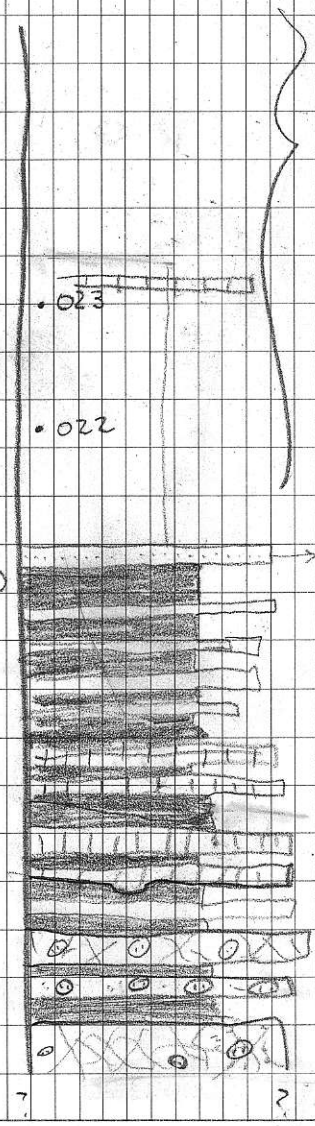
676169

Scale: 1 - 1 meter 2 meters



limestone beds 20cm thick - equigran f.g. - lesser fossils

- cleavage almost ⊥'e to bedding in shales

interbedded limestone + shale

limestone - webbed, fossiliferous, massive

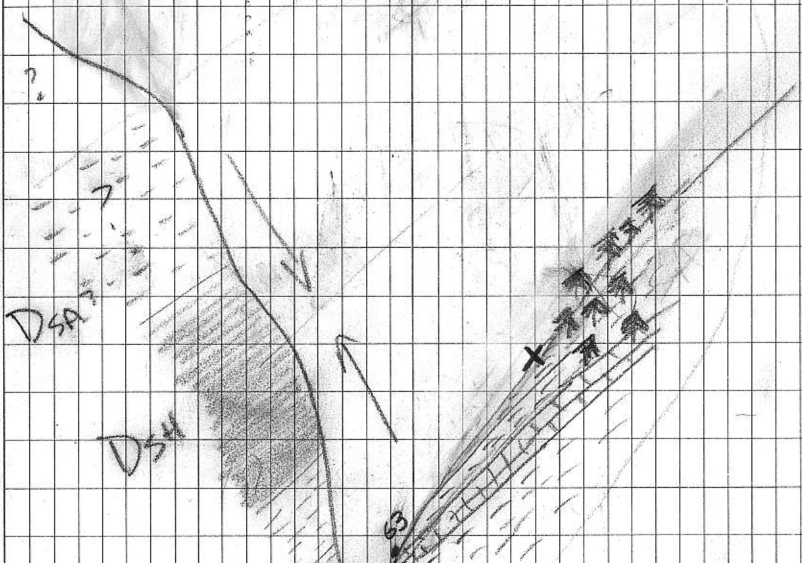
Stratigraphy - Aftie River

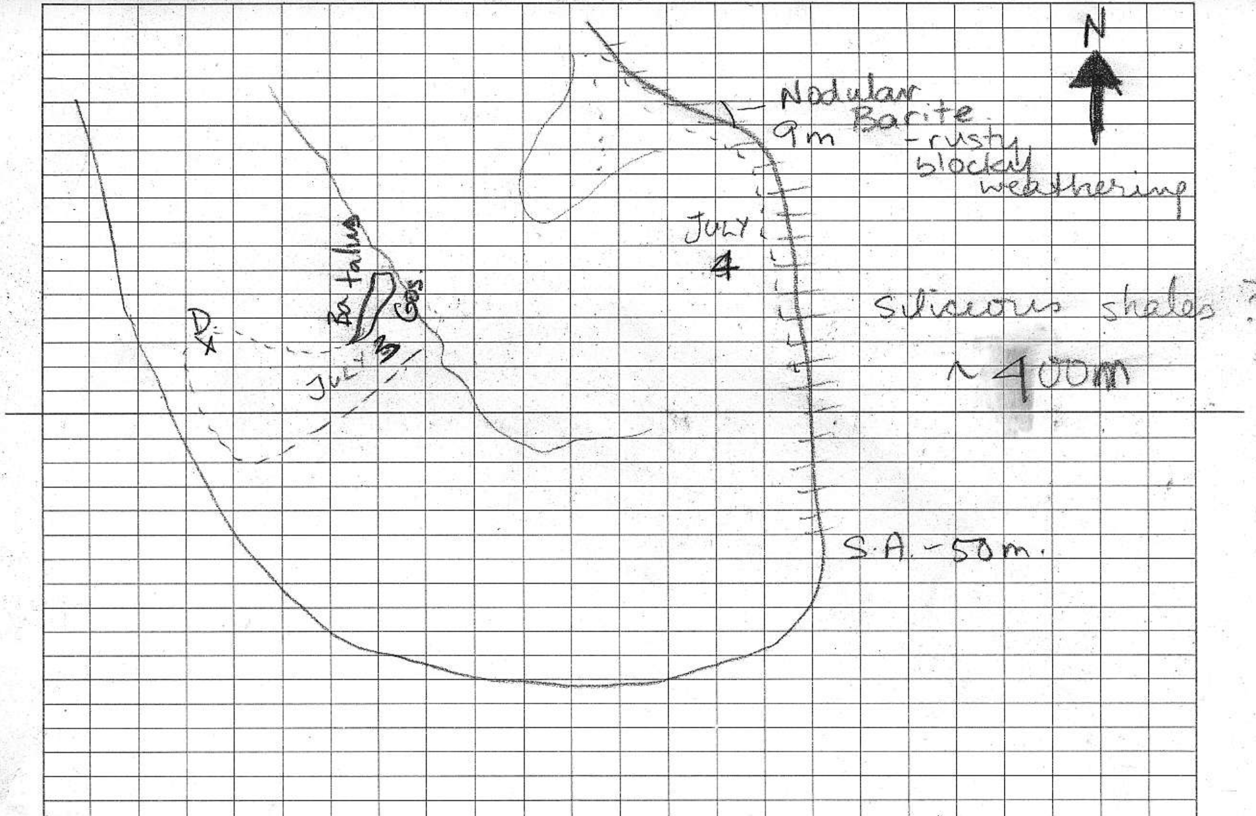
R	dolomitic siltstone - shelly
Dcc	Warneford Fmn, sandstone, siltstone polymictic pebble cong. = prox+dist turb.
Dsh	Siliceous argillite, pyritic bl shale Gunsteel Fmn
Dss	basinal equivalent to Dunedin Fmn siltstone (calc) interbedded sil. argillite
Dls	grey fossiliferous lstone = Dunedin Fm platformal carbonates
S	Siltstone = brn weathering - eastward migration of basin - platform transition zone MS - sce rx+ carbonate platform basinal = Nonda Fmn = Road River Fmn
OS	calc. siltstone, shale, lst, volc. x
ЄO	calcareous mudstone, phyllite = Ketchika G
L M Є	Qtzite, massive limestone = Atan G

