

7123a&b

Graphic Control

Diag. Cht. No. 8556-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey GRAPHIC CONTROL

Field No. LJ-A-49
LJ-B-78
LJ-C-79 T-7123 a& b
Office No.

LOCALITY

State ALASKA

General locality S.E. COAST, ALASKAN PENINSULA

Locality KUKAK BAY

1949

CHIEF OF PARTY

JOHN BOWIE, JR.

LIBRARY & ARCHIVES

DATE

APR 25 1950

B-1870-1 (1)

7123a&b
Graphic Control

DESCRIPTIVE REPORT

TO ACCOMPANY

GRAPHIC CONTROL SURVEYS

(Field Nos. LJ-A-49, LJ-B-49, LJ-C-49)

T-7123 a and b
 T-7160 a
 (T-7123 a and b) (T-7060 a)

Scale 1:20,000

John Bowie, Jr., Chief of Party
 Commanding, U. S. C. & G. S. S. LESTER JONES

A. PROJECT

The graphic control surveys were executed under INSTRUCTIONS - PROJECT CS-338, Kukak Bay, Alaska dated 24 March 1949 to the Commanding Officer, Ship LESTER JONES. The purpose of this survey was twofold: (1) To establish hydrographic signals, (2) To supplement and provide additional horizontal and vertical control for the photogrammetric survey.

B. SURVEY LIMITS, DATES

The survey extended from Cape Nukshak at the northern entrance to Kukak Bay around and to Cape Ugyak at the South. Work was commenced on 21 July and was completed on 28 August.

C. EQUIPMENT AND METHODS

Standard plane table equipment with an aluminum mounted sheet was used. Surveys "A" and "B" are on opposite sides of one sheet and survey LJ-D-49 (1:10,000 scale and covered by a separate report) appears with "C" on opposite sides of a second sheet. The alidade was tested for adjustment prior to the beginning of work and the telemeter rods were checked, resulting in a small plus correction which was applied on distances over 400 meters.

Standard plane table procedure was used in signal location, primarily intersection and resection methods being employed. One two mile traverse was run between NUKSHAK 1908 and signal FIT on Sheet "A". The resulting closing error was too small for adjustment on this scale.

The survey party consisted normally of five men including the topographer with one man as doryman. A 20 foot dory with an outboard engine was the usual means of transportation, although at times a 30 foot motor launch was used in the outer and more exposed areas. As a rule the party left and returned to the JONES at anchor in Kukak Bay.

T-7160 a
 T-7060 a

T-7123 a+b

D. TIDE STATIONS

Records from the Kukak Tide Station and the Aguligik Tide Station served for the reduction to the M. L. L. W. plane of rocks and reefs awash located during these surveys.

E. HORIZONTAL CONTROL

The second-order triangulation scheme expanded during 1949 into Kukak Bay under the same Project instructions provided adequate horizontal control. Several graphic three point problems were solved for additional control to eliminate the running of short traverses.

F. HIGH WATER LINE

Sections of High Water Line were surveyed during the course of the signal location. In several areas additional shoreline was surveyed, notably on Sheet "A" while the traverse was run on this sheet, and in the occupation of different points for the delineation of the low water line.

G. MEAN LOWER LOW WATER LINE AND FOUL AREA LIMITS

MLLW rodged in and should be symbolized - - - - - instead of as shown on G.C. sheets

In many portions of the area surveyed sunken rocks, rocky ledges, reefs and rocks awash are found outside the Mean Lower Low Water line. It was deemed best to define most of the foul area limits by plane table. Some of the outlying reefs and dangers were located by sextant and plotted on the hydrographic sheet. Thus the hydrographic party had to only occasionally break their line to locate some previously unplotted feature. Also, this procedure relieved the photographic inspection party of a great amount of otherwise necessary field inspection of areas difficult to define on the photographs.

All of the M. L. L. W. line and foul area limits were surveyed at or below the datum plane which in most instances meant a revisit to the areas for this express purpose.

H. VERTICAL CONTROL

Attached to this report is an "Abstract of Elevations - Main Scheme Stations" showing the elevation of stations as determined by plane table and theodolite. The plane table work was the usual alidade vertical angle method. Alongshore stations were usually occupied where the H. I. of the telescope above M. H. W. was measured directly.

Additional elevated points were determined on the graphic control sheets. All of the vertical control was established to meet the topographic mapping requirements.

I. GEOGRAPHIC NAMES

Geographic Names are covered in the Photogrammetric Field Inspection Report for this project. However, all names were penciled on the sheets.

J. LIST OF PLATE-TABLE POSITIONS

No position list will be submitted with this report. See the Photogrammetric Report for this project for a list of supplemental control stations located on these graphic control sheets.

K. COMPARISON WITH PREVIOUS SURVEYS

This survey made no junction with any existing modern survey and hence no comparison could be made.

