

U.
S.

Hall
1895-1
Alaska Coal fields
Bogosloff Volcano
Corral Hollow

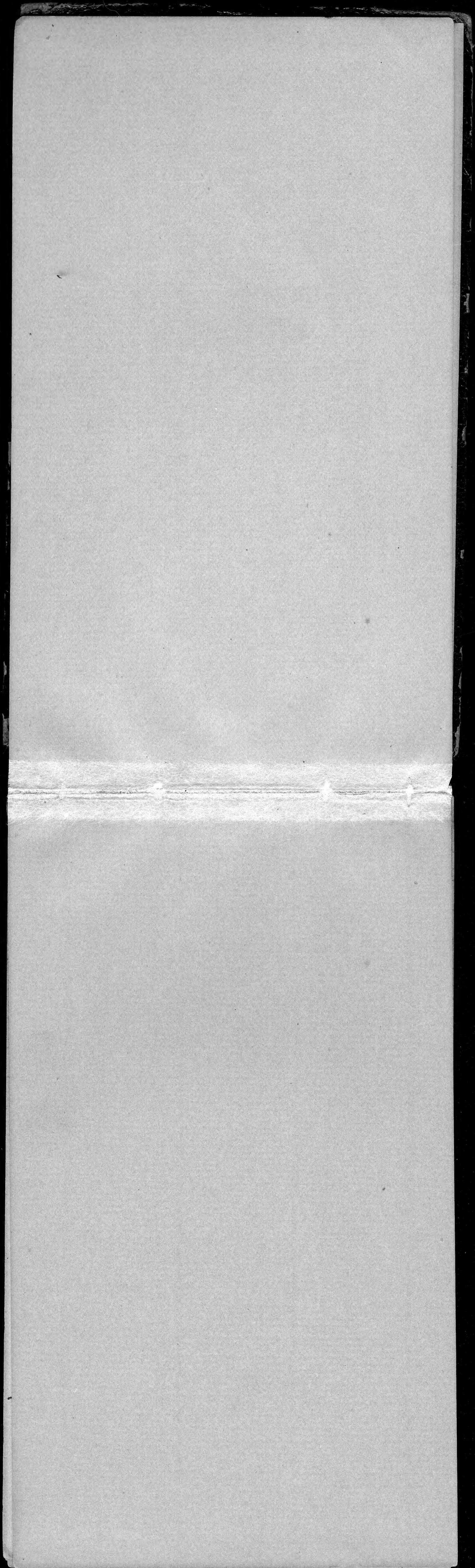
SURVEY

Note book no 1

1895

Wm H. David

U.S. Geol. Survey.



Sunday June 2/95

U. S. S. Pinta, Sitka, Alaska.

About 9 A.M. take the launch for St. John Baptist Bay about 15 miles north of Sitka opposite Salisbury Sound. Coal has been reported here at various times but only in float pieces. A careful examination of the material brought down by streams shows only granitic and metamorphic rocks and occasional bands of graphitic slates. The latter have sometimes the look of anthracite and are probably what has been mistaken for coal by inexperienced persons. Return about 5 P.M.

Coal at N. side Yakutat Bay near the shore, seam about five feet. some taken to Sitka by De Goffo & Emmons. Russell's Camp No 2 is at the site of the mine.

Coal at Pt. Gardner, several thousand dollars spent in development by Capt. Jas. Carroll and others but work ceased on account of faulting which cut off the vein.

Sunday June 9/95
Kootznahos lagoon southeast arm - Sepphagen mine. shaft 8 ft deep full of water, hoisting apparatus & small car. A few tons of coal taken out (specimen bag No. 115.) about 3 years previous to our visit now reduced by slacking to small flakes. appears to have been a small pocket soon exhausted. Seam in friable sandstones and soft shales dipping about 30° NW. only a short distance from the water's edge.

Sunday June 9/95 - 115a
Arm of Kootznahoo lagoon
where signs of coal were dis-
covered by prospectors
on a reef covered at high
water. shales & sandstones
^{mostly higher} dipping about 35° NW. The
shales very friable with broken
fragments of leaves & stems
but no good plant remains
A few specimens (marked 115A)
were collected. The thickness
of the coarse grained but rather
uniform soft sandstones
appeared to be several hun-
dred feet, with occasional
concretionary nodules of
hard & fine material. The
strata showed waves in several
places with a general NW dip.
The layers showed wave action
by crossbedding very distinctly.
The shales were variable in
hardness usually soft and
in thin layers, very friable.

with occasional lignitic nodules but no well defined coal seams. The surface of the land covered with vegetation. The only exposures between the trees & low water mark.

At another point on a small islet between two arms from Favorite Bay, Mr. Bright saw pointed out a six or eight inch seam of lignite much decomposed at the surface. This was traceable from low water mark to the base of the bluff. The sandstones appeared much broken up wavelike, and every where low, the topography apparently every where less than 100 feet. The arm (S + SE) in which these exposures are shown is the 2nd from the entrance, rocky and with strong tides, only accessible at slack water. Dip, 30° - 45° NWly.

117 Meadeston

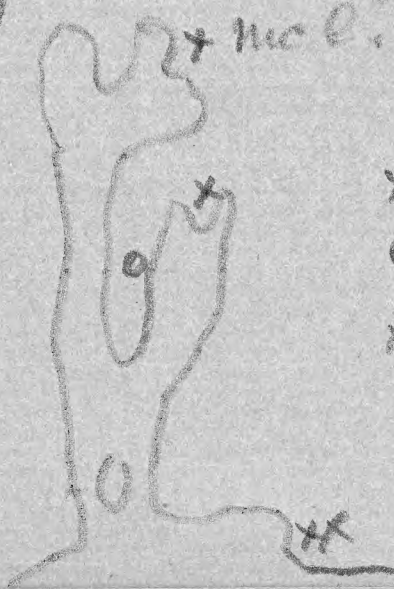
118 Brighton & S. Y. 1182 leaves

Monday June 10/95

At Pt. Sullivan a shaft 120 ft was made by McCloskey & others with poor results. The outcrop is about 8 inches thick of much crushed shaly lignite with polished surfaces. In the shaft according to McCloskey there are two seams separated by about 6-8 inches of hard slate. Dip NE 60°. Strike 60° NW. The coal taken out of this shaft does not appear to have been utilized except in the dwelling adjacent to the mine. (Specimen no 116) The adjacent shales show numerous leaf impressions.

Monday June 10/95.
Mitchells Bay, Kootznahoo
Lagoon Alaska. opp. camp
of C.S. party on bluff not
far from entrance into
McCluskeys arm.

a small seam not exceeding
five inches of coal with twice
as much slate & shale in
hard sandstone dipping at
a steep angle (Strike E + W.
Dip 45° N.) a tunnel run in
about 30 feet probably ten
years ago and abandoned
There are one or two similar
seams, one of four inches &
another a little thicker, reported
upon the SE shore of the
bay opened by prospect holes.