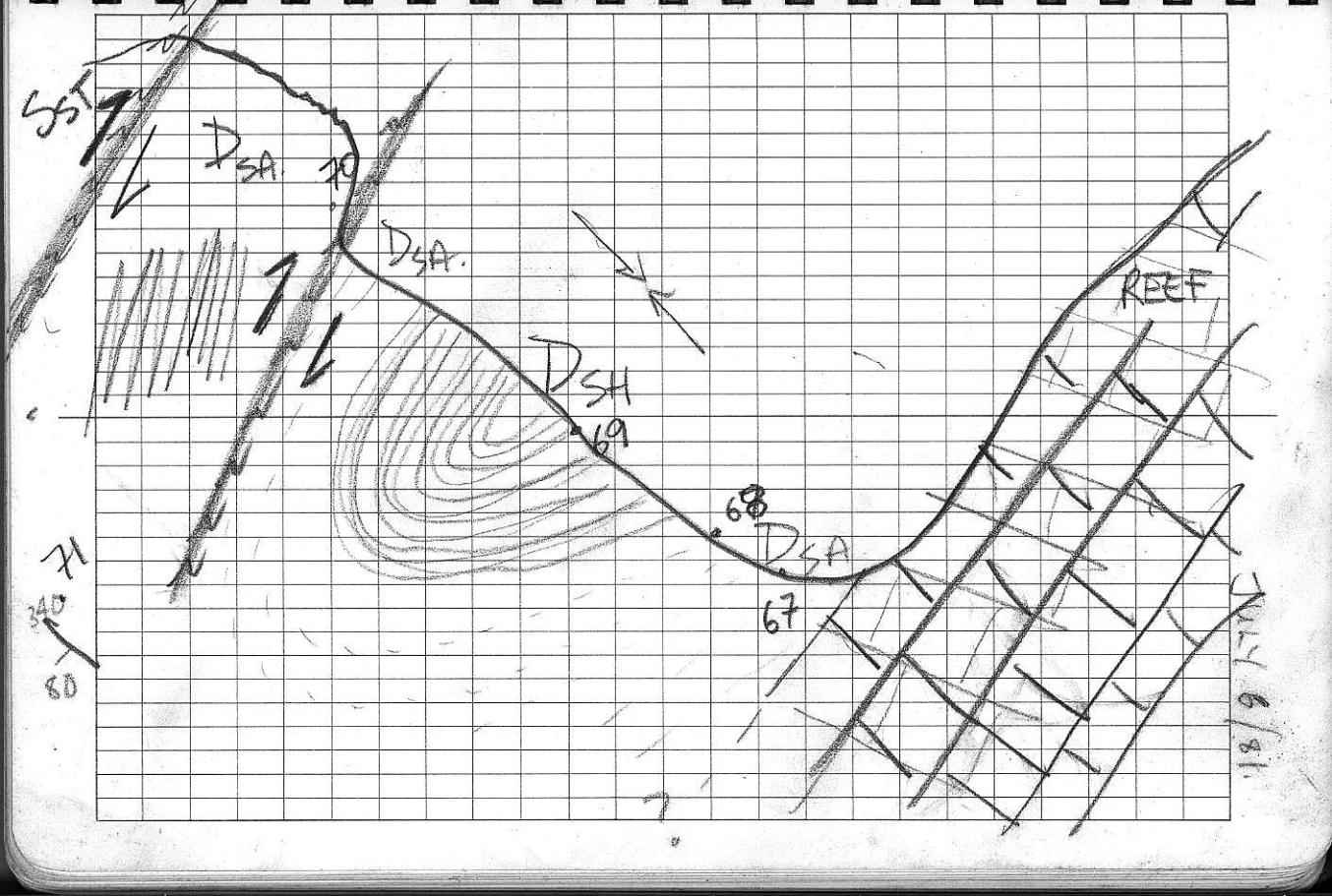
JULY 5/81

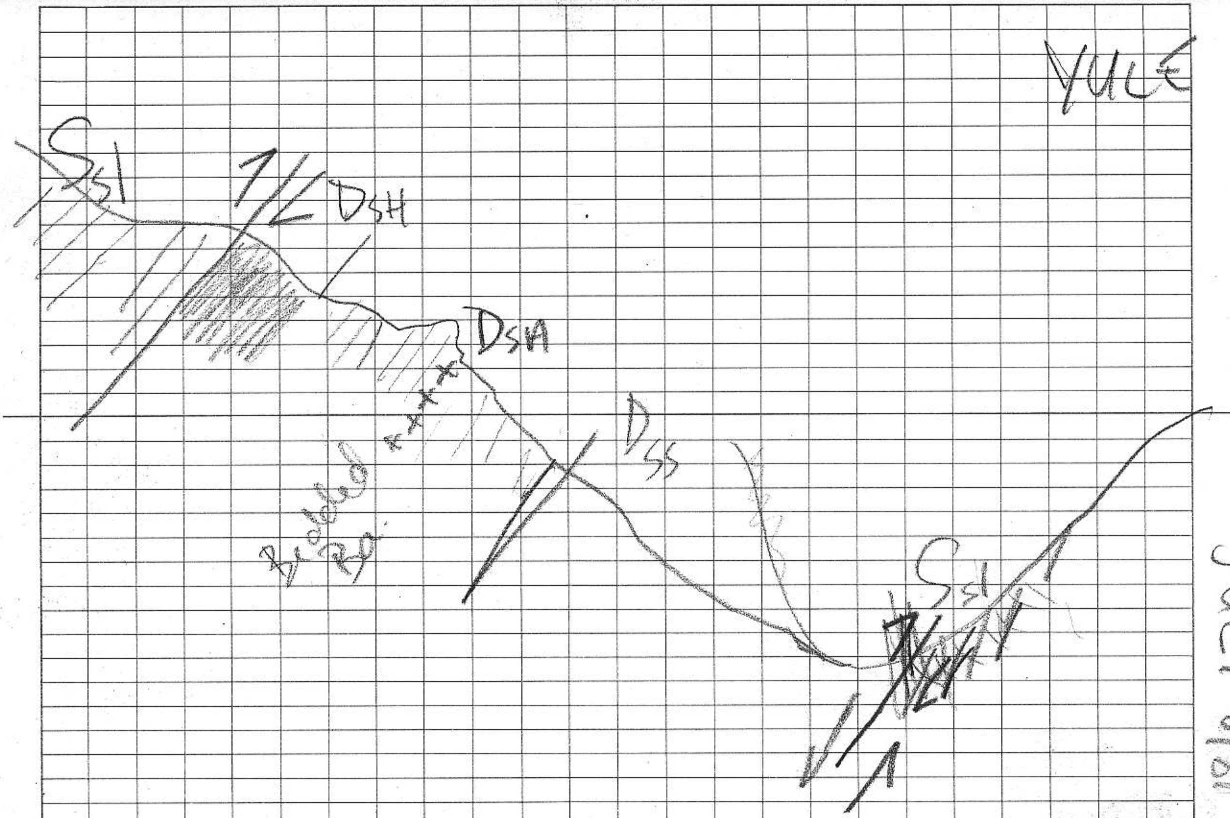
63 Lst - ☉ grey, fossiliferous lst. Dis.?

overturned syncline




N
Nodular Barite
9m
- rusty blocky weathering
JULY 4
Ba talus
Gos
D
JULY 3
