sometimes
assoc. with epidote.

- Magnetite rich in zones.

- deflection - 6 inches.

- Claim post. #1 H.G. 6.

Feb 25 1966

H. GLOSLEE

② AR 19 Δ2. - silicious green finegr. vol.

- Pyrite along shear zone.

also some minor Chalcopyrite

- shear planes 300 \ 55 NE

0 \ 55 W.

15° \ 75° SE

③ Sample EM 1910 soil.

- NW facing slope from gossan area

- wet clay under organics.

- water seepage.

$\Delta 4$ - Basaltic

$\Delta 5$ volcanic flow - contains
amygdular Basalt
with layers of Vol. Breccia
- Breccia consists of Block +
Bombs of various sizes
with a fine grained
matrix (ash like)

Bedding $240 \setminus 20$ SE

Empress

page 1

Hopkins - Sharn

Xalline Limestone -

130°/40N

East side - foliation 110°/25N

- Shear 330/80E - strike slip

+ E. side
moved S.

- minor garnet + epid
shear with traces
cpx - near contact
with dioritic dyke (5' wide)
trending northerly +
steeply dipping

- Xalline limestr shows evidence
of 3 stage folding, with
axis plunging
northerly at
low angle



cred. of hill formed by
porphy-granod. to Nyl
N-S/STEEP - 100' and
- Co. on west side in
small CaCO_3 pondant.

- intr. in very st. mag. gneiss
see photo 14881-37

$\frac{1}{2}$ mi. east of truck
met. in 155°/20 NE

yellow limestone, gneiss etc
highly siliceous &
low mag. suscep.

mile 29.7, 200' E of road

gtz - bis. sch. $\rightarrow$ gneissic
intr. F₁ - 335°/70 NE
low mag. suscep.

Empress

page 2

— June 17/66

14861-91 $\Delta 1$ Rec.

CG - granite - orthogneiss

- fault between granite

+ Bob - toward south

$\Delta 2$ - dk green

chert

June 18th

$\Delta 1$ - 18-6-66 - elev 6200'

C.g. porphyritic granite

mg. susp. low -

$\Delta 2$ - 18-6-66 - elev. 3600'

gossan zone, cat trenches

by dam #4 JUNE 14th

stroked JUNE 8/66 by Mr. Thom

grey Xalline limestone

110°/80NE to west of
west end of airport

- eastern end, in min. zone
attit 130°/step) -
min! pyrite, py chalc.

mostly? in gillman zone
replacing limestone in
a city-like section
of Xalline limestone.

- dyke of felsite into
W cut the showy,

- very little magnetite noted
f'n have low mag susp.

- zone exposed by cut
200' x 50' - near on east

end min. very sparse
+ trace out!

Δ3 - 18-6-66

- gneissic in - foliation

110° - steep N.

- low mag. suscept.

- North trending dyke
of felsitic intr. common

Δ4 - limestone contact

Δ5 - peak with cairn, 3 miles
east of the bend in
Hotshi Lt - Rv

purple f.g. porph

rdc flows, overly intrusive

what of lower down

mt side to the west

- mag suscept. low

→ elev - 4800'
Δ6 - c.g. porph rhyolite
- sl. magnific.

soil
E411 Δ7 - c.g. qtz monzonite
with abundant apparently
barren qtz stringer
- possible minor ant
sample dried by above
oc of broken rock
- area of oc. rel.
extensive 2000x100
intermittent.

Δ18 - qtz monzonite
E-410 ck - 10 cusecs
sandy stream sed
choppy for Moly.
- ~~rip~~ - some spec. show
purple flucite
dissom. Rx jointed 6" intervals

Empire

page 4

N-S / 60E) - + faulted?,
E-W/V.

