



Sketch map of SKAGIT river-basin  
July 1915



to Carter Prof  
of University of  
Calif

See new West -  
gate map

True

altitude of Hope

209 ft

$$\begin{array}{r} 1350 \\ - 209 \\ \hline 1140 \end{array}$$
 Deduct

~~1980~~  
~~1350~~  
~~600 ft~~

4<sup>th</sup> July

2

at Hope @ 10.15 am

aneroid 1350 <sup>209 ft alt.</sup>

Coquihalla flat w millcreek

Douglas fir<sup>+</sup> yellow cedar<sup>+</sup>  
 white cedar<sup>+</sup> alder, bassara  
~~aspen~~ achylo<sup>+</sup> actaea<sup>+</sup>  
 Pyrola rot. (white or pale) Curcuma  
 Asarum<sup>+</sup> Salix (prickly pl)  
 Viola canadensis, Claytonia Sibir.<sup>+</sup>  
 Liarelle unifoliata<sup>+</sup>, Menanthes<sup>-</sup>

At 6 mile bridge 1.15 Pm  
 aneroid 1950 (810 alt.)

after leaving <sup>9 mile bog</sup> ~~the~~ the ascent  
 becomes more rapid for a mile  
 or two & then comparatively level  
 ± undulating @ <sup>2310 alt</sup> 3450 aneroid  
 Here was found Alnus sitchouensis  
 Poryanthus empetriformis,

4<sup>th</sup> July (cont) 4

Camp 4.35 pm

aneroid 3500

act.  
2360

at Beaver lake.

3450  
1140  
2310

3300  
1140  
2160

Note discrepancy of 50 ft

3450  
∴ deduct 2360  
1090 instead of 1140

3350  
1090  
2260

where *Tragaria*  
*cuneata* or *glauca*  
is referred to it =  
*T. platy petala*

5<sup>th</sup> July - Monday 6

Aneroid 6 am 3450

2260 alt.

at 3350 *Arnica parryi*? ⊖  
@ 17 miles

*Castilleja miniata* +  
*Achillea*, *Geranium* \*

\* *Tragaria platy petala* *bracteata*  
*Abies grandis* - *Ribes* (black glaucous  
berry, stems armed strong prickles)

*Lilium columbianum*

*Eriophyllum* - *Acer circin* +

*Aruncus*, *Holodiscus*, *Brucis*  
*edulis*, *Symphoricarpos*

*Pentstemon* ~~obtus~~ <sup>diffusus</sup>, *Silene Menziesii*

*Campanula*, *Chimaphila*  
*Pseudotsuga* + *Pyrola chlorantha*

*secunda*, *Cornus canadensis*

*Pyrola bracteata*, *Trientalis unifida*

*Rubus nutkanus*, *Habenaria obtus*?

*Lonicera involucrata*

" *clivosa*, *Ononis emargin*.

3400  
1090  

---

2310

3550  
1090  

---

2460

5<sup>th</sup> July (Monday) 8  
Alnus sitchensis +  
Populus tremuloides, - Thuja \*  
Salix flavescens \*  
Menyanthes glabella

9-30 am aneroid 3400 (alt. 2310)

Douglas fir \* Pinus emarginata +  
Urtica? (yellowish green)  
Viburnum, Polygona  
Ranunculus Douglasii, Ranunculus  
Clintonia, Pentstemon Menziesii  
Lycopus annot., ~~Salvia~~ Salvia  
Complanatum  
Adenocaulon Lychnitum  
Hieracium (white) Epilobium angustatum  
Symphoricarpos  
Aprocytum (on rockslide) (17 mile hill)  
Erinella, Arisaema  
Rosa gymnocarpa, Veronica Serpyllifolia  
Veronica americana, Viola canadensis

Monday cont 5/7/15 10

Aquilegia, bonus stolon.  
Serratula latifolia  
Trillium ovatum  
Streptopus <sup>musculus</sup> (small) germ macro  
Sedum grandif. Actaea  
Galium triflorum. Phegopteris  
Phegopteris  
Phacelia circinata, Senecio discoid  
Disporum oreganum  
Claytonia sibirica  
Equiset. hyemale  
Tolmiea menziesii  
Adiantum ped.