Siliceous shales ?
~400m
S.A. - 50m.

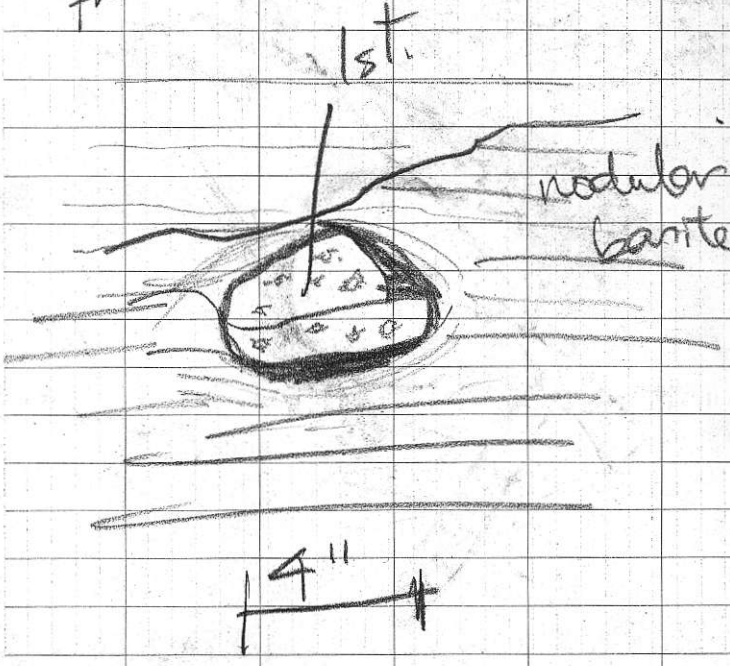

55°
DSA.
70
DSA.
DSH
69
68
DSA
67
REEF
71
340
80
July 6/81



JULY 8/81

spiny surfaces.
+ pitted.

photo # 35



CIRQUE VALLEY

JULY 3/81.

K.D ~ J.L.

