

8387

Diag. Cht. Nos. 8862 and 8863-3.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. EX-4157 Office No. H-8387

LOCALITY

State ALASKA

General locality ALEUTIAN IS. ^{NORTH SIDE} ANDREANOF GROUP

Locality GREAT SITKIN IS. ^{ATKA I} TO KASATOCHI IS.

1957.....

CHIEF OF PARTY

E. H. KIRSCH

LIBRARY & ARCHIVES

DATE FEB 2 1958

COMM-DC 61300

8387

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H-8387

Field No. EX-4157

State ALASKA

General locality ALEUTIAN ISLANDS - NORTH SIDE
ANDREANOF GROUP

Locality GREAT SITKIN ISLAND TO ATKA ISLAND
KASATOCHI ISLAND

Scale 1:40,000 Date of survey 14 JUNE TO 15 AUGUST 1957

Instructions dated 16 DECEMBER 1954 AND 1 OCTOBER 1956

Vessel SHIP EXPLORER

Chief of party E.H. KIRSCH

Surveyed by SHIP'S OFFICERS

Soundings taken by fathometer, graphic recorder, hand lead, wire

Fathograms scaled by SHIP'S OFFICERS

Fathograms checked by SHIP'S OFFICERS

Protracted by SHIP'S OFFICERS

Soundings penciled by J.C. SAINSBURY

Soundings in fathoms ~~XXX~~ at ~~MLLW~~ MLLW

REMARKS:

.....
.....
.....
.....
.....

Handwritten initials

DESCRIPTIVE REPORT

to accompany

Hydrographic Survey H-8387 (Field No. EK-4157)

East of Great Sitkin I. to vicinity of Kasatochi I., North Side Andreanof Group

Aleutian Islands, Alaska

1957

Scale 1:40,000

USC&GSS EXPLORER

E. H. Kirsch, Comdg.

Surveyed by - Ship's Officers, EXPLORER

A. PROJECT:

This survey was executed in accordance with:

1. Revised Instructions - Project CS-218, dated 16 December 1954.
2. Supplemental Instruction - Project 12180, dated 1 October 1956.

B. SURVEY LIMITS AND DATES:

This survey covers an area bounded on the east by longitude $175^{\circ} 20'$, on the west by longitude $176^{\circ} 00'$, on the south by latitude $52^{\circ} 03'$, and on the north by latitude $52^{\circ} 15.5'$.

Junctions were made with prior surveys H-7973, 1952, (1:500,000) on the north and H-6850, 1943, (1:60,000) on the east. Junctions were also effected with contemporary surveys 2157 and 2357 on the south and with 2257 (H8437) which covers the inshore area around Kasatochi Island.

Field work was started 14 June 1957 and completed 15 August 1957.

C. VESSEL AND EQUIPMENT:

All hydrography was done by the Ship EXPLORER.

Soundings were taken with 808 recording fathometer No. 113S and EDO recording fathometer No. 4.

Bottom soundings were obtained with snapper type cups attached to a wire sounding machine.

Turning radius of the ship (from 1952 Descriptive Report):

Full right rudder - 360 meters
Full left rudder - 275 meters

D. TIDES & CURRENT STATIONS:

The tide station that was used for this entire sheet was located near triangulation station NEF, on a small island just west of Fenimore Pass.

No current stations were occupied within the limits of this survey.

E. SMOOTH SHEET:

This smooth sheet was originally planned to be used as a boat sheet and therefore junctions of prior survey H-6850 is shown in red. It was decided at a later date to use this sheet as a smooth ship sheet while using an acetate overlay as the working boat sheet. An attempt was made to erase the inked junction soundings but was shortly thereafter abandoned. All work of construction and plotting was done by personnel of the Ship EXPLORER with the exception of the projection itself which was machine ruled in the Washington Office.

F. CONTROL STATIONS:

Triangulation stations were established by the U.S. Navy in 1934 and by the Ship EXPLORER in 1956. 1934 Navy triangulation is published by the Coast & Geodetic Survey.

Shoran station NEF was located by distance and direction from Triangulation station FEN 1956. This location was made in 1956; for computation of same, refer to descriptive report H-8309, 1956. Shoran station EAST was located over triangulation station EAST (USN) 1934.

G. SHORELINE AND TOPOGRAPHY:

This is considered to be an offshore sheet and therefore no shoreline or topography will ^{be} shown.

H. SOUNDINGS:

Soundings were taken with 808 type recording fathometer No. 1135 up to a depth of 100 fathoms, beyond this point soundings were taken with EDO type recording fathometer No. 4. There was a considerable period of overlap when both machines were in use. Agreement between the two was found to be good. The 808 was also compared to wire soundings at various depths and times. Here also, agreement was found to be good. Refer to special report on fathometers and fathometer corrections for additional information.