3250 Pamassia fimbriata  
2160 alt.

Moneses uniflora

Lunch (left 1.30)

22 mile house, 2040 alt

Large cedar 30 1/2 ft circum

Berberis aquifolium

" nevada

Potrychum, Razaria punctata,

3250  
1090  
2160

3400  
1090  

---

2310

5<sup>th</sup> July  
*Spiraea lucida*  
*Arnica californica*,  
*Cornus canadensis*

2,300 ft  
*Rhododendron Californicum*  
@ 3400 aner. alt 2310  
Douglas Fir predominant  
and a few *Pinus contorta* +  
*monticola*. The soil seems very  
limey, sample kept to examine  
for lime. Limestone blocks all  
over the ground. A few *Salix*  
*scouleriana*. *Abies* - <sup>granata</sup> *Picea*  
*sitchensis* -

*Rhododendron* in places the  
predominant underbrush.  
The first locality is just at  
the apex of Mt. Hopeless. where  
the Samallow + Skagit join on  
the top of the ridge. The river  
surface of soil covered by  
lichens, *Polytrichum*, *Peltigera*

3600  
1040  

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2510

across  
across

Pachystima, Chimaphila 14  
Vaccinium macrophyllum  
(not glaucous berries)  
Pteris

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The woods are fairly open, the soil apparently freely drained. Exposed to the full southern sun & protected by Mt Hopeless from the northern winds

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3600 aneroid at trail across Canyon Crk

2510

3700 aneroid 6 Pm at  
2610  
camp at Canyon Crk



note discrepancy of 100ft

∴ deduct 990

$$\begin{array}{r} 3600 \\ - 990 \\ \hline 2610 \end{array}$$
$$\begin{array}{r} 4375 \\ - 990 \\ \hline 3385 \end{array}$$
$$\begin{array}{r} 4925 \\ - 990 \\ \hline 3935 \end{array}$$

6<sup>th</sup> July Tuesday 15

9.25 am 3600 at camp  
2610 alt

Up Canyon Valley

*Smilacina racemosa* +

3385 alt.

aneroid H345 apparently on  
divide of Canyon

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In Pass

*Mitella pentandra* + *trifida*

*Polygonum viviparum*

*Lenis edulus*

*Valeriana pital*

*Epilobium latifolium*

On summit 6/7/15/16

*Pinguicula* *Drosera*

*Cornus ~~sativa~~ ?* like *canadensis*

*Ledum* (glabrous beneath)

*Luzula hypoleuca*

5800  
990  

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4810

Wednesday 9/7/15

18

Over the divide

aneroid 8.30 am 5800

4810 alt.

Valeriana\* Phlox ⊕  
Pedicularis <sup>grand.</sup> Delphinium ⊕  
Potentilla flab. \* and with 5' leaflets  
Thalictrum. Lappula  
Phlomis alp. Arenaria capular. <sup>new</sup>  
Spergularia salsug. ⊕  
Epilobium angust. Polygonum <sup>acutif.</sup>  
Senecio triangular. +  
Sedum unifol. Monarda  
Sparganium. Anemone latifol. +  
Listera cordata ⊕ Mitella pent \*  
Gsm. <sup>thru</sup> Rubus pedatus \*  
Heracleum, Sibes lacust.  
Lycopus annot. Lonicera involuc.  
Pyrus sitchensis - Mitella trifidat  
Fragaria (thick glaucous)  
Claytonia. Anemone cordifol. +  
Luzula Mertens \*\*  
Pedicularis racemosa

6000  
990  

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5010

6845      7650  
990      990  

---

5885      6660

Wednesday 7/7/15 (90)

*Carex vulgaris*?

at <sup>5010</sup> 6000 ft *Pinus contorta*  
(murrayana) is predominant  
at headwaters of creek before  
reaching lake, associated  
with it were:-

*Sedum stensh* - *Phlox* +  
*Vacc. myrtill. micro* \*  
*Lupinus* - *Troxin aurant* -  
*Fragar. cuneata*? \*

*Pyrus* (glossy leaves serrate to base)  
*Potentilla flabell* +

*Eriogonum* ♂, ♀

*Pentstemon confertus* (white) ⊖

*Aquilegia*

glaucous Umbel

water shed 6845

alt  
5885

Peak near camp at 650

4 P.M. ~~6845~~ 6660 alt.

over

association on top of

$$\begin{array}{r} 7100 \\ 990 \\ \hline 6110 \end{array}$$
$$\begin{array}{r} 7500 \\ 990 \\ \hline 6510 \end{array}$$
$$\begin{array}{r} 4400 \\ 990 \\ \hline 6410 \end{array}$$
$$\begin{array}{r} 4610 \\ 4450 \\ \hline 160 \end{array}$$
$$\begin{array}{r} 6235 \\ 6000 \\ \hline 235 \end{array}$$