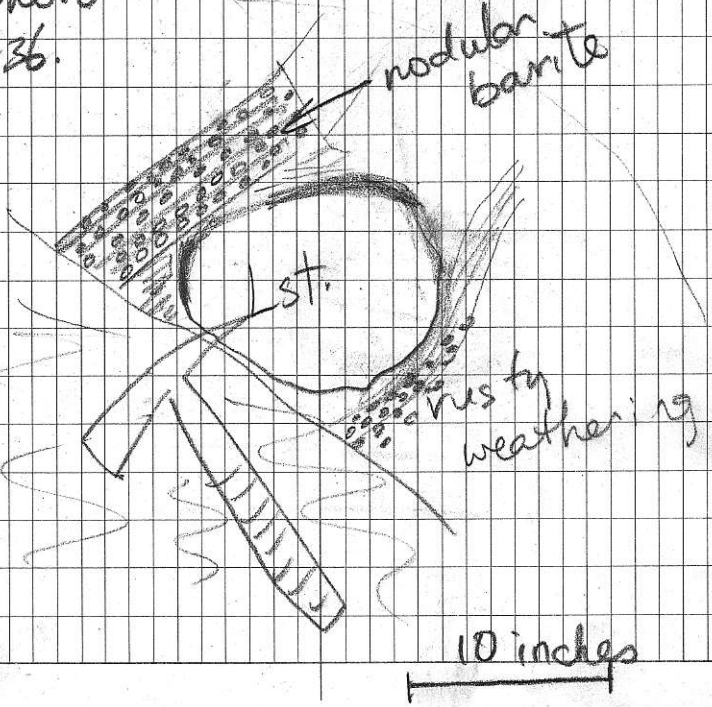
Zeiss Icon

Roll #1

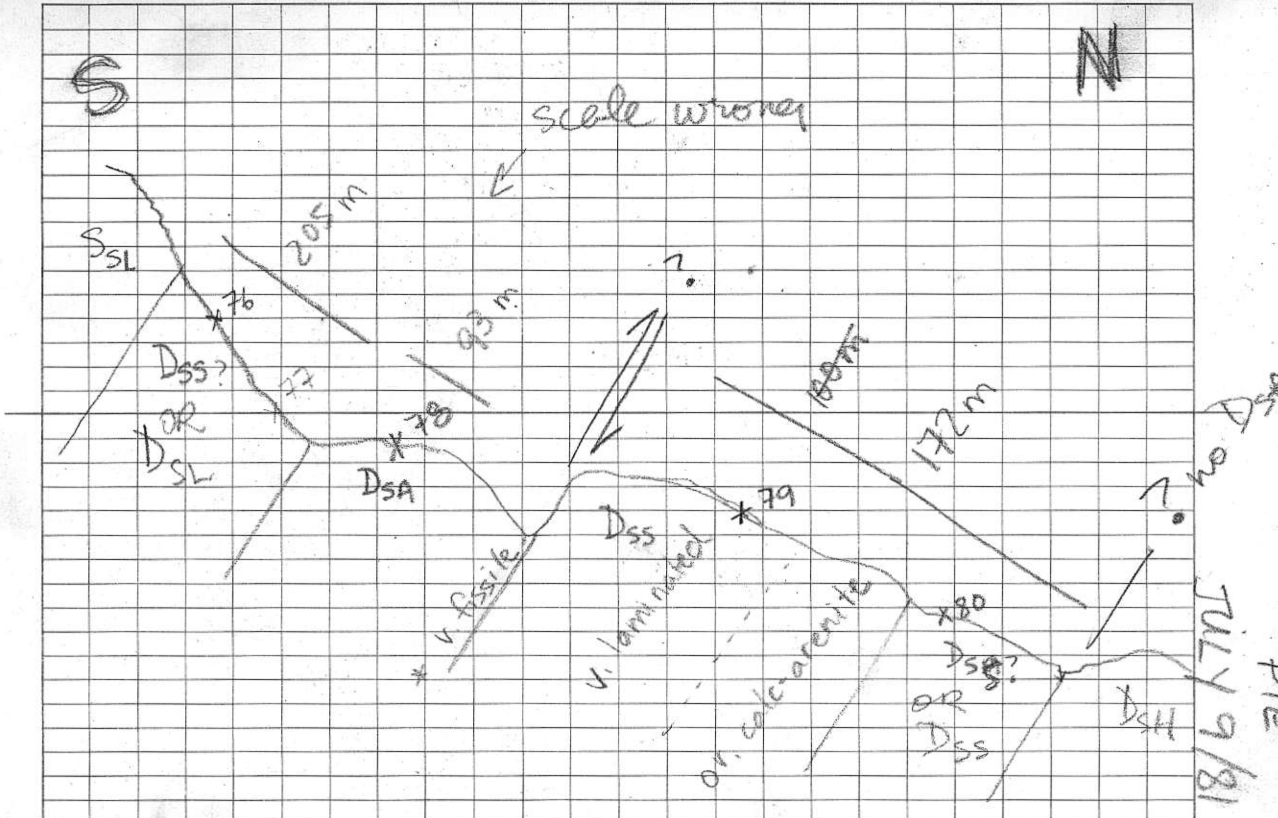
hammer f.s.

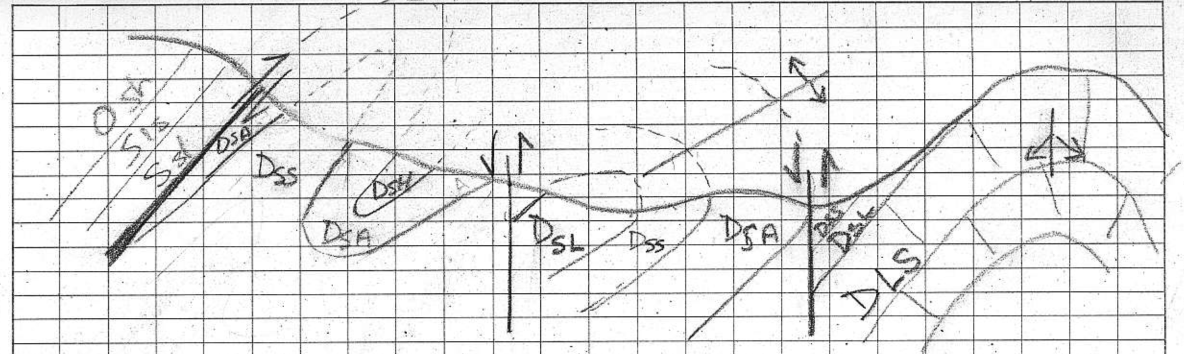
picture 35, 36 (2)

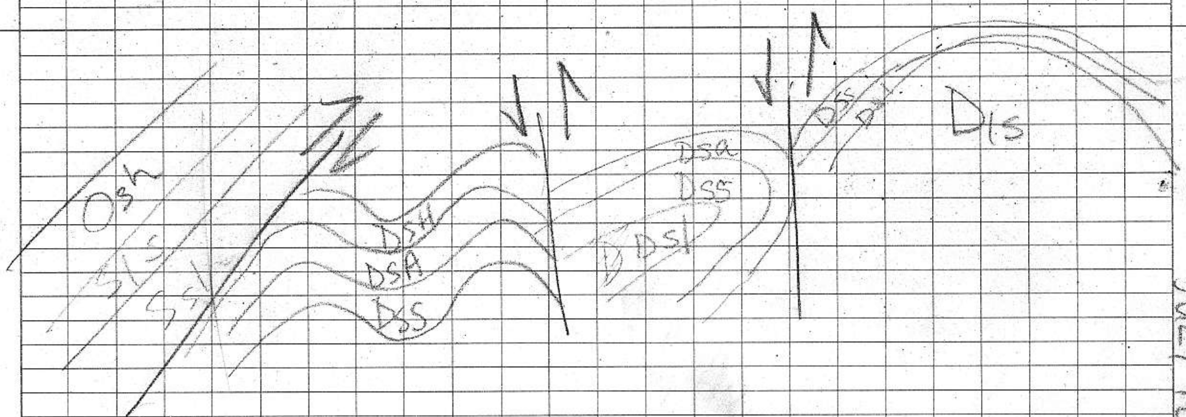
Photo #36.



