Department of Commerce and Labor
COAST AND GEODETIC SURVEY

Superintendent:

State: Alaska

LOCALITY:
Alaska—West Coast
Cape Alpenoca to Chagruk Bay
and
Chagruk Bay to Tordrillo Bay

1912

CHIEF OF PARTY:
P. S. Patton
Topographic Sheet Chagvan Bay to Cape Newenham Alaska

U. S. S. EXPLORER

August 1912

R. S. Patton, Assistant

Commanding

Scale ............... 1: 20 000
Topographic Sheet - Goodnews Bay to Chagyan Bay Alaska

U.S.S. EXPLORER

R. S. Patton, Assistant Commanding

July & August 1912

Scale 1: 20 000

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To accompany topographic sheets A and B, Survey of approaches to Ambon in River, Bering Sea.

Sheet A: Goodwin Bay to Bajjar Bay
Sheet B: Bajjar Bay to Cape Okmirenham.

As a special report has already been made covering this region, and containing, among other information, much that would otherwise be incorporated in the descriptive reports, the scope of this present one will be limited to survey matter relative to this survey. Also, as the methods used were largely the same for both sheets, one report is made covering the two.

Sheet A, at its northern limit, joins on to the survey made by the party of 1911. The junction is only approximate, the limits of the previous work were taken from a progress sketch, and the present work begins on the shoal line near that point.

No triangulation has been done over the area to be surveyed, which was, therefore, entirely without points of control. The instructions for the noble were to do no triangulation, but merely run a traverse along the beach, sketching the shore line, and locating such objects as could
be used in the hydrography. For more detailed topography than this was to be done.

To obtain a starting point for the traverse, a triangulation station (A B C D E F) was established near the southern limit of the traverse season work, and the traverse started from this point. The plan table was used at first, but it was soon evident that the plan table was unsuited for work under the prevailing weather conditions. Constant mist, rain, and fresh breezes so delayed the work that no three weeks later the traverse was carried ahead only six miles, and even at that distance there was some evidence to show that it was slightly in error. It was decided, therefore, to continue the traverse by means of the transit and stadia.

On shot A, therefore, the work between A B C D E F was done with the plan table and the stadia by transit and stadia. On shot B, the transit and stadia were used strongly. To obtain a starting point for the transit and stadia traverse, the position of B C D E F was scaled from the shot, and the azimuth computed at a long count time to an adjacent signal.

As the traverse progressed, it became increasingly evident that it was in error, and therefore, late in the season, it was decided to determine by triangulation sufficient intersection stations along its course to furnish points of control for its adjustment.
The method of adjustment was as follows:
The traverse on map was divided into two sections:
- Black to A Rim, and O White to A Farm. The gap
  between A Rim and O White, Security Box, was surveyed by a
  second party. The Security Box circle was an expansion of the
  line A Rim to A Tall, and the position of O White was, there-
  fore, well determined. The position of Black was
determined by triangulation. Each half of the traverse, therefore,
 began and ended on a known point. The traverse was
computed, and the difference between the position of stationary A
and Farm, as determined by triangulation and traverse, respec-
tively, was taken at the end of the traverse. These errors,
and they appear to be systematic, were distributed throughout
the traverse in proportion to the distance from the origin.

The data are accompanied by the record book and computation
of the traverse.

The work was done by Mr. J.M. Flinbrook, who, however,
was detailed from the party before his report was written.


Respectfully submitted,

P. S. Patton,
Chief of Party.