- x Brightman
- o Meade - two -
- xx Mitchells Bay

Monday June 10/95

Meade & Mitchells seams
on arm of Mitchell Bay
1st tunnel, where coal was
taken out for the Sapinau
timbered but filled with water
and crushed by land slide
(Specimen of coal in bag 117)
visible seam averaging about
a foot, near high water mark
much contorted and 100 ft
west turns vertical and bi-
furcates, then runs out.

Strike 25 N E Dip 5 E flat variegated
A second short tunnel in sim-
ilar coal a short distance
further up the arm.

Rock sandstones chiefly above
without fossils, below shales
with leaves, like the others.

Continuing up the arm on
a small point is a tunnel
put in by Brightman, de Goff
and others for 100 ft or less
now abandoned. Seam of

Shaly lignite not over 14
inches in thickness in shale
on side of which is a
harder sandstone. (Speci-
men of coal in bag 118.)

Many leaves in the shale
a few specimens (1189)
collected. Several thousand
dollars spent on this mine
quite worthless.

In a small cove at the head
of the left hand stream is the
only coal seam now worked
on which Mr. ^{Das} McCaskey has
done a good deal of work
and taken out nearly 100
tons of coal. Dip ≈ 25 S.E.
strike ~~25~~ 40 N.E.

The rocks here are a low
bluff of coarse sandstone
under which, dipping nearly
at the angle of the beach

but visible from 1.0 to
somewhat below high
water mark about level
with the surface of the
beach is a seam of
shale & coal (18 inches)
and which has been dug
out for a distance (along
its face) of about 100
feet to a depth of
a couple of feet. In the
beach and immediately sur-
rounding the sand are several
at seams of coal separated
by variably thick beds of
shale & slaty sandstone.
The upper (specimen of coal
in bag No. 114) is the best
& clearest and not over a
foot thick. Coal from
this seam tried in the
Patterson Steam Locomotive 18
coiled tubular boiler, burned
well and developed about
 $\frac{3}{4}$ the steaming value of


Wellington (B.C.) coal usually used, was decided by better than Cornox coal.

Below this seam is a yard or two of shale and then a parallel seam of brown lignite mixed with bright coal and thin leaves of shale. This contains many particles of fossil resin and impressions resembling wood fibers. Owing to the wash over it the full extent and uniformity of this seam could not be distinctly defined but it appeared to include about three feet with the central portion somewhat more shaly than the rest. Whether this mass was a local thickening of a seam elsewhere thinner or part of a uniform bed can only be determined

by more extensive exploration.
The rocks about this
mine are less disturbed
than at other localities
visited, and the prospect
of continuity in the seams
corresponding by better

Woody Id. - Kadiak Id.
July 11/95-

On the shore of the island facing Chikilak Bay there are numerous beds of blackish slate, the schistosity nearly vertical and in large part coinciding with the bedding. The dip and strike are ^{locally} multifarious even in the extent of a few rods. These slates alternate with thin sandy layers and form very thin leaves in many places, but are faulted and broken up in a remarkable manner with numerous dykes of grayish hard diorite intersecting them and often greatly fissured with small cracks which are mostly filled with quartz & calcite. Fossils are very rare in these slates but careful search revealed a few (No. 90). The average strike is N + S, magnetic, the dip 80° - 85° ~~Eastward~~ ^{Eastward}. The beds

form successive ridges
 between which
are fresh water lakes - long &
narrow, or swamps
The fossils (to July 16) were all
found in the westernmost
layers - These are somewhat
less crushed than those above
them and the latter become
lighter colored and more greasy
looking toward the top. The
thickness visible above the
sea is about 200 ft at the
thickest section. The dioritic
intrusions are usually more
or less transverse to the shaly
beds. I could find no boulders
on the surface, but one or
two scratched crinoids of a
sandstone like that of the
leaf beds of the peninsula
were noticed near the high
water mark on the beach (71)
Late found one crinoid on the
Mission grounds

As we leave Chiniak Bay and
work NW. through the strait be-
tween Kodiak & Afognak &
Spruce Ids, the base levelling of the
lowlands is seen to be less & less
decreased and no base levelled
bench is visible on the NW shores
of Kodiak or Afognak.

Bight W of Cape Douglas Cooks
Inlet July 21, 1895.

This bight has a rather
shallow depth in 2-3 fms. ac-
cording to soundings and
except from N. & N.E.

The cape is low with rocks about it
and the E and S. parts of the bay
appear to be flat. The west shore
is bold and should be kept aboard
in entering.

The East Peninsula is composed
of andesitic flows mostly horizontal
and more or less interstratified with
ash beds containing carbonaceous
matter and remains of plants.

They are somewhat faulted and
the ash beds are often stream-
waded and sometimes contain
sandy layers. The plants are ^(no 93)
mostly dead, grasses etc. as if
the deposit was a much flatter.
To the south through glaciers are vis-
ible in the range. Two come down
south of Cape Douglas and end
in a stream discharging into the
bay. The southernmost is the lar-
gest. The peninsula west of the
bay is composed of a very hard
layer of volcanic material about
40 ft thick with a layer of volcanic
material of the same, and indica-
tions of further below. The top
of this hill has been moderately
glaciated (as also the western penin-
sula) and shows a few eroded
The agency might have been an
extension of the glacier whose stream
now discharges into the bay at
the growing point down it.
The rocks are a sort of dark de-

composed on the surface but
the glaciation was rather a
sneaking off than scoring.

Leaving the Cape and making
a course NW $\frac{1}{2}$ W for Augustus
Isd. the back or northern
side of the Douglas Massif is
well seen, snow covered and
with three very large snowy
glaciers descending to the
vicinity of the sea. That
to the east appears to be the
largest and shows an even
snowy surface without talus
and moraines. Northwest of
the group of mountains is a
space of comparatively low land
behind the great Kamishake
Bay. Here evidence all reported
plentiful.