JUNE 1974 -

Δ.9 - elevn 5300 - knob 3 1/2 miles
east of Hopkins Lake

- c.g. grey - (grey to sl. brownish
blocky jointed weathering)
intr. or. low Qtz content
→ skarnic rock with

dis. grains Fe_3O_4 in mafics
(pyroxenes?) + biotite,

- possibly a MORITIC type
gabbro, or hypersthene-
bearing Qtz DIORITE

- mag. suscept

6" (mod) + topographically
high

Δ10- Qtz monzonite forms
small flesh-col talus
slopes + stream beds
- locally altered with
minor epidote replacement
along fractures + some
alteration of feldspar → glass
white feldspar occurs in small
patches - Some minor
Qtz stringers noted as barren
- No MnSi_2 noted to date
- O.C. generally rounded hills,
with st. rusty o.c. + pinkish
rocks.

Δ11- rusty-Qtz monz. : like N-S/7SE
with pyrite. Rr nod
alt. - no signs of MnSi_2 ,
except a little patch of
iron-bearing gels in irreg
Qtz stringer

Δ.12 - granular porphyry
of prob. volc. variety
(dacite - ??) - slightly
magnetic (2" pull on magnet)
- coarse bedding suggests
new strand - viewed
from air, but not apparent
on outcrop visited.

Δ.13 - knob, 3 miles S. of east
end of Satashu Lk.
dk col. massive cherty argillite
with minor pebbles

Δ.14 - S of west end of Satashu Lk.
old log post # BL Δ XC 10
- not certain what it's
purpose was ??
Rn - Cg. dacite or rhyolite
similar to that seen
earlier today Δ.12
- with dull earthy f-g
porphyry on top dip ~ 35° SW

June 21/66

Δ.15 - west side,
southern end of Sekulman
Lake - in meta sed.

- fine stn., chert,
gtz - semi - sch., th bio - sch
+ minor chloritic sch.

- 130°/70° NE with
dip of lat. owing to
the NE, away from
intr. contact.

- assemblage has
low mag. suscept., - minor
bands slightly offset
mag. rd.

Minor folds plunging
30° to NW, 1-4 generally
contorted, with
tendency to isoclinal
folding in minor
structure locally. -
may be two rel. thick
limy zones, 700' strat
apart - ? Rn generally
rusty due to weathering of
Bio. + minor pyrite

June 22/66 Empress page 6

D.16 - west side Aishihik
slon 4100 - near infr.
contact

- gtz-rich, gtz/c, s.
concretic, bio, sch.

F₁ - 330/42 E.

- rx - sl. pyritized + brown/ls of

- dk. bands elaty band
suggest minor graphite.

- low magnetic suscept.

June 23rd/66

D.17 - by silt E-409

(LOW)

20 cusec - slow stream

sandy silt - O.C.

contact area between sl. magnetic
gnd. g. sl. large other low
planes, & highly fract.

buff to pinkish gtz-magnetite
- latter to east.

D.18 - by Glt N zone soil sample

10E

E-412, middle lake of NNW

fing. lake at head of

Kirkland CK - check for

No 52 - dyke SW/V

Δ 19- Kirkland Ck
 elev 2600' - E-570

st. rusty granitic rx
 - ch flow 6000000

(9W)

Δ 20- 3 mi N. of carb sh
 - lower Gp rube-
 granitic -

st. magnetic to iron-
 magnetite

Δ 21- Mack Cu - Magnetite deposit
 with minor copper sulphides ^{200' x 100'} ground

Δ 22- 5 to 6 miles S + S.W. west of
 Mack Cu

- dk - oxidized rube
 point - 2-3 magnetic
 reflection on compass

Δ 23- pink bro- porphy
 latite? or "trachyte"?
 , low mag. suscept,

E-408, 6000000

10E

granitic boulders
 - silt + sand - Place (CL) ^{thick} ^{thick}

Empress 1907

Δ-24 - Albert Cl. - Yellow Limestone
exposure, trend westerly
from N. end of Sekel man
Lode, highly foliated,
- on South side of Albert Cl
valley - a prominent westerly
trending ridge consists of
a brown-red porphyritic
chrysolite, which gives a
"1/2" magnet deflection.
is very slightly magnetic
- chrysolite is reasonably
fresh, & prob. a later rock
unit

Δ-25 - rock - trend 300
sandstone dip prob
to N.E

Loc'n - 6 miles SW of S. end
of Breckenridge

Decler 31°30'
Rubber gloves

N 50° E

~~the~~ one handles & wedges

2 file

plastic tarp

nail

(check on materials)

