Department of Commerce and Labor
COAST AND GEODETIC SURVEY

State: Alaska

LOCALITY:
Alaska - West Coast
Cape Alavenham to Chagrin Bay
and Chagrin Bay to Kodiak Bay

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 Chagvan Bay Alaska

U.S.S. EXPLORER

R.S. Patton, Assistant Commanding

July & August 1912

Scale 1: 20 000

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3311 & 3312

Descriptive Report,
To accompany topographic sheets A and B.
Survey of approaches to Anahowin River, Bering Sea.

Sheet A - Goodnews Bay to Blyan Bay
Sheet B - Blayun Bay to Bole Okinaiam

As a special report has already been made covering this region, and containing, among other information, much that would otherwise be incorporated in this descriptive report, the scope of this present one will be limited to
related to the 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 former were taken from
a progress sketch, and the present one begins on the shoreline
near that point.

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

To obtain a starting point for the traverse, a triangulation station (A Sg.) was established near the southern limit of the traverse, 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 in the three weeks the traverse was carried about 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 station. On shot A, therefore, the range between A Sg. and O Black was done with the plan table and the remainders by transit and station. On shot B, the transit and station were used strongly. To obtain a starting point for the transit and station traverse, the position of O Black was scaled from the shot, and the azimuth computed from a long counting line 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 station along its course to furnish points of control for its adjustment.
The method of adjustment was as follows:
The traverse was now divided into two sections:
- Black to A Pin, and A White to A Fann. The gap between A Pin and A White; Security Box, was surveyed by a second party. This Security Box circle was an extension of the line: A Pin to A Fann, and the position of A White was, therefore, 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 Pin and Fann, as determined by triangulation and traverse respectively, was taken as the error of the traverse. These errors, as they appeared to be systematic, were distributed throughout the traverse in proportion to the distance from the origin.

The data was accompanied by the record books and computation of the traverse.
The work was done by Mr. P.M. Treadwell, who, however, was detached from the party before his report was written.


Respectfully submitted,

P. S. Paton

Chief of Party