*Parallax -2% correction needed for Edo
sigs. Check with carstens.*

I. CONTROL OF HYDROGRAPHY:

Hydrography was controlled from two shoran stations, NEF and EAST. Refer to paragraph "F" above. The geographic positions are as follows:

Shoran NEF	-	Lat	51° 57'	32.407"
		Long	175° 35'	17.340"
Shoran EAST	-	Lat	52° 02'	12.257"
		Long	175° 58'	41.061"

No unusual or sub-standard methods were employed. It was found necessary in a small area around Kasatochi Island (Survey EX-2257) to take supplemental visual angles or bearings in order to maintain proper horizontal control. This was due to the fact that the island itself would at times blank out one or the other of the shoran signals.

Shoran calibrations were taken periodically. The corrections obtained therefrom were recorded in the sounding volumes and applied as the work progressed.

For additional information refer to the special shoran report.

J. ADEQUACY OF SURVEY:

This survey is complete. Junctions with adjoining sheets H-7973, 1952, on the north, EX-2157 and EX-2357 on the south are adequate and satisfactory. Those junctions that have been made with EX-2257 are good. This sheet, however, which is made up of the inshore area around Kasatochi Island, is incomplete. Certain discrepancies were noted in the junction with H-6850, 1943, on the east. This was believed to be due to the difference in the caliber of horizontal control used on the two sheets. It is recommended that the recent survey supersede H-6850 where any question arises.

K. CROSSLINES:

There are about 140 nautical miles of crosslines or approximately 15% of the total hydrography. All crossings are in good agreement.

L. COMPARISON WITH PRIOR SURVEYS:

Comparison with prior adjoining surveys was generally good (H-6850, H-8233, H-8237 and H-7973). The only prior formal survey of the immediate area was that executed by the U.S. Navy in 1934. Comparison with this survey proved to be satisfactory, although in general the Navy soundings were a few fathoms deeper than those obtained by this survey. This discrepancy is believed to be due to the inferior type of equipment that was used at that time. Survey No. 4157 is a new basic survey and is considered to be adequate to supersede the above prior survey for the common area.

M. COMPARISON WITH CHARTS:

The only presently charted soundings (Chart No. 9193, 1953 Edition, Revised 5 July 1954) in the immediate area are those obtained from the 1934 Navy survey. Refer to Section "L" of this report.

N. DANGERS AND SHOALS:

There are no dangers or shoals within the limits of this survey.

O. COAST PILOT INFORMATION:

There is no additional coast pilot information being submitted from this survey.

P. AIDS TO NAVIGATION:

No aids to navigation exist within the limits of this survey.

Q. LANDMARKS FOR CHARTS:

This is considered to be an offshore survey and therefore no landmarks appear.

R. GEOGRAPHIC NAMES:

This is considered to be an offshore survey and therefore no geographic names appear.

Z. TABULATION OF APPLICABLE DATA:

1. Submitted with report
 - a) 1 Acetate overlay used as boat sheet
 - b) 1 Smooth sheet
 - c) 9 Sounding volumes
 - d) 15 808 Fathograms
9 EDO Fathograms
 - e) 67 Sheets of shoran abstracts
2. Submitted separately
 - a) Special Report on Fathometer Corrections
 - b) Special Report on Shoran Corrections
 - c) Tide Records from Fenimore Pass tide gage.

Respectfully Submitted,

James C. Sainsbury

James C. Sainsbury
Ensign, C&GS

Approved and forwarded:

STATISTICS

<u>Vol. No.</u>	<u>Day Letter</u>	<u>Date</u>	<u>No. of Pos.</u>	<u>Wire Sdg.</u>	<u>Bot. Samples</u>	<u>N.M. Sdg. Line</u>
I	A	6/14/57	152			94
I & II	B	6/15/57	82			52.9
II	C	6/19/57	140			90.0
III	D	6/20/57	124			86.5
III & IV	E	6/21/57	99			71.0
IV	F	6/22/57	4		4	- -
IV	G	6/25/57	99			74.2
V	H	6/26/57	127			95.6
V & VI	J	6/27/57	112			77.8
VI	K	7/1/57	10		10	- -
VI	L	7/2/57	36			23.9
VII	M	7/10/57	141			77.4
VII	N	7/11/57	128			72.4
VIII	P	8/14/57	170			57.8
VIII & IX	Q	8/15/57	100	7		41.7

1524

Area: 329 square nautical miles

TABULATION OF FATHOMETER CORRECTIONS

Index or draft corrections and phase corrections are combined and entered in the sounding record in the first column of corrections under "echo correction."

SHIP - 808 FATHOMETER NO. 113S

<u>Period</u>	<u>A Scale</u>	<u>B Scale</u>	<u>C Scale</u>	<u>D Scale</u>
14 - 21 June	+0.5	+1.0	-0.4	-2.5
22 June - 11 July	+1.0	+1.2	-0.2	-2.3
12 - 15 July	+0.5	+1.0	-0.4	-2.5
14 - 15 August	+0.8	+1.5	+0.1	-2.0
21 August to end of season	+0.5	+1.2	-0.2	-2.3

LAUNCH NO. 2 - EDO FATHOMETER NO. 212

Entire season	+0.3	+0.3	+0.3
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LAUNCH NO. 3 - 808 FATHOMETER NO. 127

Entire season	+0.3	-0.3
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LAUNCH NO. 3 - 808 FATHOMETER NO. 128

Entire season	+0.3	-0.8
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SHIP - EDO FATHOMETER, MODEL AN/UQN/1B, SERIAL NO. 4

0 - 150 FMS	+2.5 FMS
150 - 600 FMS	+2.0 FMS
Below 600 FMS	- -

Any variation from the set initial was applied as an "initial correction" in the third column of corrections.


