

REPOSITORY NATIONAL ARCHIVES  
 COLLECTION PAIRING OF FOLDER RETURN

TO: DAVID L. WARVER, JR.  
 FROM: H. L. DIETZE

JOB 88. 100 206  
 RE TRIANGULATION

DATE: 21 May 1953

Transmitted herewith are three (3) copies each of the following:

- 110887-281 Field Book 1050, Pages 16 to 47
- 110887-282 Abstract of Directions, No. 9 to 19
- 110887-283 Computation of Triangles, dated 5-16-53
- 110887-284 Side Equation Test, dated 5-21-53

This material contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18, U.S.C., Secs. 793 and 794, and the transmission or revelation of any of its contents in any manner to an unauthorized person is prohibited by law.

(1) Oboe - North How - South How - Nan Quadrangle

The triangle North How, South How, Nan closure is the maximum permitted for second order. Re-observations were made at North How and South How which did not improve the triangle.

The angle at Oboe, South How to Nan, was directly observed; it was obtained by subtraction.

The attached computation of triangles shows an individual angle correction that is very erratic. However, it indicates a side check within limits.

(2) Salt - Piper - Oboe Triangle

The re-observed angles at Salt and Oboe, with the former angle at Piper yields a summation of minus 0.5 seconds for the triangle. This appears to be acceptable but the relation to the measured sides of the Baseline must still be met.

(3) Coca - Oboe - Salt Triangle

The closure of this triangle is just 0.1 seconds, over the maximum permitted for first order. If spherical excess is considered, it is reduced to the maximum of first order tolerance.

In (1) above it is recognized that a strict interpretation of specifications might require additional work. An examination of the net as a whole indicates that the remaining work will furnish a wide choice of figures which will discover any serious error. Due to this element, no further work is planned on this. If the Home Office should decide that it is necessary, it will have to consider the possibility of re-planning the net if completed or further delay to be made.

In regard to (2) above, it was expected that the base line would be completed at this date. The work at Site Charlie necessitated a full time crew and this left insufficient men to handle the base line. It is presently planned to complete it approximately at the completion of the primary triangulation net. The water section of the base line is to be completed at the next "low-low" tide cycle after the end of the month.

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW SINGLE REVIEW AUTHORIZED BY: 1. DETERMINATION (CIRCLE NUMBER(S)) 2. CLASSIFICATION RETAINED 3. CLASSIFICATION CHANGED TO: 4. CONTAINS NO DOE CLASSIFIED INFO 5. COORDINATE WITH: 6. CLASSIFICATION CANCELLED 7. CLASSIFIED INFO BRACKETED
REVIEWER (ABD): NAME: <i>LD</i> DATE: <i>1/19/74</i>

~~HOLMES & NARVER, INC.~~ Pacific Region  
~~ENGINEERS-CONSTRUCTORS~~

TO: DAVID L. NARVER, JR. JOB 884 078 6208

FROM: H. L. DIETZE RE TRIANGULATION

Page 2. DATE 21 May 1953

(3) involved the use of Station Coca. The results appear satisfactory. Coca Station is very stable considering its position. Only at very infrequent intervals do the crashes of big swells or rollers vibrate the structure. Tide conditions seem to have no effect as big swells or minor vibrations - which only momentarily lift the theodolite off of line.

One of the problems encountered was the disturbance of the inner towers by high winds. This has been reduced by covering the outer tower with canvas on the windward side.

Another problem during the operation described in (1) was the shortage of boat operators. Scheduling of triangulation had to be dependant on their availability. Usually there would be only one boat available. This necessitated the triangulation party leaving early enough so that members could be dropped off at different points and the operator returning to Site Tare before he had run up excessive overtime. The return to Site Tare on the morning after triangulation was usually late due to the same reasons. This condition has greatly improved in the past week and should cause no further trouble. The Marine Dept. has been most cooperative to the full extent of their men and equipment.

The Construction Dept. has also been cooperative in scheduling its requirements. However, even a minimum of construction work requires a full crew on Site Charlie and a large part of the time of one crew on Site Tare. In addition, these crews must fill your requirements of profiles, barge data, etc. Field Party strength on Bikini has never exceeded three full parties.

The Triangulation Party plans to complete the primary Net by June 1st. They have not allowed for any contingencies in this schedule, such as loss of a night due to weather or some other cause. Generally, all schedules of triangulation have been carried out as planned with no foul-ups in any of the operations.

*H. L. Dietze*

H. L. DIETZE  
PRESIDENT ENGINEER

HLD:LMB:jws  
Encls.

- cc: L. S. Hammond
- HO Chrono
- HO Central
- OS Chrono
- OS Central
- OS Engineering

SELECTED  
TRIANGULATION

**HOLMES & MARVER, Inc.** Region 1  
ENGINEERS CONSTRUCTOR

REPOSITORY  
NATIONAL ARCHIVES

TO: DAVID L. MARVER, JR.

OB 884 0/S 1208

FROM: H. L. DIETZE

RE TRIANGULATION

DATE 21 May 1953

Transmitted herewith are three (3) copies each of the following:

- Field Book 1050, Pages 16 to 47
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- Side Equation Test, dated 5-21-53

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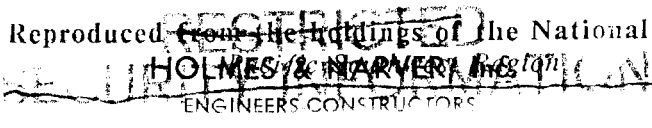
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In (1) above it is recognized that a strict interpretation of specifications might require additional work. An examination of the net as a whole indicates that the remaining work will furnish a wide choice of figures which will discover any serious error. Due to the time element, no further work is planned on this. If the Home Office should decide that it is necessary, it will have to come after the remainder of the primary net is completed or further delay the remainder.

In regard to (2) above, it was expected that the Base Line would be completed at this date. The work at Site Charlie necessitated a full time crew and this left insufficient men to handle the Base Line. It is presently planned to complete it approximately at the completion of the Primary Triangulation Net. The water sections of the base line remain to be completed at the next "low-low" tide cycle, about the end of the month.

HOLMES & MARVER, Inc.



TO: DAVID L. MARVER, JR.

JOB: 884 O/S 6208

FROM: H. L. DIETZE

RE: TRIANGULATION

Page 2.

DATE: 21 May 1953

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The Triangulation Party plans to complete the Primary Net by June 1st. They have not allowed for any contingencies in this schedule, such as loss of a night due to weather or some other cause. Generally, all schedules of triangulation have been carried out as planned with no foul-ups in any of the operations.

H. L. DIETZE  
RESIDENT ENGINEER

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