OOD RIGHT

EVEN LEFT

Note - N. of Hatchi + to
west - alt. into AN -
check gauchers covering
where Dirke landed
early in year

AC

1-8-

I. FRANKLIN

14th/8/66

9-16

R. CHAPLIN

17-24

D. TARVOS

25-32

D. GOODRICH

33-40

J. ALMSTROM

41-48

A. REINSBÄCK

49-56

E. JACKSON

57-64- P. Calbro

65-72- M. Archer

73-80- Dr Paul

81-88- M. Hommes

- 24.23

- 22. 21

- 20 - 19

18 17

16 15

14 13

12 : 11

10 19

17

6	1	5
---	---	---

4:3

2
AL

drop if need be

17

Sept

1000

drop

- final posts

380 37

-36.35

- 34.33

$$= 32.31$$

- 30.29

- 28.27

1486-37

①

TRAVERSE No.	Project	Photo	Collector	Date	Page No.	ANALYTICAL RESULTS	
	Sample No.	Flow P.M.S. Cusecs.	SED. OR SOIL	GEOLOGY	Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	Cold Hot
			Gvl. Sand Silt Clay O.g.	Float Bedrock			Cu, H.M., Cu, Mo, Pb, Zn
			or A, B, C Horizon	(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)			
Road #2 - Airborne Hepburn Lake	406	1 1/2 M	gvl + sand	meta sed	Flat	Deep + Extensive	
	on Road 15	3 mi. upstream of Hepburn Lake	+ iron + mica malachite				
			+ low magnetite content	CO ₃ abundant			
			very little evidence of sulphides in par				
Hepburn Lake	E907	TRICKLE	loc'n 161° 28' 36"	ALONG	POSS. FAULT CONTACT ??		
		COLD RUSTY SPRING	137° 38'				
		ON TRAIL, 1/4 CH.	2 MILES NORTH	ISSAC CR.,	west side		
					SERKULMAN CR.		

OVER PAGE

Project *Engdoro*

Photo

Collector

Chaplin

Date

23/6/66

Page No.

2

Sample No.	Flow R.M.S. Cuscs.	SED. OR SOIL					GEOLOGY		Gen. Topog. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
		Gvl.	Sand	Silt	Clay	Org.	Float	Bedrock			Cu, Pb, Zn	Hot
							(Intr., Volc., Sed.) (Met., Alt., Fract.) (Sulphides)					
						or A, B, C Horizon						
<i>E408</i>	<i>60 R</i>		<i>silty sand</i>				<i>intrusive</i>	<i>draino</i>	<i>mod.</i>		<i>Placer workings creek</i> <i>TRIS to Kinkland Ch</i> <i>ARO LAKE DRAINAGE</i>	
<i>IOE</i>								<i>Qtz-monz.</i>				
<i>MAP</i>								<i>partly altered</i>				
<i>E409</i>	<i>20 S</i>		<i>sandy silt</i>				<i>-</i>	<i>qtz-dio</i>	<i>mod. upland</i>	<i>extensive</i>		
<i>MAP</i>								<i>Qtz-monz.</i>				
<i>LOW</i>								<i>rusty fract.</i>				
<i>WORM CK</i>												
<i>E412</i>			<i>B-horizon soil</i>					<i>fract. leucite</i>	<i>mod. upland</i>	<i>extensive</i>		
<i>MAP</i>			<i>C-alt. qtz. monz.</i>					<i>to pinkish</i>				
<i>IOE</i>								<i>intr. silic +</i>				
<i>MAC CK</i>								<i>rusty</i>				
<i>GOS</i>												
<i>E570</i>	<i>600 R</i>		<i>silty sand</i>					<i>fract. + sh.</i>	<i>congr. bedrock</i>	<i>extensive on top of cong.</i>		
	<i>Kinkland Ch. elev. 2600'</i>							<i>alt. granitic</i>				

TRAVERSE No.

(OVER PAGE)

Project Empire

Photo

Collector

Date _____

Page No.