Wednesday (cont) 7/7/15 (22)  
upper skdist  
Delphinium<sup>+</sup>, Polemonium<sup>+</sup> <sup>humile</sup>  
Antennaria lanatum\*

alt. 6110

Aneroid at lunch 3<sup>pm</sup> of 100

Camping site 6:30 - 4500  
alt. 6510

Claytonia ~~lanceolata~~  
~~sessifolia~~

Lupinus

Abies

7225  
 990  
 -----  
 6235

6460  
 990  
 -----  
 5470

about 6000  
 alt.

Thursday 8/7/15

(24)

Camp left about 9.30

6235 alt.

@ 10.30 7225 aner on  
 top of ridge on Hope-Pinecroft  
 trail

By Hope trail (dry slopes)

*Mitella trifida* ⊖ *antennar rosea* +  
*Pachystima* + *achillea* \*  
*Castilleja* ~~angustifolia~~ \* *Bradburia* +  
*Phlox* \* *Eriogonum* - *Sedum* stem \*  
*Pentst. coer. pm* \* *Picea Engel.* +  
*Pinus contorta*, *Ribes* ~~niveum~~ +  
*Cyprip. acid* + *Arnica cordifolia*  
~~Sp.~~ *Spiraea* ~~laevis~~ + *Anaphalis* +  
*Phleum alp* \* *Fragaria (glauca)* \*  
*Arnica cordif.* + *Arnica alp.* ? (ray) +  
*Saxifraga nivalis* ? - *Vaccin. micro* \*  
*Festuca* \* *Loximon* + *Epilob.* <sup>angust</sup>  
*Rumex aceto* \* *Sals.* (flory above, glauc below  
 about 15 ft. <sup>entire leaf</sup> white bark) + *Habenaria leuco.*  
 Moist ground. *Donica* sep. yel. +  
*Eriogon.* + *Silvum* + *Parnassie* +  
*Lept. arbore.* + *Sentiana scuta* - *Mitella*  
~~pentandra~~

At LUNCHING point a Ribes with strong hairs or weak accendi on the berries, otherwise resembling *R. acustris*, was found

4500  
500  
2500

5000  
990  
4010

4900  
990  
3910

4825  
990  
3835

Lower down trail 8/2/15 (26)  
~~Abies amabilis~~ \* ~~grandis~~ -  
 Arctostaphylos - Pyrus acid +  
 Arenaria maritima + abies  
 Aquilegia + Haberaria gracilis -  
 Pedicularis bract. - Arenaria latif -  
 Mimusulus Lewisii - Epilob alpe +  
 Lupinus + Thalictrum +  
 Pentstemon (var diff) Heracleum .  
 Collinsia parviflora - Gilia gracilis  
 Chrysothrix parvi + C. edulis +  
 Lonicera involuc + Amelanchier (Hobson)  
 Pyrola secunda - Heracium albiflora +  
 Pedic. racemosa - Rosa acicularis  
 Alnus sitchensis + Rubus nutkan +  
 Prunus virginiana, - Beanothus  
 velutinus -

Lunch where Hope trail  
 crosses creek @ 1:15 pm over 5000 4010  
 at 3910 Fragaria bracteata leafy berries  
 @ 4825 Berberis nervosa  
 3835  
 abies amabilis + grandis



Fungus found in 9/7/15  
Skaist Valley Hope trail

Thursday (cont.) 9/7/15

The trail for some distance  
is over gravelly soil & for the  
most part keeps well above  
the skait. Gradually  
timber makes its appearance  
and in some places the  
trail is beautiful; passing  
through Hemlock, Douglas  
fir & a few *Arnus monticola*  
the sides are clad with *Rubus*  
*pedatus* *Chimaphila* *Scorilla*

Camp at Cedar flats  
6 Pm. 3900 aner  
2910

3900  
990  
2910



Rhododendron in  
 main Skagit. about 2  
 miles from Hope trail,  
 Douglas fir + Hemlock +  
 Pinus montes +  
 Rocky ground covered with  
 lichen moss + gaulth  
 ovatifolia open wood  
 a few Black Vaccin. acute  
 leaves. (4400 aneroid) 10:30 am  
 On flat ledge below slope  
 abundant on one spot, rare in other places