On the way to Augustus Isd. and
6 or 8 miles from it are the Sea
Otter rocks (— —) which
are said to lie SE way from
the peak of Augustus. We saw

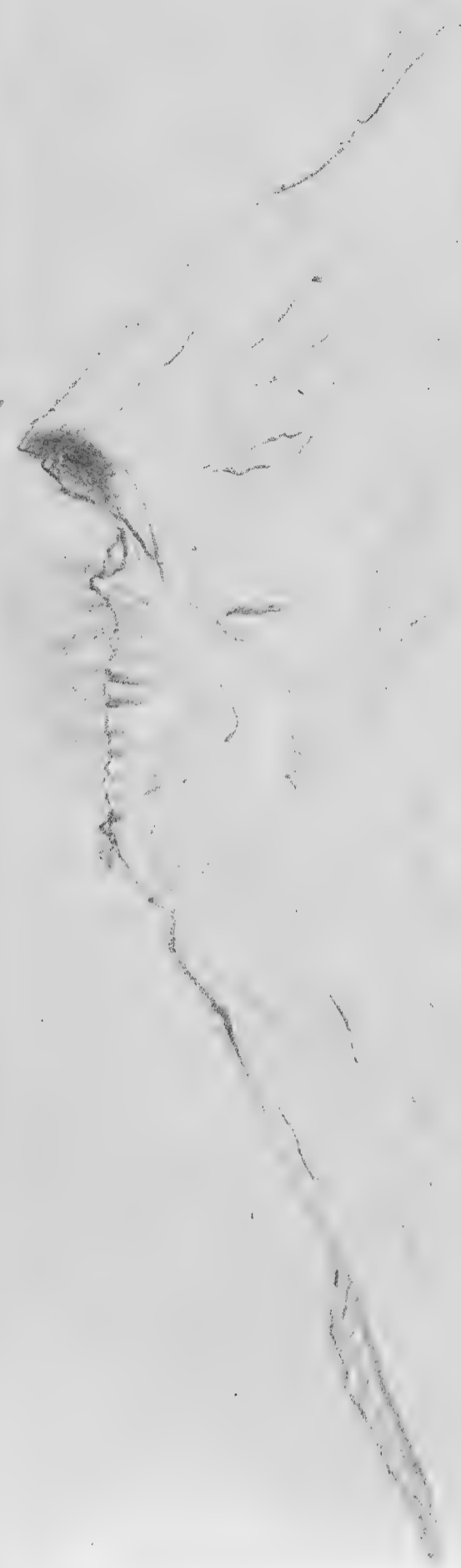
them in one with a high bluff
on east side of inlet (probable
Pt. Bede bearing N E by E while
the peak bore from us NW $\frac{1}{2}$ W.
mag. Later they bore N 50° E and
the peak N 50° W. at low water
there were two low flat rocks
and a smaller pointed one
visible two miles off. They
are said to be awash at $\frac{1}{2}$
tide.

July 22nd 1895
Augustin Id - Volcanos.

Anchor in $3\frac{1}{2}$ fms, sails with
the S. Pt bearing SE, by S, the
west Pt. NW, the peak N E by E
 $\frac{1}{2}$ E, about a mile from the beach.
The S. pt is sandy and low but
the best landing is best here
the beach running off very short
north of it. The west point is
composed of ashes and volcanic
stones forming low bluff banks

and running off in flats upon which the boulders, sometimes very large, are irregularly scattered. There was formerly an excellent harbor for small craft here, and the narrow harbor still exists, but the entrance is now dry at low water. This change was brought about in the last eruption (about 1868) and that it was due to an elevation of the bottom and not to filling up by the fall of ejected material is evident from the presence of a number of more or less stunted spruce trees near the shore which are evidently older than the eruption and would have been killed by the fall of material sufficient to choke the harbor.

The peak has the regular volcanic form, the apex being broken away to the west and



North, the south edge of the original crater being highest and apparently overhanging to the north. Steam issues from fissured black rocks at the edge of the crater in intermittent puffs. On the south slope, arched beds of ejected material crop out on the upper third of the mountain. The south slope from the crest is about 42° , the northern slope about 35° . The upper two thirds of the peak are largely snow covered, below much is bare ash and scattered lava blocks, then more a less herbage with stunted spruce sparsely scattered and low creeping alders. The borders of the island to the S + West are low hummocky and with bogs and small pools. The South side has bluffs of variable height, some very high. The lava is andesitic.

About 5 P. M. leave anchorage and start northward for Chisik Id anchorage

July 23rd, 1895. About six miles run into Chisik Id ^{Coastline} Harbor and anchor under the island shore. Bark Highland Light at anchor, waiting for salmon from Kasiloff cannery. Go aboard and consult Capt. Hughes about the locality. He is anchored in 15 fms. Lowest spring tide in June was 5 ft., about 24 ft. at ordinary times. Go to point at NW head of north entrance (floored by foul ground) about 57 ft. high. Reddish sand 4 ft., barren yellowish sandstone coarse quartz grains about 15 ft., then dark grey to pale limestone in successive thin beds, lowest is a light grey barren shale. The limestone is rather plentifully supplied with fossils (2.94)

of Cretaceous age. *Mourasaurus*
is the most common. *Baculites*,
Ancella, *Ammonites*, *Ferganella*
Pecten, *Liopistha?* and others occur.
also remains of a crab. In some
of the layers near the beach were
rounded whitish pebbles containing
the same fossils as the matrix.
These strata are moderately inclined
(Dip Strike)
and the beach is largely composed
of the flatish mud-cracked sur-
faces of some of them which
show out at low water along
the shore. The NE head of the en-
trance shows bluffs of limestone
sandstone & conglomerate, con-
taining rolled pebbles. Both peb-
bles & matrix containing the
same fossils. These bluffs are
much higher than those on
the mainland side and above
the NE end of this it rises
to a magnificent castellated
summit of curiously eroded


beds conformable in every respect and apparently homogeneous with the various beds actually reached. This end rises to 1500 feet or possibly 2000 the island gradually declines to the SW end with the dip of the gently covered strata. Just at the extreme end of the island the beds are for a short distance more steeply inclined. The weathering is more or less rectangular giving castellated forms and, near the beach, undercut by the sea into caves and natural arches. The bluffs on the mainland side appeared similar and also rise very high and continue high past the SE entrance. Off the SE head there were no visible rocks or breakers and we were informed there is no bar but a clear channel in, but on entering and leaving a well

marked tide rip was encountered both times, which might lead to the supposition that obstructions exist. On the island side the water is bold to; on the main, shallow near the head of the harbor for a long distance from the beach. There seems to be no hidden dangers and the holding ground is good. The wind is often stronger inside the harbor than out in the inlet at the same time owing to the high land and funnel shaped valleys. The harbor opens to the S.E. but the entrance is so narrow and the channel so long that the winds probably do not blow home with severity enough to endanger vessels at anchor. There is probably a narrow channel out at the NW end of the harbor but the ground is too foul to render any attempt to see it advisable.

antecedent to a survey.

Left the harbor about 3 P.M., and started a little before the flood tide for West and North Foreland. P.M. foggy with a fresh breeze and tendency to rain. Touch the shoal east of Kalpin Id. while at supper, but with no bad results.