L. PHOTOGRAPHS

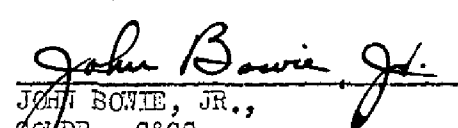
A series of horizontal photographs (K-20) will be submitted in a separate report for this Project covering all phases of work.

A great amount of the survey data determined on those control sheets has been identified and marked on the nine lens photographs.

Respectfully Submitted,


 HAROLD J. SEABORG
 LT. COMDR., C&GS

Approved and Forwarded,
 Date: 1/14/50 Place: Seattle, Wash.


 JOHN BOWIE, JR.,
 LCDR., C&GS
 C&GS, USC & GSS LESTER JONES

M

STATISTICS

Sheet No.	Statute Miles		No. Signals Located
	MHWL	MLLWL Foul area	
LJ-A-49	2.4	14.5	24
LJ-B-49	4.8	6.9	60
LJ-C-49	3.4	3.4	28
TOTALS	10.6	24.8	112

NOTE:

No area calculated on the graphic control survey.

ABSTRACT OF ELEVATIONS --- MAIN SCHEME STATIONS

SHIP LESTER JONES -- 1949

PROJECT CS-338 --- KUKAK BAY, ALASKA

STATION		ELEV. METERS		AVERAGE ELEVATION	
		Planetable	Theodolite	Meters	Feet
AGUL		100.28		100.28	329
BRUCE			0.76	0.76	2.5
CHIK		113.39		113.39	372
DIME		13.41		13.41	44
GULL	1908		147.67	147.67	484.5
JANE		4.57		4.57	15
JONES		190.93 ⁽⁴⁾	192.14 ⁽¹⁾	191.17	627
KUKAK		23.62	23.77	23.69	78
MAIN		0.30		0.30	1
NURSEAK	1908		40.27 ⁽²⁾ 39.22 ⁽¹⁾	39.92	131
OTTO		5.18		5.18	17
CEONE			514.42 514.82	514.62	1688
QUITA			0.91	0.91	3
RAY		7.47		7.47	24.5
TINY		46.33		46.33	152
UOYAK			2.34	2.34	8
YUGHAK		9.00		9.00	29.5
TONI		60.96		60.96	200

Notes: Small figures in parenthesis denotes weight given in mean.

REFERENCE DATUM IS MEAN HIGH WATER

GEOGRAPHIC NAMES

Survey No. T-7123 a & b
Graphic Control

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K
									1
									2
									3
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Foul area lines and Low Water lines
Norfolk, Va.
Rodded in by topographer March 7, 1950

Dear Mr. Smith,

Your letter dated Feb. 16 was received just a few days ago as I had a somewhat leisurely trip across country. I'll get right to the root of the matter.

With regard to question one the short dashed line ----- on sheets A B and C, Kiah Bay only indicate the outer limits of foul areas. Only extreme and critical points were rodDED in and joined up with the dash line to show the hydrographer the danger limits. In many cases the hydrography was run over these limit lines. To survey these kind of areas minutely would have been uneconomical and unnecessary. However, the dotted line indicates true M. L. L. W line and was run in at or near low tide stages.

I trust the foregoing answers your question.

On the second point you are correct in assuming that the heights of rocks shown in black and within parenthesis indicate the heights above M 96. W. I had them shown in red at one time but changed them to black as I interpreted red figures to show only precise elevations. The rock heights were for the most part obtained directly with the tape rod held alongside (estimation).

I appreciate your writing me directly and I believe that is the best way to clear up minor points.

We have just bought a 3 bedroom home here but must wait about 6 weeks before moving in. In the meantime we are in an apartment which is not too bad. All in all I believe we are going to like this assignment. Thanks again.

Sincerely yours,

Harold Seaborg

(over)

I believe that it would be
advisable to show the foul area
limits on the smooth sheets.
~~Constr~~ Many of the rocks along the
outer limits and some within
are definitely located sunken
and rocks Jawash. 988

APR 23 1950

537a
-24-47)DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO. T- 7123 a 86

TOPOGRAPHIC TITLE SHEET

FIELD NO. LJ-A&B-49

Each Planetable and Graphic Control Sheet should be accompanied by this form, completed so far as practicable, and forwarded to the Washington Office.

STATE

Alaska

GENERAL LOCALITY

Alaska Peninsula

LOCALITY

Kukak Bay

SCALE

1/ 20 000

DATE OF SURVEY

July-August 1949, 19

VESSEL

LESTER JONES

CHIEF OF PARTY

John Bowie, Jr.

SURVEYED BY

Harold J. Seaborg

INKED BY

Harold J. Seaborg

HEIGHTS IN FEET ABOVE MHW OR

XX

CONTOUR

APPROXIMATE CONTOUR

FORM LINE INTERVAL FEET

PROJECT NUMBER

CS-338

REMARKS