وَقَدْ

TRAVERSE NO.	Sample No.	Flow No. of Cuscs.	SED. OR SOIL					GEOLOGY		Gen. Tenor. Slope Angle	Approx. Depth & Extent of Overburden	ANALYTICAL RESULTS	
			Gvl.	Sand	Silt	Clay	Crg.	Float	Bed-rock			Cold	Hot
								(Intr., Volc., Sed.) (Met., Aft., Fract.) (Sulphides)				Cu, H.M., Cu, Mo, Pb, Zn	
	E565	1 coarse flow west		sandy				- pyrite in l. col. f.g. flow - coarse of granitic??	granitic up. assoc. with CaCO_3 + dark quartzite	mod.	shallow but entirely covered		
	E566	1/2 coarse gran		silt				granitic hills E side of valley	mod.				
	E567	300 cuscs in		sandy silt				granitic boulders some dark in	granitic rock in stream bed	mod.	shallow but entirely covered		
	E565, E566, E567, E568, E569, E570, E571, E572, E573, E574, E575, E576, E577, E578, E579, E580, E581, E582, E583, E584, E585, E586, E587, E588, E589, E590, E591, E592, E593, E594, E595, E596, E597, E598, E599, E600, E601, E602, E603, E604, E605, E606, E607, E608, E609, E610, E611, E612, E613, E614, E615, E616, E617, E618, E619, E620, E621, E622, E623, E624, E625, E626, E627, E628, E629, E630, E631, E632, E633, E634, E635, E636, E637, E638, E639, E640, E641, E642, E643, E644, E645, E646, E647, E648, E649, E650, E651, E652, E653, E654, E655, E656, E657, E658, E659, E660, E661, E662, E663, E664, E665, E666, E667, E668, E669, E670, E671, E672, E673, E674, E675, E676, E677, E678, E679, E680, E681, E682, E683, E684, E685, E686, E687, E688, E689, E690, E691, E692, E693, E694, E695, E696, E697, E698, E699, E700, E701, E702, E703, E704, E705, E706, E707, E708, E709, E710, E711, E712, E713, E714, E715, E716, E717, E718, E719, E720, E721, E722, E723, E724, E725, E726, E727, E728, E729, E730, E731, E732, E733, E734, E735, E736, E737, E738, E739, E740, E741, E742, E743, E744, E745, E746, E747, E748, E749, E750, E751, E752, E753, E754, E755, E756, E757, E758, E759, E760, E761, E762, E763, E764, E765, E766, E767, E768, E769, E770, E771, E772, E773, E774, E775, E776, E777, E778, E779, E780, E781, E782, E783, E784, E785, E786, E787, E788, E789, E790, E791, E792, E793, E794, E795, E796, E797, E798, E799, E800, E801, E802, E803, E804, E805, E806, E807, E808, E809, E810, E811, E812, E813, E814, E815, E816, E817, E818, E819, E820, E821, E822, E823, E824, E825, E826, E827, E828, E829, E830, E831, E832, E833, E834, E835, E836, E837, E838, E839, E840, E841, E842, E843, E844, E845, E846, E847, E848, E849, E850, E851, E852, E853, E854, E855, E856, E857, E858, E859, E860, E861, E862, E863, E864, E865, E866, E867, E868, E869, E870, E871, E872, E873, E874, E875, E876, E877, E878, E879, E880, E881, E882, E883, E884, E885, E886, E887, E888, E889, E890, E891, E892, E893, E894, E895, E896, E897, E898, E899, E900, E901, E902, E903, E904, E905, E906, E907, E908, E909, E910, E911, E912, E913, E914, E915, E916, E917, E918, E919, E920, E921, E922, E923, E924, E925, E926, E927, E928, E929, E930, E931, E932, E933, E934, E935, E936, E937, E938, E939, E940, E941, E942, E943, E944, E945, E946, E947, E948, E949, E950, E951, E952, E953, E954, E955, E956, E957, E958, E959, E960, E961, E962, E963, E964, E965, E966, E967, E968, E969, E970, E971, E972, E973, E974, E975, E976, E977, E978, E979, E980, E981, E982, E983, E984, E985, E986, E987, E988, E989, E990, E991, E992, E993, E994, E995, E996, E997, E998, E999, E1000												