July 24/95. Anchor off West Foreland about 4 A.M. to wait for the flood tide. A small village of Kooena Indians here some of them come off to the ship. Bluffs about 50 ft high of gravel + sand, wooded above, with some high mountains in the interior. Leave at the slack about 10 A.M. for North Foreland. There is a wide bay between the two with shoal water and foul ground in much of it. The land behind it is partly very low, all wooded and a river



comes in with very muddy water. Near the North Foreland is a series of whitish gravel bluffs of very regular height with a broad beach and shallow water for a mile off it with sparsely scattered boulders lying on it some of them very large and squarish, mostly of a whitish color. There are Indian houses in the principal gap in this series of bluffs. The largest settlement, Tyanuk, is near the point of the Foreland where a small gravel flat exists, the water off the beach for half a mile is rather shallow but not foul. The spot enclosed by a dotted line South of North Foreland is about with Nolic's remains No. 4. 1895 at low water shows large bare sandbanks 6-10 feet high. East of North Foreland between it and St. P.

session is a flat or shoal not shown in the charts and of considerable extent forming a serious danger. Fire Id is nearer Pt Campbell and more southerly than in the chart and there is no channel south of it between it and the foul ground. The shoal in Farnagin Bay is more elongated than shown on the chart. There is an inlet near the point east of Pt Franklin north of which anchorage may be had. East of this the Bay is almost dry at low water. Around the Midland to the north and about two miles distant is Ladd's fishery & trading post. Anshored here about 4 P.M. and landed. The water was $\frac{3}{4}$ fms half a mile off the beach at $\frac{3}{4}$ flood. Tides 25 to 35 ft. The formation is gravel &

a small river comes in,
The ground is low here for a
short distance with low bluffs
on either side. About N. longi-
tudine is seen Iushitna Mt. a
high peak near the Iushitna
River. The land on both sides
of Fumagayn Arm as seen
from here is high & mountain-
ous. Anchor here for the next
five days.

July 25/55

Leave about 2 P.M. with miners
boat in tow. Thick & foggy. arrive
off Fire Id about 4 P.M. and
stand over to Pt. Camp. Proceed
then along the shore at 2 miles
distance to a small rocky point
with a camp at the end, wooded
and with a small flat rock off
its end. Anchor here (in 7 fms
less no fool) at high water about
8 A.M. The point turns the
strength of the sea a little when

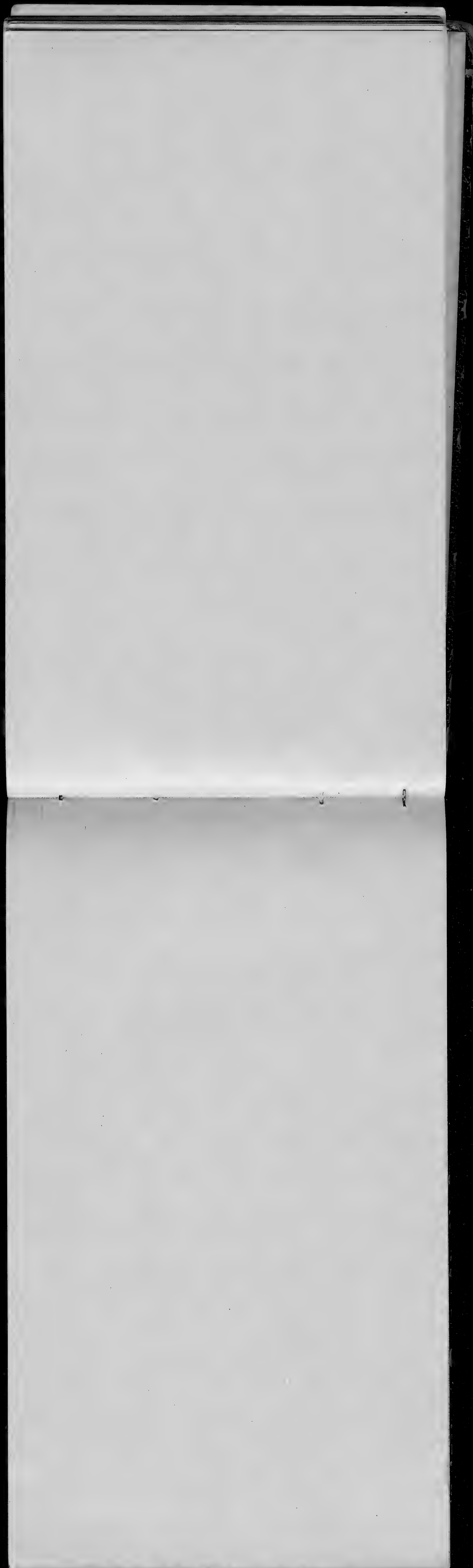
of the anchoring place a distance
by the azimuth compass Pt. Camp
bell bears West ^{40° N} the edge of Pt
Possession ^{N 50° W} by ¹² the SW edge
of the Adm by ^{N 60° W} and the small
rocky point East a cable and a
half by compass.

Pt. Possession is very low, wooded
with small bushes at the shore
Pt. Campbell is similar.

At the bottom of the light east of
Pt. Possession (which is short the land
rises to 2000 ft mountains (and
also the opposite shore) both are
rocky and come down to the water
in rocky bluffs with no benches
at high water. Off the high land
on the south shore is a small
dunehill, low island around
which the ~~bluffs~~ flats dry at
low water. It is called Maystone
by the natives. At the anchorage
the following readings were
taken of the alt by portable log
from the vessel

9.15 A.M.	log put over	100 miles
10.15 "	rears	103 ¹ / ₄ "
11.15 "		106 ¹ / ₂ "
12.15 "		110
1.15 P.M.		112 ³ / ₄
2.15 "		114
2.50 "		114 ¹ / ₂
3.30	Black water	

About 7.30 A.M. Dr. B. & A. leave
 in small boat for the place
 mines on Resurrection Island
 at 8.30 A.M. 41 ft water = tide
 " 3.15 P.M. " " " } 39 feet
 Mt. Sushitna bears NW, ¹/₂ W mag.
 Flood tide runs 400 ft in
 and at first rises 6 ft in 10
 minutes.



July 28 1895

N. Pac. Mining & Transportation Co.
Jos. Rosenthal 19 Montgomery St. S.F.
Agent in San Francisco.

Explorations begun in 1894 Dec.
near Eastland Creek, Kachemak.

F. H. Curtiss

Supt. M. R. Curtis, Eastland Station

- 70 ft. deep, 10 ft. wide, 10 ft. long

remains of alternate sand & gravel

& the sand is white, the gravel

is black & red. The gravel is 300 ft.

and the sand is 100 ft. and is a

fine sand later in the season.

22 1/2 oz. Specimen (218) main vein in place

with bag weighs 13 oz. (218)

Specimen (219) main vein in dump

with bag 13 3/4 oz. (219)

Specimen (220) main vein in place

with bag 13 1/4 oz. (220)

Strata of sandstone, whitish

clay containing large water

worn boulders, shales and

lignite, the upper part cov-

ered by some 2-10 ft. of

disk gravel. bluffs 600-800 ft.

land rising behind 1000 ft.

Mr. Curtis is employing only a few men and the work he is doing is of the nature of exploration. The development of the property will depend on the results of the experiments with the coal.