JULY	1	MACKENZIE
JULY	2	PRETZEL LAKE
	3	CIRQUE I (WEST RIDGE)
C-81-01	4	CIRQUE II (EAST RIDGE)
	5	WATERFALL
	6	SADDLE
C-81-02	7	YULE I
	8	YULE II - Bedded Ba
	9	PIE
	10	PIE II
C-81-03	11	FLUKE I - C-81-03
	12	FLUKE II
	13	CIRQUE III
	14	CIRQUE IV
	15	DAY OFF
	16	DOG I and only!
	17	TRAVERSE ORD LST → DEV.
	18	TRAVERSE SIL ST → EO KECH.
	19	MACKENZIE → CALGARY
	20-27	ONTARIO
	28	PRINCE GEORGE-SMITHERS
	29	PRETZEL LAKE
	30	TRAVERSE, TOODOGGONE
	31	RAFT RACE


S
N
scale wrong
205 m
93 m
172 m
S_SL
76
77
78
79
80
Dss?
OR
D_SL
D_SA
Dss
v. fissile
v. laminated
or calc-arenite
? no
Dsa?
OR
Dss
D_SH
JULY 9/81
PIE


O
DSA
Dss
DSH
DSA
DSL
Dss
DSA
DLS


Osh
DSH
DSA
DSS
DSa
DSS
DSl
DSS
DLS

PIE #
JUL 10/81

50 315 - 35 SW

2038 m

51 Black shales in saddle

52 S3L 307-75 (SW)

53 1990m 295-38 (SW)

54 328-70 (SW) Rock

• ME-81-55

• 56

56B

PELLY CLAIMS

AUG. 2/81

JL-81-125+

JL-81-125 1738 m

Kechika OR SILURIAN siltstone?

- buff to rusty weathering siltstone
- platey, non-calcareous
- [S] - for I.D. - platey stuff
- non-phyllitic
- [S] - silty stuff w pyrite cubes weath.
- more massive S.S. w oxidized py.

JL-81-126 1770 m

Devonian OR ORDOVICIAN volcanic

- 10 m horizon - talus only
- grey-green tuff w calcareous nodules
- narrow horizon w in buff siltstone
- [S]
- calcite veining also

- up slope - talus 1805 - same unit 125
- platey - sometimes flaggy siltstone
- some wavy bedding
- slightly calcareous to quite cal.
- [S] - 126 B
- interbedded w silty shales - dark grey colour

(57)

127 1810 m

(Cl) 335-83 SW (B) approx dip steep NE

S

O RRF

interbedded black limestone, and black silty shales.

- no graptolites visible
- black shales not rusty weathering
- " " calcareous.

(58)

128 talus

- buff weathering, platy siltstone
- sometimes calcareous.
- O or S_{SL}

(59)

129 1850 m

(Cl) 335-86 (SW) (B) 320-49 (NE)

S_{LS} ? 7m thick

- light grey ~~buff weathering~~
- non-fossiliferous limestone
- well-bedded w buff coloured laminations of silty lst.
- bedding kinked

(60)

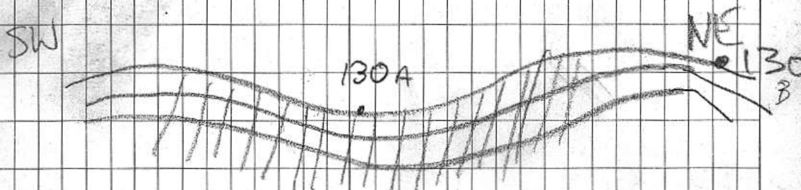
130 1870m

A) SSL

(Cl) 315-75 (SW)

(B) 330-65 (NE)

- pencilled O/C
- well defined bedding + cleavage
  - see 129



B) interbedded limestone, siltstone in secondary folds
< several limonitic concretions about 5-10 cm in diameter
- interbedded dark grey silty shales 3 m thick

cleavage to SW.
weather light grey

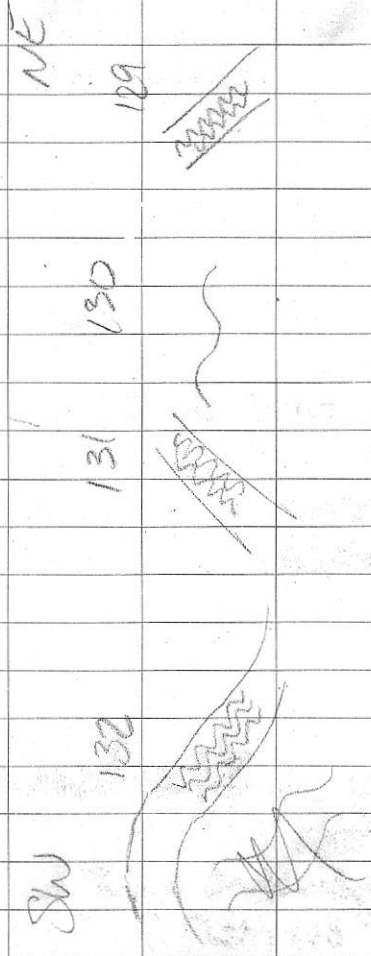
(61)

131 - same Lst as 129
- appears as antiform limb

(B) dips SW (Cl) dips SW shallower than (B)

132 SSL laminated siltstone

(62) (C) 315-82 SW (B) 325-45 NE



(65)

(5) 300-30 (80)

133 EO_{KG}

- phyllitic siltstone
- elongated nodules of planar fabric

[S]

- bedding measured by orientn of nodules

- thrust contact w S_{SL} + LS cumbed unit.
- v. calcareous
- wavy bedded

(64)

134 S_{SL}

- platey, buff coloured siltstone
- homogeneous unit
- thrust contact w

v. minor dark grey Vshales silt 9

(65)

135 €O KG

(Cl) 325-86 (SW)
phyllitic siltstone
light grey - cream
fissile talcy
wavy bedded, looks ∥ to (Cl)

(66)

136 S_LS ? €O_LS
Silurian limestone in
fault contact w/ €O_KG
- extensive quartz veining
- platey limestone
- weathers rusty colour
- fresh light grey
- no fossils
- well laminated - lam 2-5 cm thk
↗ €O_SL ?
- S_SL buff, dolomitic siltstones
non-phyllitic, platey
- quartz veining

(67)

137 S_LS - light ~~grey~~, platey, unfossiliferous laminated limestone
- not buff coloured ? S_LS ???

68

138 DKS 1m thk
- rusty weathering dark grey shales
- thin unit - possible lubricant surface for thrust.

69 (C) 300-40 (SW)