4450  
 990  
 3460

4400  
 990  
 3410 alt  
 2910  
 600

X

Friday 9/2/15

Aneroid 8 am <sup>2910</sup> 3900  
 up main Skagit Valley

~~Elaeagnus~~ Shepherdia ⊕  
 Goodenia, + Pyrola lact +  
 Rubus nervosa \*  
 Pachystima \*\* forming the underbrush  
 Pyrola chlorantha +  
 Chamaehila \*  
 Gaulth. ovatifolia \*  
 Pseudotsuga \*\* + Pinus mont -  
 Tiarella unif + Clintonia \*  
 Rhododendron albifl ⊖  
 " californ ⊕  
 apocynum (along trail)  
 Clematis can. +  
 Clintonia + Rub. ped. + Cornus can. +  
 Thelypodium \* Rubus ped \*  
 In valley at 4450 aner. the forest  
 is very moist get cedar is com<sup>trunk</sup>  
 rare, Douglas fir and Hemlock  
 Viburnum paucifl? + Alnus

5600  
3900  

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1700

5600  
990  

---

4610

Cedar was conspicuously  
rare, Douglas fir &  
hemlock was most  
abundant. In one or two  
instances we saw a  
cedar & Douglas fir so  
close that they seemed to  
rise from the same root  
the bark being almost  
continuous; the cedar  
bark tended to envelope  
the Douglas fir.

Friday 9/7/15

Camping ground summit  
of Skagit @ 6pm 5600  
4610

From Cedar flats to summit  
a fine ledge of Rhododendron  
was passed. Two other  
isolated specimens were  
noticed by the trail. White  
Rhododendron<sup>albiflorum</sup> was occasionally  
found. The trail at first  
passed through fairly open  
woods, then descended to the  
bottom of the valley which  
was filled with dense  
underbrush mostly Devils club,  
the herbage was Clintonia  
Rubus pedatus & Oak-fern. The  
latter most predominant.  
Devils club takes the place of  
Salmonberry & thimbleberry  
so often found in similar  
situation. In some parts

Saturday

In passing from this camp to the Lightning lakes we went through a great forest of spruce (*P. sitchensis*) which extended down to near where the Bridge crosses the Cambie. After this, there is practically only *P. contorta* with a few *P. monticola*. Occasional clumps of *beanothus velutinus* was found.

The underbrush in places was reduced to a minimum - a low growth of *V. myrtillus microp* & in some places nothing but a few clumps of low *Polytrichum* giving the open woods a desolate appearance

5650  
5325  

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225

Note rise of 25 ft  
∴ deduct 1015

5625  
1015  

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4610

Saturday 10/7/15

Aneroid at Camp 9.30 am?

5625 on Cambie Valley  
4610

on gravelly flat. *Sedum div*  
*Fragaria blanda* \* *Delphinium*

*Aquilegia* + *Lilium* \*  
*P. contorta* \*\* *Picea* \*\*

after lunch country is very dry belt like. *Silene* + *Pink Scout*  
*beanothus - sprucea lucida* \*  
*Rhepherdia* \* *Arctostaphylos* \*  
*Lupinus* + *Sedum stenoph* \*  
*Rosa*, *apocynum* (@ 5200 am) 4185  
*Chloa Douglasii* *Polemonium*  
*Pachystroma*

Camp at Lightning lakes  
aneroid 5325 @ 4.30 pm  
alt 4310

5325  
1015  

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4310

note rise of 45 ft

5400

1090

4370 ft. ~~to deduct~~

6110

4200 at place where it  
was proposed to camp on  
Lightning lakes

On the slopes N of Lightning Ck.  
*Lonicera* ~~nitida~~ + bean others  
*velutinus* \* *Leuna* + *Gilia* \*  
*Phlox* (across leaves) + *P. Douglasii* +  
*Eriogonum* \* *Lupinus* \*  
*Thalictrum* \* *Heracleum* \*  
*Veronica alpina* \* *Arenaria nardif.* \*  
*Delphinium* ⊕ *Sedum steno* \* +  
*divergens* ⊕ *Erigeron aureus*  
*Arnica* (low alp) ⊕  
*Rhododendron alb* + *Symphoricarpos*  
⊕