The Alaska Coal Co. which owns all the other claims within the spit on the bay. They have put in two tunnels which are reported caved in and the station is not now occupied. A Mr. Cooper living at Nenilchik is the agent but only occasionally visits the buildings here. ^{New York parties} The ~~Central Pacific Co.~~ sent an Expedition under Lieut Schwenen U.S.A. to explore & test the coal for locomotive purposes (in 1891?) but did not find it advisable for such use. Their coal was taken from McNeil cañon. next beyond Cottonwood ~~next below~~.

The coal does not want to be too frequently stirred in firing, has little smoke and light ash.

Putt. it down a little south of the west station and examine seam of coal there which has been prospected with two short tunnels by Mr. Bates. One seam about 45 ft above the beach is 4 ft 7 inches thick, blue coal ⁽²²²⁾ with about six inches iron shales sandstone above and a thick gray clay below. Above this are three seams separated by thick beds of clay or sandstone one of which, below, is nearly four feet, the others thinner, the coal fairly compact with a dull fracture, occasional thin lenses of sand or shale and a tendency to break up cubically. Lay along side the Maroon all night.

Monday July, 29, 1895

Run over to glacier spit and go ashore in the boat with the Eskimo while the boat was all the coal. Go up to the Dederingk glacier which has receded since 1850 about 250 ft, leaving a moraine of gravel and mud about 15-20 ft. high. The ground was some in part washed down by the Eskimo. Come off about 2 P.M. and go aboard the Marion at 9.30. Have some supper here but the Eskimo which has been eating and filling water does not come up till 10 P.M.

Tuesday July ~~30~~³⁰

Morning westerly wind, fair. Tow the Marion to a new anchorage then proceed to the coaling place which is on the beach a little south of a small river which empties into Coal Bay north of the spit. This is said to be the same ledge upon

which the Alaska Coal Co's.
entry was founded, and a tunnel
now faced in, run by
Mr. Bondley. There are several
seams close to one another of
which the lower is the thicker
and better coal, about
15 in thick. This is nearly
the lowest seam in the
series visible above
tide marks and is more
compact, glassy in fracture
and disposed to subcon-
fracture than the beds more
north or the lower side of
the bay and higher in the
series. (Specimen bag No. 13)
Boggs bears skull from the
mouth of the bay. Found
about 25 feet below the
back to the house & low water
light. At 6 P.M. sail for
Saldoria Harbor, arriving at
11 P.M.

Wednesday July 31st 1895
Morning cold, foggy, water
low. To ash & see into
New Black Mt. (Cincinnati)
(N.W. Co.) side of some
examine the rocks which
are schistose with much con-
tact. In some of the gaps
between the supposed points
at N.W. SE of the point are
patches of what appear to be
tertiary beds which are
horizontally bedding upon
generally upon the bed
One such patch SE from
the entrance to the harbor
shows a bed of dark blue
coal. Above the bed of
coal seam is a bed of about
five inches thick and a piece
of coal supposed to be from
the same period upon the
beach is compact, glossy
greenish brown, (not)
The bluff at SE head of the

harbor is composed of two
small rocky bluff islets
united by a low spit not
continuously high as on the
coast. The entrance has
rocky bottom clear across
with deep in 2 1/2 fathoms
most of it is black but
there is a rounded boulder
off the NW small whitish
bluff pt, visible at low
water. There are also
rocks above & below water
around the E. head. Inside
there are 7 or 8 fms. water
sandy bottom by the village
in inner harbor. Reflection
in the water shows some
land. The water was
blue of the bay. Sailed
Sailed about noon for
Fakhe Id. Weather fair,
weather overcast with light
air.

Thursday - August 1895 -
Reach mouth of river behind
Takli at about 5,30 A.M.
Find the coal well scattered
from all points, and average
in 10 fms, said.
The rocks are chiefly coarse
sandstones (Lip Mike
) resting conformably
on an ancient agglomerate
etc. etc. containing dark
pebbles. Thickness about
250 ft or more. Strata
of stream bedded sharp
gravel in layers few feet
thick or more with
three seams about 15 in
ches thick of impure
coal of which about four
inches are pure coal of
a glossy texture, and by
the hands of the men
blacksmith (see p. 14 of
men 214) These beds are
broken off by a granite

dyke weathering reddish
to the east and were prob-
ably once covered by a
more recent basalt which
forms the mass of the
outflow, but it
interposes into the south-
side in some places
enclosing the older mass
of some degree. The same
dykes also a few feet
high of liquid and the
presence of pebbles and
stones which are
of local origin.
Leave the boat for
Cold Bay about 11:30
am and before an in-
creasing tide pale water
to P.M. about 4 or 5
the bay, which has quite
a wide opening to the
west. The water is
and the water is well



up in the NE part of the bay about 7 P.M. Go ashore and look at the rocks which are very peculiar.

They comprise chiefly calcareous sandstones or sandy limestones containing numerous isolated concretions, not also used some pebbles, (over)

Fossil woods SW Head of harbor (Specimen No. 150)

Invertebrate fossils from just back of mountain west of stream near anchorage

NE side Cape Bay (Bay No. 149 + 148) Parry Island

Invertebrate fossils from about middle of series at high water mark west of stream

Fossil vegetation NE Head of bay (148/49) Parry Island

Fossil woods from NE of stream at J (149/147) Dall

Vegetable impressions from
slates below conglomerate below
granite N W part of harbor
Cold Bay - (bag 147)
Sandstone from above eruption
Basalt Takli Id Harbor (176)

In this limestone we found a
small seam of carbonaceous
shale with occasional thin
laminæ of clear coal, the shale
only a few inches thick, above
the limestones was a moderate
thickness of crumbling shale
without fossils much mud-
cracked. In shaly streaks of
the limestones were impressions
of reed like plants, like those
seen at Cape Douglas. NW
of these low bluffs, which
rise behind to a ^{high} squarish
hill, the beds descend gradu-
ally toward a small
stream off which we was
chored. Here a considerable

bed of conglomerate of small pebbles was superposed on the limestones. Aug 2/95.

West of the stream the limestones and shales are again seen forming a low arch, westward from which they are surmounted by a regular series of beds which have a purplish or reddish gray tint from a distance and being of varying hardness rise in a series of benches to a summit about 2000 ft high. The harder beds are limestone without fossils, the softer ones a calcareous shale which crumbles into small angular fragments making long uniform talus slopes. The limestones contain many mostly lenticular or spheroidal whitish concretions which affect the

upper beds NW of S
Abv 40' E of S
Dip 30 NW

ticular horizons more than
others. There are also thin
variable beds of conglomer-
ate. About the middle of
the series NW from the
anchorage was a bed of
conglomerate of small
rounded pebbles in a
limestone matrix which
also contained fragments
of organic remains, among
which were *Ammonites*
Belonites, *Asteria*, *Lanthe* bivalve
or two

at the outcrop of the first
high beach of the same
mountain mass dipping 30°
NW. Partridge found *Am-
monites*, a brachiopod like
Rhynchonella, *Belonites* and
a bivalve or two. The dip
of the strata becomes more
steep near the valley of
the stream. In the shady
streaks of the limestone

found pieces of fossil and
also carbonized wood and
obscure stems or rootlike
impressions of plants.