139- 325-87 NE (C)
SSL 320-20 SW (B)
brown, flaggy weathering with stable

70

140 SSL + SLS
saddle o/c
(B) 310 - 23 (SW)
platey siltstone

71

141 SSL wavy bedded, flaggy
(A) 320-80 (NE)

72

142 DKS silty, platey grey, rusty shales

S (C) (NE) 320-75 320-70 SW

(73)

143 DRS - dips NE

(74)

144 - qtz vein mks thrust
fault

dip NE - vertically dipping

S

R. D[...] HAL[...] D. [...]DE IN
DUKSBAK WATERPROOF

AUG 3/81

MF-81-75

MF-81-75 O_{LS}

grey, rusty well laminated, bedded limestone, non-fossiliferous
rocks grossly crumpled

(B) 310-40 (NE)
(Cl) 305-63 (SW)

MF-81-76 2080m Є0 –

((Cl) 295-57 (NE)) [S] for I.D.

wavy bedded, phyllitic calcareous-mud-siltstone
- suspect Kechika Fm.
- nodular appearance

(B) 295·88 ~~NE~~ (SW) (Cl) 302·35·NE

MF-81-77

$ЄO_K$ 2092m

phyllite, nodular, calcareous

(B) 300-60 NE ; 310-45 NE
(Cl) 305-75 NE ; 330-90 SW

- suspect other limb of syncline from 76.

78 - O_{SL} ? S_{SL}

qtz veining sep. Kech. from this station's unit
- light cream weathering crumpled siltstone
- non-calcareous
- laminated
- deformed like O_{LS}

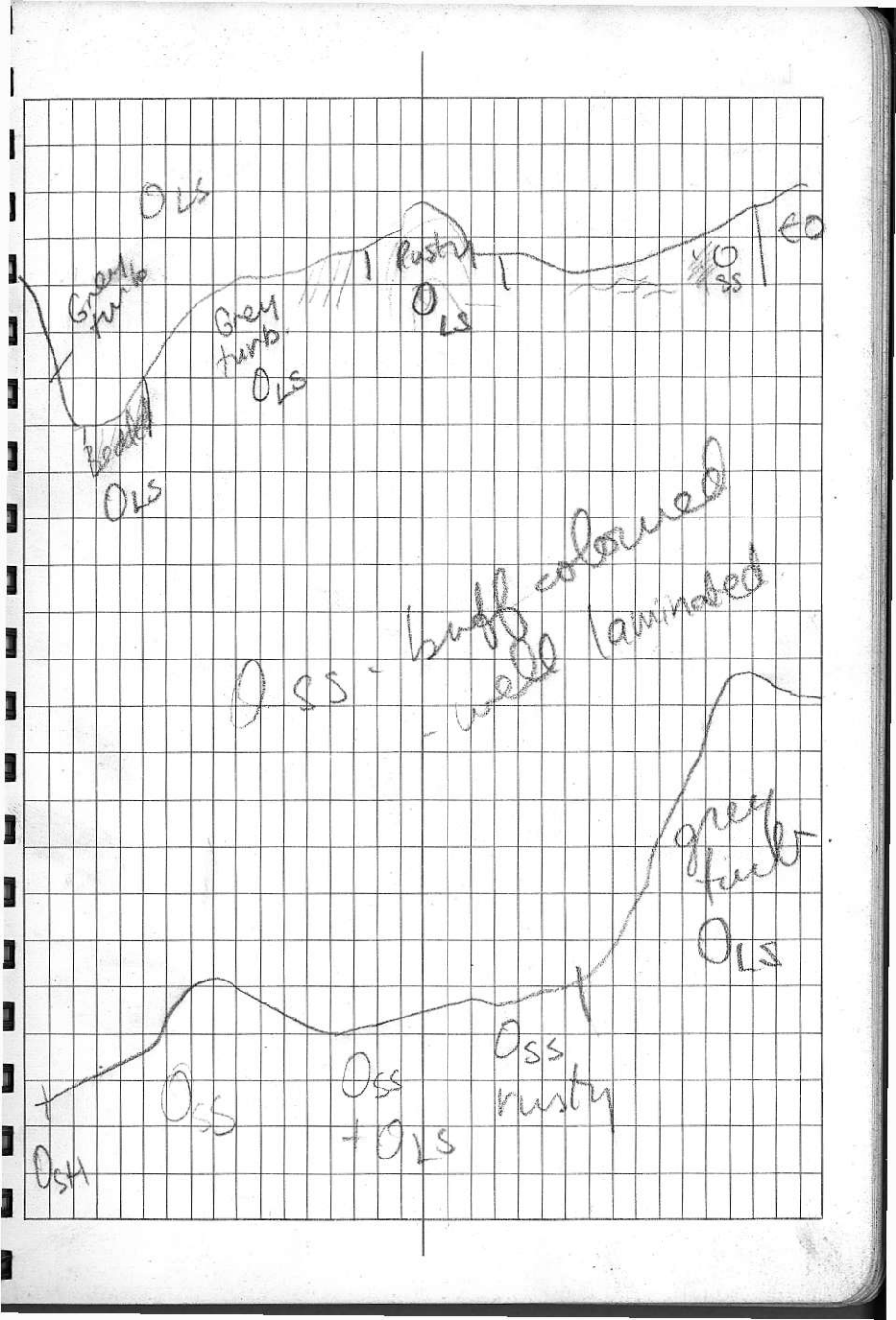
Kech (S) 308 - 85 NE or (C) ?
(290 - 50 (C) SW)

O_{SL} (C) 305 - 85 NE
(B) 285 - 40 (SW)
[S]

79 - O_{LS} - anticline knob < 10 m wide - rusty grey

80 (P) 300 - 80 SW O_{LS}
- limestone debris flow
- grey
- calcareous

81 - (B) 310 - 70 SW Banded O_{LS}


θ_{LS}
Grey turb.
Beaded
θ_{LS}
Grey turb.
θ_{LS}
Rusty
θ_{LS}
θ_{SS}
θ_{SS} - buff coloured
- well laminated
grey turb
θ_{LS}
θ_{SH}
θ_{SS}
θ_{SS} + θ_{LS}
θ_{SS} rusty

82- O_{SH} [5]

- grey shales
- ~~b~~ graptolites rare ✓
- unit adj to grey mass.