7050

1110

4200

1090

6110

4050

6090

5960

Sunday 11/7/15

Aneroid 8:30 am 5400  
alt. 4310

*Berberis aquifol* at Lightning  
lakes *Lonicera involucrata*

*Abies lasiocarpa*  
narrow cones

ovary, filaments, and lower  
part of corolla

Divide between

Camp 4:45 pm aner 5960  
4050

at

$$\begin{array}{r}
 7450 \\
 1090 \\
 \hline
 6310
 \end{array}$$

$$\begin{array}{r}
 7400 \\
 2825 \\
 \hline
 4675
 \end{array}$$

$$\begin{array}{r}
 2825 \\
 1090 \\
 \hline
 1735
 \end{array}$$

Monday 12/7/15

Aneroid 9:45 am 7050 5960

Aphyllon uniflor  
Viola flabella

Erigeron compositus,

Polemonium humile

Oedum stenopet, sax branch

Potentilla dissecta on rocks  
head of muddy creek also

Erigeron, Anemone multifida

Arenaria nardifolia @ 7400 aner.

alt. 6310

at Whitworth's ranch

2825 aner

1735

Tuesday 13/7/15

Rhododendron on  
 Skagit 2950 aner  
 Pinus monitcola +  
 " contorta \*  
 Pseudotsuga Douglas +  
 Ceanothus sanguin. -  
 Amelanchier -  
 Prunus emarginata +  
 Thuja - Spiraea lucida \*  
 Alnus + Pachystima \*  
 Arctostaphylos \*\*  
 Berberis nervosa \*  
 Vaccinium macrophyllum +  
 Rubus nutkanus + parviflorus  
 Corydalis picta - Chimaphila + <sup>Popul. rot</sup>  
 Lilium col - Hierac. alb - Sium latif

Soil fine brown loam -  
 with Peltigera + Cladonia  
 Menziesia glab. Ribes.

2875  
 1090  
 1785

2950  
 1092  
 1858

Tuesday 13/7/15

2875 (anersid) @ 7:45 am  
 1785

Lupinus pods \* for seeds,  
 Ceanothus velutinus \* fruit  
 Pedic. haemosa  
 Pachystima \* Apocynum  
 androsaem + Shepherdia \*  
 Spiraea lucida, Amelanchier \*  
 Pinus contorta \* ~~Pop. tremul.~~  
 Pseudotsuga \* Rhod. Calif +  
 and ⊙, Berberis aquif + +  
 nervosa + Achillea + R. acetos.  
 Ceanoth. sang - actaea arg +

2040 alt.