Later in the morning we
crossed to the right at the NE
part of the harbor at the head
of which is a flat with a
large lagoon dry at low,
into which a stream runs.
Ascented here a gully of erosion
in the rocks finding barren
shales and limestone like
those of the eastern side of
the bay. Well up I found a
calcareous shale with
a few plant impressions
above which was a heavy
bed of conglomerate above
which was a hard perhaps
andesitic volcanic rock
which from fragments
fallen from above seem-
ed to be more coarse grained
and friable higher up. The

beds of this rock seemed to lie conformably on the other rocks. The southern end of the point was relatively low and the beds very massive and horizontal, a fault concealed by a ravine at the junction probably separates these beds from those to the north of them which dip more steeply to the northward. The face of the cliff much eroded into crevices gave many places to thousands of sea birds, mostly murrelets & gulls. In the limestones near the point fossil wood and numerous tracks were found, the latter often horizontal.

Went aboard the steamer crossed the bay to pick up Purinton & dine and then went to the S.W. head where

we searched in vain for the ammonites mentioned by Fisher. The rocks were the same as those described for the NE part of the bay but the only fossils found were silicified wood and obscure plant remains & fossil seeds. The bed containing the ammonites may exist hereabouts but at all events is not conspicuous. Rained most of the P.M., with fresh wind & fog from the eastward. Left fjord & returned to our camp

Aug. 3, 1895

Leave about 10 A.M. for Kialoqqit Bay, West Greenland. Arrive about 10.30. A kedarka boards us & pilots us behind the island. Coast about 1/2 mile north east of the river which runs in from the portage. Fjords

Aug 3, 1895, Kialagvit Bay
Alaska. Specimens from
locality near Ugashik por-
tage. In bags 212, 215-
216, 217, 221, 223.

The dump is less than 100 ft
high and consists of a grassy
slope with small exposures of
dark stone and coarse shale
affair plenty of the fossils
and other specimens in situ.
The strata of this locality
are poor, the bay leading to
the Betcheroff straits. It is
except near the entrance
entrance where the local
ground extends west of
The upper part of the bay
is shall for a couple of
miles off the shore. There
is no conspicuous mountain
recognizable in the area
stretching from the straits
the mountains approach

be formed of rocks similar
to those near Cold Bay.

The entrance to the water
bay is rather deep for the
width, with a sand bar
over a foot within it.
Plenty of water comes down
there in a season's entrance
and at the first heavy
rain, with heavy water in
it. There are numerous
visible, narrow, shallow
rivers in the bay.

Mt. Olai is at the west end
of the bay, perhaps on the
shore, north of it. There is
a large glacier on its west
flank and in the lower
part two or three streams
flow to the sea. We
leave the bay and go
for Chiquite Bay where
we arrive next morning.

Sunday Aug 4/95

Day fair with westerly wind,
arrive in Chignik Bay about
6 A.M. and enter the lagoon
and run up to the cannery
which is on the S.W. shore
2 fms least water on the bar
and 22 ft at high water
within the channel is mod-
erately wide with 3-4 fms
water sandy bottom up
to the cannery, beyond which
it shoals.

Capt. Muller & Supt. Smith
of the cannery went aboard
We go ashore, inspect the
cannery, dine with Mr.
W.D. Smith, and about 4 P.M.
go on a small schooner
up to the head of the bay and
about a mile up the fjord
to the coal mine. The river
is not very deep and runs
between perpendicular ice
bluffs of tertiary sand, to

a lake 2-3 miles further up
which is 6-8 miles long then
connects by 5-6 miles of river
with another lake which is
be as long as the first.
The coal was discovered
by one Nordstrom about 1865
but he did not maintain
his rights and a Mr. Robert
Lee who did some exploration
during four years and took
out several hundred tons of
coal. He sold his rights to
the Alaska Packers' Association
for \$765.00 and they proceeded
1893 to develop the mine in a
concrete fashion using the
coal for the canneries. Dur-
ing the summer three men
are employed who take out
about two and a half tons
per day at a cost of \$3.00
per ton. About 350 tons a
year or 1000 tons in all have
so far been mined here

During the winter two men
are employed and paid at
the rate of 25¢ an hour
working as much or as
little as they please. There
is no machinery and the
work is done by blasting
the rock & coal men out
in wheel barrows. There are
two tunnels about 40 ft
apart, ⁵⁴6 ft high and 246
feet long. The only timbers
are uprights which have
been put in to support
the roof which is good but
shows signs of weakness
in spots. The upper tun-
nel has been robbed to
a width of 40 ft in some
places with a simple cross
cut to the lower tunnel.
The strata dip N 25° E and
the strike N. 15°-20° W. The
bedding is very regular over
the whole with a few small

slips. The coal consists of
one seam about 16 inches
in average thickness of
which one inch is a streak
of sandstone more or less
regular. Above this 11 inches
stone and about six inches
of coal. About six feet
above is another small
seam 2-3 inches in thick-
ness, very adhesive to the
roof which is of a firm
sandstone.

There are few fossils, all
stems or roots with an excep-
tional leaf. *Sagueria* was
noticed among them (bag 144).
The coal is solid, bright
clean, with little visible
silica and no sulphur
(bag 141). Experiments in
burning at the furnace
give as a result 118 lbs
equal 100 lbs of *Wapping* or
coal - it does not char.

The ash is granular and of a reddish gray. The coal gives little smoke - and is a satisfactory steaming coal. The vein comes to the surface about 30 ft higher than the upper tunnel in a ravine and has been traced inland for more than half a mile.

Leave Khyntik lagoon about 10 P.M. for the Shumagin with a quiet sea & cloudy sky. The tertiary beds of the west side of the Bay appear gently waves, nearly horizontal and abut against the mountain rocks apparently unconformably.

Monday Aug. 5/95

Morning, see Cape Kupre-
an off about 7 A.M., day
cloudy with moderate
sea & heat wind. Sail N.
at 10 AM and anchor at
Sand Point, off the buildings
about 2 P.M. So when you
news & find some, body gone
to Delatoff Harbor. When the
steamer Portland was met
with mail from the
air. Steam down there &
anchor in the outer harbor in
by 8, 30 P.M. After dinner
go ashore and see the
deputy, Mr. St. Clair and
the assistant, Hubble, Mr. Hughes
and others, and get some late
papers. Then about for the
night, or sit down sitting
in.