O_{LS}

83 O_{LS}

- buff → grey limestone (dukslope)
- grey tuff lst.

(5) 287 - 80 (SW)

78-83

83 O_{LS} O_{SH} O_{LS} O_{SL} 78

O_{SL}

poss syncline overturned

SSL

84. (B): 215 + 55 (NE) (Cl) ?

flaggy
rusty weathering
slightly phyllitic
wavy bedded
- v slightly dolomitic

85 talus saddle
cherty fragments - black
with white qtz veining - webbed
- very fractured, gravelly
- Silurian unit
OR Devonian unit

(S) weathers black & light grey dolostone
- 2 diff't horizons

- QTZ veining v. intense
- siltstone Silurian

86 SSL (B) 340-80 NE
flaky siltstone

87 - DsH [S]
saddle 1900m
25 m
- not rusty
- weathers green, black
v. recessive

dips NE

silurian siltstone, then,
87 A [S] 1 m wide dolostone
w ofyite concretus
on other side of silty shales
Dei black
- back into Silurian sxn
~~(C1) 285 - 72 (NE)~~
(B) 270 - 41 (SW)
Cl 275 - 75 (NE)

87 B (B) 268 - 55 (NE)
Cl - same - ie parallel to bedding
α - poss. talus of D shale v. black weathering
88 - Volcanic horizon - talus
½ m wide
- [S] for I.D part of Silurian pkg

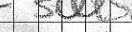
R. D. HALL LTD. MADE IN U.S.A.
DUKSBAK WATERPROOF

S_{SL}

89 - (B) 335 - 75 (SE) (SW)

(C1)

- wavy bedding
- laminated
- siltstone flaggy



90 -

- grey - debris flow limestone
  dips NE
- more laminated
- 15 m thk

91 S_{SL}

siltstone - platey

dip change

(B) 305 - 33 (SW)

92 S_{SL}

(B) 245 - 38° (NW)

- part of synform at top of unit

(C2) 295 - 75° NE

93 west side of knob

(B) 320 - 50 (NE)

S&L

94 (B) 335 - 55 (SW)
(Cc) 292 - 77 (NE)

95 downslope S&L
wavy → platey bedded

(B) 295 - 36 NE
pyrite cubes on bedding plane

(B) 300 - 50 NE
further downslope

96 - DRS
- grey-blue weathering siety shales talus only
- scattered pieces
[S] - DRS ??? @dips NE
- much qtz veining
96 A (B) chert
96 B limey debris flow with qtz webbing
- resembles Osgrey Qz
- all talus

S&L / chert / limey debris flow / DRS
qtz veining

96C graptolitic shale - ~~Des~~ → O_{SH} !!
96D dolomitic siltstone
96E blocky ~~silty~~ - FeS_2 weathered out
- O volcanics ?
- chloritized

97 O_{LS} - (B) 325 - 40 NE
- rusty, laminated (+ grey lam) limestone
- intense qtz veining

- appear 96 ≈ 97 walking down

98 - O_{SH} ? ~~D~~ SH
downslope of 97 past limestones to orange siltstone

99 S_{SL} wavy - to platey bedded siltstone
(Cl) NE dip
(B) SW dip.

100 O_{SH} - graptolitic shale
101 O_{LS} - limey debris flows Cl ≈ (B) ? 303 - 85 NE

AUG. 5/81

MF-81-112

EOK

(B) 325-25 SW

GTZ { - grey calcareous, nodular phyllite
- talus slope v. platey, talcy

DRAIN { intervals of orange phyllite 60m thk alternate w grey phyllite beds
- orange, dolomitic/calcareous, silty well laminated w grey laminations
- less nodular

MF-81-113 EOK - GREY KECHIKA

(E) 318-60 (SW)
- talcy phyllite
- nodular

(B) 333-52 (SW)
(B) 318 86 (SW)

- several qtz-veined intervals where qtz appears to intrude // to the bedding

(E) 350-63 (SW) (C) 310-75 NE

114 O_{LS}, O_{SH}

(B) 283-40 SW - Kechika thrust above - topographically posit'n

O_{LS} - grey bedded non-fossiliferous LS. w qtz webbing

[S] O_{SH} - thin sliver of black shales w ~~[illegible]~~ of graptolite bedding & cleavage.

- couple meters wide

- unit overlain by Kechika

- PHOTOS of KECHIKA RIDGE - side by side

MIKE ROLL #G # 0,1

- photos to illustrate ridge o/c

- to explain structure ???

MF-81-115

- contact EO_K with O_{LS} < 5m thk

- contact EO_K 1m thick

- contact limestone horizon < .25m thk back into EO_K

[S] (B) 325 - 53° (SW) < .25m thk

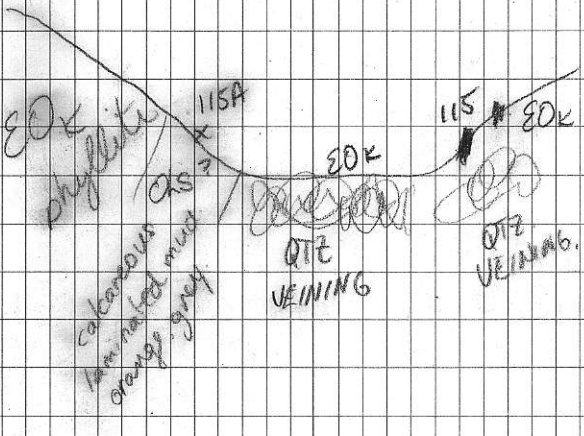
- v. small crinoids - grey

- limestone horizon ~~w~~ in EO_K?

+ much qtz veining present.

Kochika before Ols is grey buff on weathered surfaces. ~~flaggy, platy~~ wavy banded, phyllitic

115A [5] Ols. ?? OR limey EOk ?
- maybe nothing at all!
- just laminated silty calcareous mudstone orange + grey.
bedding conformable to EOk.



116- (12) - air photo
- limestone horizon in Kochika 4" thick.

MF-81-117

DRS - fault contact of Drs, EOc

- 305-40 (SW)
- 292-85 (NE)

S

- rusty, soft dark black shales w/ cherty horizons - resistant knobs?