3160 aner at  
Robinsons Camp 22 mile horse

640

3185 alt

4275 aner at Sayroph

3160  

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1115

3160  
1090  

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2070

3160  
1090  

---

2070

31

4275  
1090  

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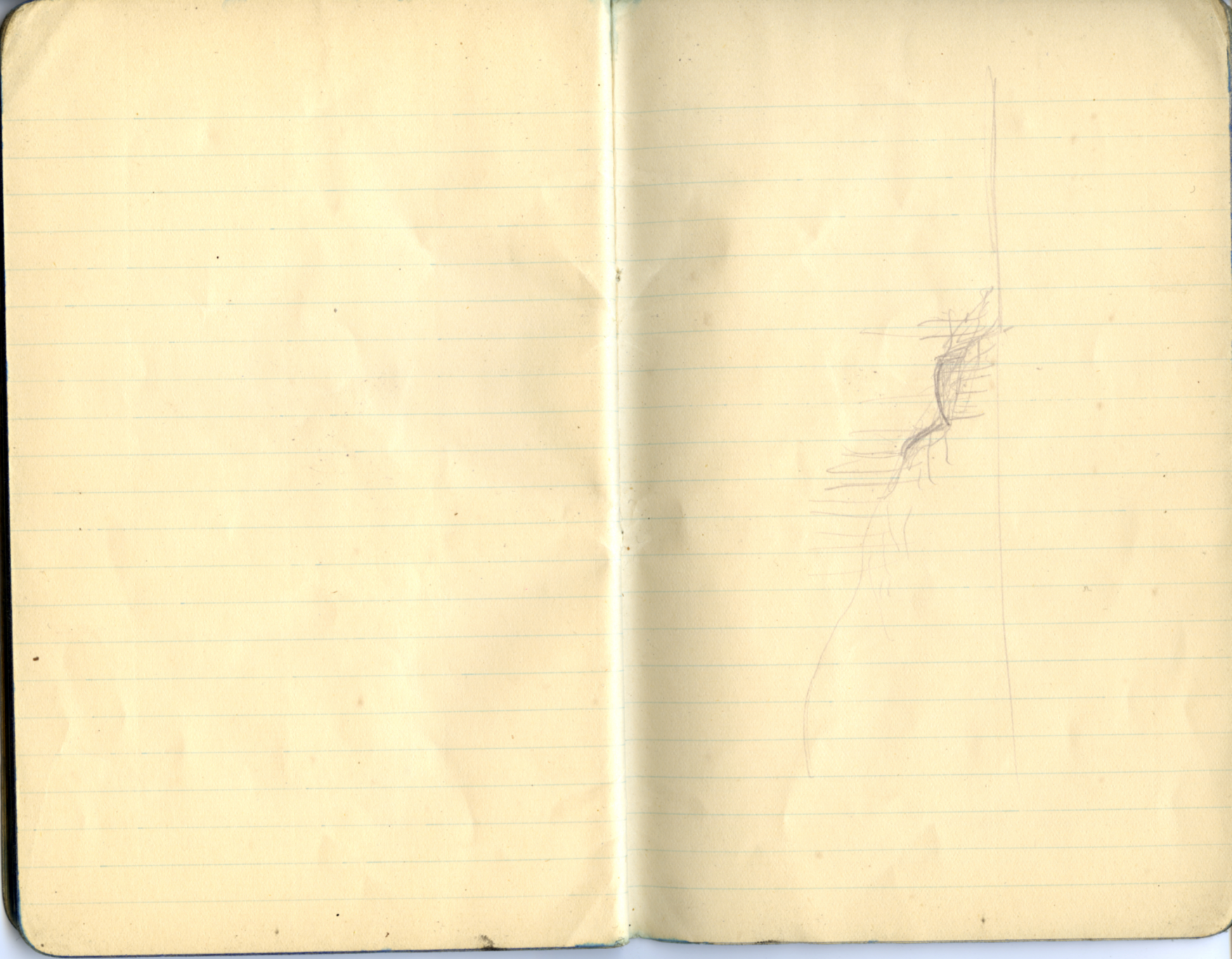
3185

Wednesday 14<sup>th</sup>

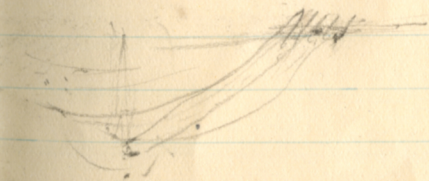
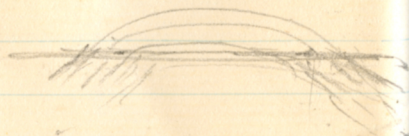
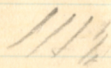
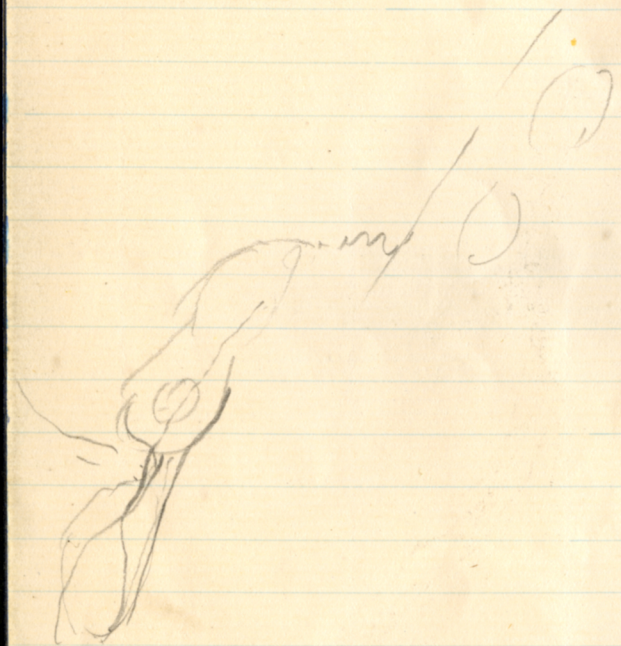
aner. 3100 ft @ 6.45 am

2010 alt

very wet day.







Mr. E. L. Marshall  
Hope B.C.

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Mr. Chas J. Howlett  
Hope B.C.

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