Tuesday Aug 6th

Morning rainy & stormy. Go
ashore after breakfast and

walk up to the Apollo Consoli-
dated Mine about three miles
above we meet Capt. Hague
B.P., proceed the mine and
I remain and see the works
underground of the mine
take lunch with them, then
a short walk to the B.P. Mine
and return by the square
about 4 P.M. in a storm of
wind rain. Upon the
inside the inner harbor
for better protection. Night
blows have in squalls with
wind rain.

Wednesday Aug 7

Morning wind still fresh but
a little more to the westward
to B.P. go up again to the
mine. I remain on the mine to
write up notes etc. The walk
off entrance to the mine - if the
mine has any type of compass
found the small compass
the largest is really a small one

ly timbered and has caved
in. The next above in
Thurs. Aug 8, 1915

The main coal seam has
been 130 feet from lower bed
of *Schizophoria* *longifolia*
Aug 14th coal seam lower
sub. 31.) ¹⁴³ *Schizophoria* *longifolia*
of *Schizophoria* *longifolia* from
from state, above this half
a dozen small seams of
4-5 inches thick of impure
coal, partly ¹⁴³ *Schizophoria* *longifolia*
partly *Schizophoria* *longifolia*
much *Schizophoria* *longifolia*
and with many thin sandy
or shaly laminae. In spots
iron pyrites is very abundant.
These seams are separated by
wider bands of *Schizophoria* *longifolia*
aluminous shale or sandy
sandy layers.

The tunnel from *Schizophoria* *longifolia*
coal was about 100 feet
14 feet by eight or ten and
runs in *Schizophoria* *longifolia* of

seemed about 200 ft above the bay, 100 ft higher was a third level of about the same size, partly timbered with much percolating water. The coal in many places was small seams varying from 1/4 inch to 2 inches thick, bands of red sandstone shale interbedded by thin layers of fine sandstone. The importance of what was found here will have to be determined later. The spots where these seams have been found in places to the southwest of the bay are all in a line of 1864-70. Leave the bay about 11 o'clock and visit the colliery near at the north end of the bay. Then run down to the camp and examine the seams. The best is found just where we set up at the wharf.

and laid our baggage about
4.30 P.M., going to the Popoff
Hotel where we got a much
needed bath. Wind blowing hard.

Waked to our great disgust
at midnight by the cry that
the Doa had come, pay bill &
get things ahead in a hurry
and leave Sandpoint for
Bellevue at 1.30 A.M.
Fresh gale blowing, reach the
village about noon and laid
some supplies then proceed
against a strong SW. wind
sometimes rising to a gale
in squalls.

Saturday, Aug. 10.

Morning fine, fresh Westerly
wind, proceed toward Ureah
Pass, which we reach in P.M.
with light wind at times.

Swell and tide rips in Skutan
pass and arrive at Dulok's
Harbor about 6 P.M. Go ashore
I am cordially rec'd by Mr.
Baldwin & Capt. Rice. Go
aboard the cutter Rush and
see Capt. Hooper who wishes
to withdraw his offer of a
cutter to Mercator's Bay, as
one of his vessels has been de-
tained at Sitka, Dr. Becker
decides to give up that trip
and go to S. F. on the Sit-
ka which is expected here
in about a week. Return
to the shore and sleep at the
Co's house.

Sunday, Aug 11/95

Morning calm, cloudy, the
sun trying to get out. Write
letters and put up notes.

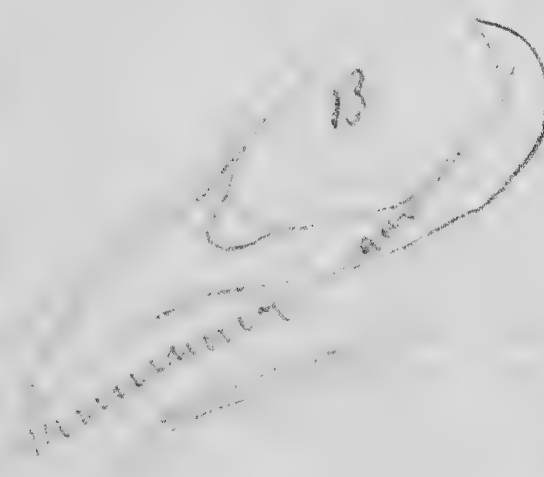
Corral Hollow coal
bag 142

From anchorage

- | | |
|-------------------|-----------|
| S. spit | SE 1/4 E |
| S. Edge Bogasloff | SSE 1/8 E |
| N " " | S by E |
| S " Browningk | WSN 1/8 S |
| N " " | N 1/4 N. |

N. Peak Bogasloff 1/3 total length high
 Middle peak a little higher
 Highest part of Browningk a little
 more than 1/5 total length

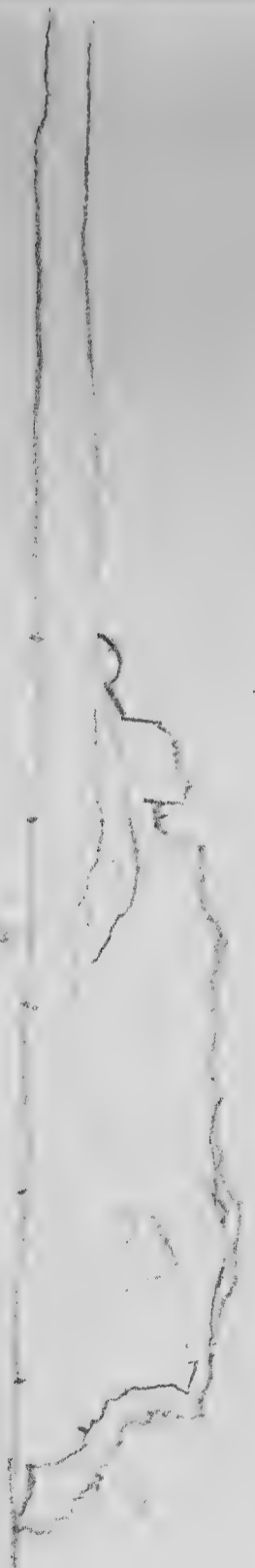
Bogasloff & Browningk etc
 canons & Aug. 13/95