- downslope - pale blue-grey silty shales Dss

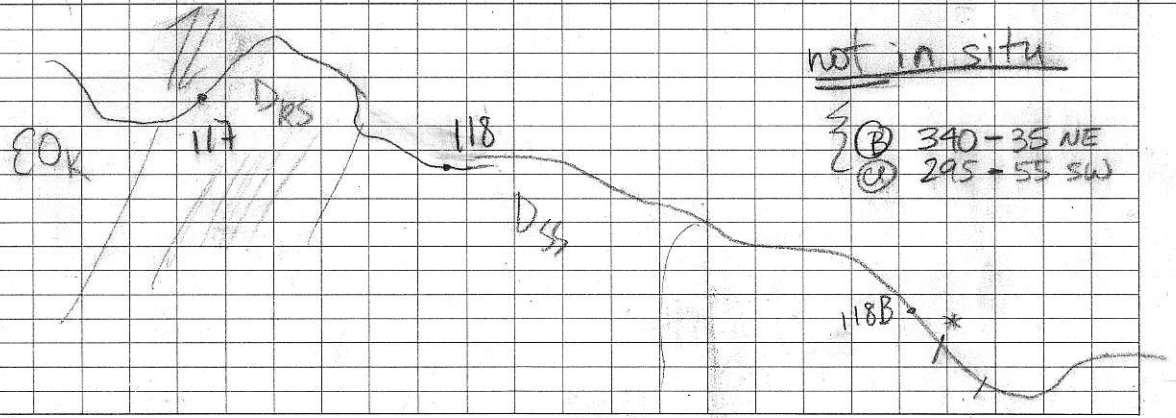
MF-118 S Dss

- talus only
- small platey fragts. some gravelly resembling slopes

* distinct orange-rusty soft siltstone/tuffs horizon in laminated light-grey silty shales. = typically a Dss pkge.

118B

119 S Dsa angular fragts light blue, rusty weathering


not in situ
(B) 340 - 35 NE
(A) 295 - 55 SW
117
118
118B

0 – 13 DSA

13 – 67 DSS

67 – 116 DSL

116 – 146 DSH

146 – 152 DSA

1750n 152 – 160 Barite bedded.

160 – 187 DSA

187 – 226 DSS

226 – 256 DSA

> 256 SSL

JUNE 21/81

A2-3885-168

MIKE, KAREN
KWADACHA PK

*change FD → ME

FD-01
1815 m Dqt
- grey quartzite, mostly massive some fine laminations, X-bedding, X-beds - overturned ?
- quartz webbing
- weathers light grey blocky

Bedding (B)
324
75

Cleavage (Cl)
85
240

FD-02
1825 m Dqt
- well X-bedded qtzite

355
5

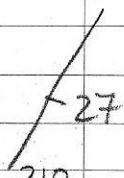
Bedding (B)

FD-03 SAMP. ✓

1830m Dls OR Dlt

grey limestone, massive fossiliferous - 2-hole crinoids

Bedding, Cleavage?

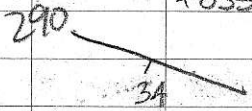


(B) OR (Cl) ?

FD-04 Dls

1840m

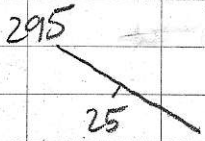
grey limestone, faint bedding fossiliferous



bedding (B)

Dqt o/c above Dls

quartzite, with silty, well-laminated layers



(B)

FD-05 Dqt

1860m

- massive quartzite, X-beds, slumps

- silty horizons

320

55

(B)

FD-06 Dsa SAMP: 6A Ba-SA
6B Ba-Lst

1860m (also)

siliceous argillite, with inter-beds of black, fossiliferous limestone (2-hole crinoids)

- very thin bedded barite in .25 m interval at contact of sil. argillite and limestone

315

50

(B)

FD-07

1890m DSA

fissile siliceous argillite

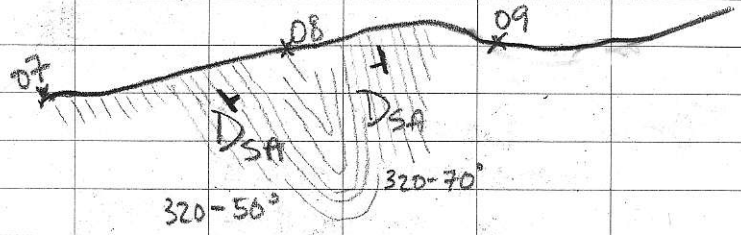
- scattered thin limestone beds
- very thin (1-10mm) barite lamin
- oc. in S.A.

320 / 50

(B) ?

FD-08 DSA. SAMP. 4 CHIPS

- fissile S. argillite
- tight synform, asymetrical.
- rare barite laminae (2mm thick)



axial plane cleavage

? trend 64° (SW)

? plunge 4° (N)

(ask Mike)

FD-09 DsA

siliceous argillite, w minor barite laminae, Ba interval < .5m
- very fissile

320 / 25 (B)

FD-10 Dls ? Dlt

limestone - fossiliferous
- massive, blocky
- some laminated horizons of limey-mudstones striking 295 / 56 (in situ?)

230 / 50 (B)

FD-11 Dqt

- massive qtzite
- poor exposure

FD-12 Dls, Dlt ?

- massive, fossiliferous limestone
- thin bedded horizons
- limited interbeds of black shale
- becomes more massive uphill.

FD-13 - qtzite & limestone interbeds
- limited, isolated o/c

FD-14 Ssl
Silurian siltstone talus
- flaggy, red-brown frags.

TO DO:

	RECOPY	AIR PHOTO	ORTHO	SAMPLES
JUNE 21	✓	✓	✓	—
JUNE 22	✓	✓	✓	120-135
JULY 17	✓	✓	✓	15→31
JULY 18	✓	✓	✓	32↔54
AUG. 2	✓ X'cept	✓	✓	55→74
AUG 3	✓	✓	✓	75→101
AUG 4	✓	✓	✓	102→111
AUG 5	✓	✓	✓	112-119

JUNE 22/81

MIKE, KAREN
KWADACHA PK

DF-01
1628 m

Devonian

Dev. shales
Dev. siliceous unit
Dev. siltstone
Devonian chert + limestone

Normal contact:

Silurian
- light cream shales
- cherty bands
- pink siltstone
- siltstone