IX

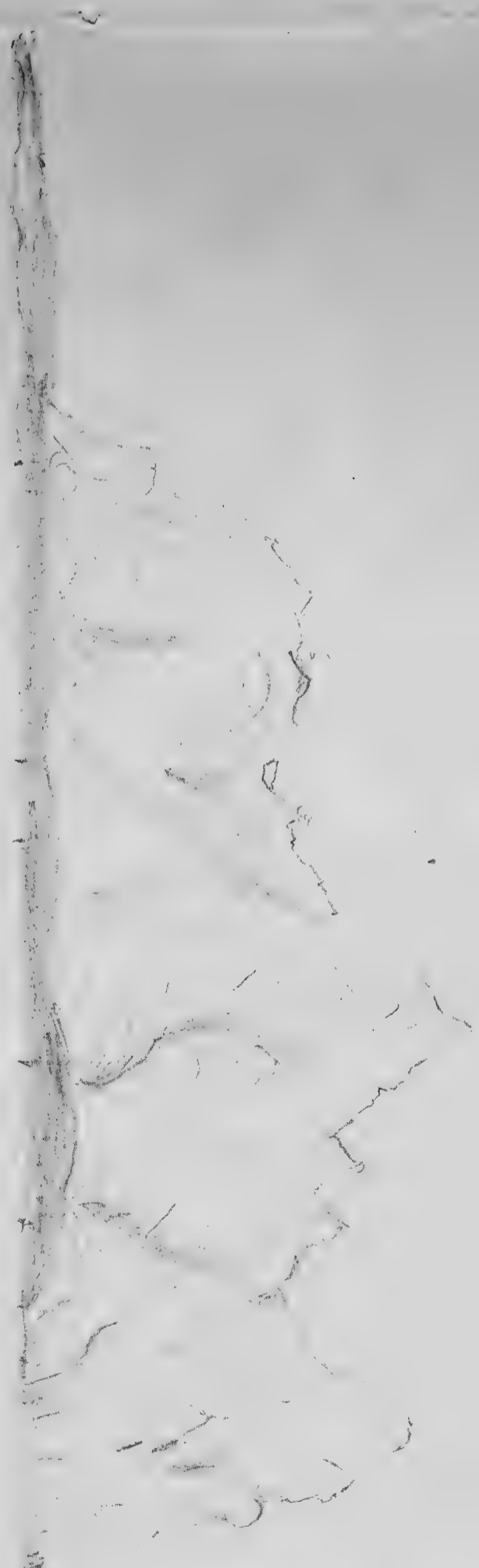
Transmissio ab 1785

hinc inde



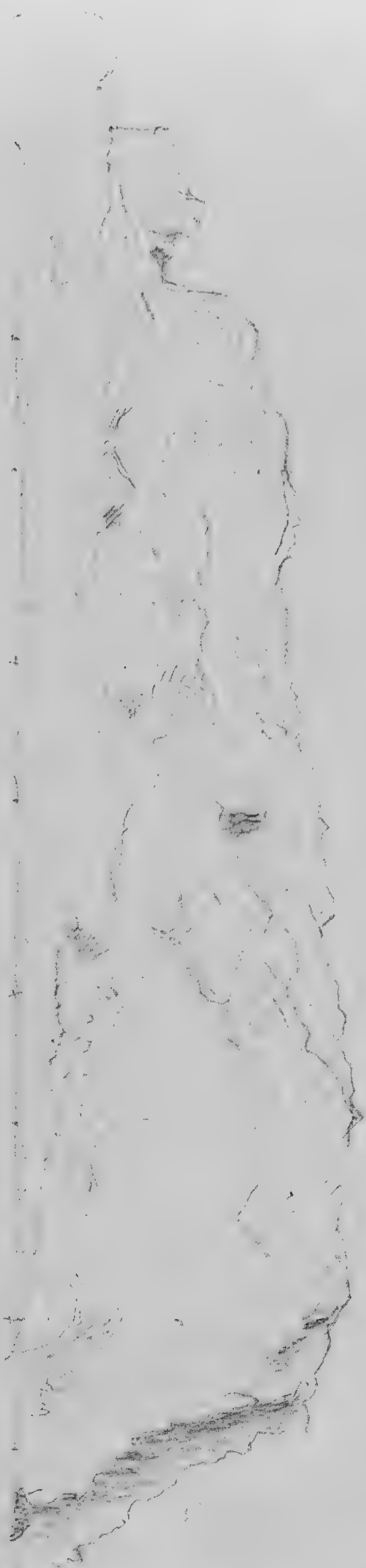
Byrd's

1785



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Vol. 13, 1955 - 1956

Viewing from ...



Aug 13, 1895 - off Bogosloff &
Greeningk volcanoes.

Sail round the islets keeping
the distance & bearing the
bearings
Bogosloff bearing south the
log reads 0.2 mile
The two islets in one south 55°
East - log 0.93 mile
off middle NE end of Greeningk
log reads 1 mile
Bogosloff comes out west of
Greeningk, west edge S, 55° E
log reads 1.30 mile
Bogosloff clear Greeningk log
reads 2.55 mile
North edge of Greeningk bearing
NE, log reads 1.8 mile
South edge of Greeningk & Reef
bearing NE log reads 2 miles
North edge of Bogosloff bearing
NE, log reads 3 miles,
South side NE, log reads 3.25
East edge Greeningk in one mile

West edge Bogostoff log reads
3.65 whole island covered 3.675
East edge Brewinck and east edge
Bogostoff in one, log reads
3.475 miles

Bogostoff is wedge like
Brewinck flatish top with
a little elevation, former square with
with three short north by
projections
The spit projects past
Bogostoff for some distance
the can be seen under water
There appears to be a channel
between the two, perhaps in
section from the east of the spit

Aug 31, shells like Spirifer
from Cape Thompson SE
Alaska, Col. Coast. Soc.
also mesozoic fossils from
Kamishad clay and tertiary
from Alaska. W. Fisher -
Ammonite in A.C. Co's museum
from Sutherland Id.

Alcedon Bay, Col. Soc.
page 27

126 coal system in clay bank
on the beach ^{Red River} Sutherland Id.
specimen obtained by P.T.B.
July 16, 1907

North Pacific Mining & Transp.
Co. Capital 300000 shares @ \$10.00
J. W. Rosenthal Pres.
J. A. Bradley Vice Pres.

4?
Commenced operations
about 1895
1890 was accepted from the
Carter
E. W. Wood testing coal for Co.
Small amount of coal
found in 1891
1892 the company began
to operate
steaming and other

good fire was kept up they
used 2600 lbs in a given
time during which they would
have used 2200 lbs of Connet
coal. With a low fire and
small pressure of steam the
amount used was 2240 to
1300 of Connet.

222 4ft vein 4m south Eastland
 142 - Corral Hollow July 28
 227 Herendeen Bay
 115 Sepphagen Mine Rd
 116 Pt. Sullivan
 117 Meade & Mitchell seams
 118 Brightman & de Graff
 114 McCloskey
 218 Eastland Cañon main vein
 219 " " " dump
 220 " " " in place
 224 McNeil vein
 213 Bradley vein
 214 Amalick Har
 141 Chignik
 131 Lower bed Unya
 143 next above 131
 126 Red River, Kadick

	213 +	
	214 +	
114 +	218 +	
115 +	219 +	
116 +	220 +	
117 +	221 +	222 ?
118 +	227 +	
126 131 + x	222 +	
141 +		
142 +		
143 +		