TIDE NOTE TO ACCOMPANY H-8387, EX-4157

All hydrography on this survey was referred to the portable tide gage located on the same island as shoran station NEF, Lat $51^{\circ} 57.6' N$, Long $175^{\circ} 35.2' W$. A reading of 38' on the tide staff corresponds to MLLW. No time or range corrections were applied to the observed readings.

APPROVAL SHEET

EX-4157 (H-8387)

This sheet along with supporting records has been examined and is approved and forwarded.


G.C. Mast
Cdr. C&GS
Commanding
Ship EXPLORER

GEOGRAPHIC NAMES

Survey No. H-8387

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List			
<u>Alaska</u>			(title)							1	
<u>Aleutian Islands</u>			"							2	
<u>Andreanof Islands</u>			(preferable to Group)			(title)				3	
<u>Great Sitkin Island</u>			(title)						BGN	4	
<u>Boxing Sea</u>									"	5	
<u>Kasatochi Island</u>									"	6	
<u>Ulak Island</u>									"	7	
			Names approved 3-17-58								8
Tide station:						L. H. C. W.				9	
<u>Renimore Pass</u>									BGN	10	
										11	
<i>Atka Island</i>										12	
										13	
										14	
										15	
										16	
										17	
										18	
										19	
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										21	
										22	
										23	
										24	
										25	
										26	
										27	

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8387...

Records accompanying survey:

Boat sheets 1...; sounding vols. 9...; wire drag vols.;
 bomb vols.; graphic recorder rolls 3...; Envelopes
 special reports, etc. 1... Smooth sheet, 1-Descriptive report, ...
 and 1-Cahier, Shore Abstracts,

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet
Number of positions checked
Number of positions revised
Number of soundings revised (refers to depth only)
Number of soundings erroneously spaced
Number of signals erroneously plotted or transferred
Topographic details	Time
Junctions	Time
Verification of soundings from graphic record	Time

Verification by.....Total time Date

Reviewed by..... Time Date

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H- 8387

The verifier should deal with the present hydrographic survey only, as the reviewer considers its relation to previous surveys and published charts. He should be thoroughly familiar with Chapters 3, 7 and 9 of the Hydrographic Manual.

1. The descriptive report was consulted and appropriate notes were made in soft pencil regarding action taken.
2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude.
3. All reference to survey sheets mentioned in the descriptive report include the registry number and year.
4. Geographic names of hydrographic features if on sheet are in slanting lettering and of topographic features in vertical lettering.
5. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken.
6. All positions verified instrumentally were check marked in the sounding records.
7. All critical soundings are clear and legible and are a little larger than the adjacent soundings.
8. The metal protractor has been checked within the last three months.
9. The protracting and plotting of all bad crossings were verified.
10. All detached positions locating critical soundings, rocks or buoys were verified.
11. The boat sheet was compared with the smooth sheet.

12. The spacing of soundings as recorded in the records was closely followed.
13. The bottom characteristics were shown on outstanding shoals.
14. The reduction and plotting of doubtful soundings were checked.
15. The transfer of contemporary topographic information was carefully examined.
16. All junctions were transferred and overlapping curves made identical.
17. The notation "JOINS H- (19--)" was added in ink for all contemporary adjoining or overlapping sheets now registered. Those not verified are shown in pencil.
18. The depth curves have been inspected before inking.
19. All triangulation stations and transfer of topographic and hydrographic signals were checked.
20. Heights of rocks were checked against range of tide.
21. Rocks transferred from topographic surveys have a dotted curve where shown thereon. Rocks located accurately by hydrographer are encircled by dotted red curve.
22. Unnecessary pencil notes have been removed.
23. Objects on which signals are located and which fall outside of the low water line have been described on the sheet.
24. The low water line and delineation of shoal areas have been properly shown.
25. Degree and minutes values and symbols have been checked.
26. Questionable soundings have been checked on the fathograms.

27. Source of shoreline and signals (when not given in report).
28. All notes on sheet are in accordance with figure 171 in the Hydrographic Manual.
29. All aids located, with those on contemporary topographic sheets, have been shown on survey.
30. Depth curves were satisfactory except as follows:
31. Sounding line crossings were satisfactory except as follows:
32. Junctions with contemporary surveys were satisfactory except as follows:
33. Condition of sounding records was satisfactory except as follows:
34. The protracting was satisfactory except as follows:
35. The field plotting of soundings was satisfactory except as follows:
36. Notes to reviewer:

Verified by

Date

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens

24 March 1958

Plane of reference approved in
9 volumes of sounding records for

HYDROGRAPHIC SHEET 8387

Locality Aleutian Islands, Alaska

Chief of Party: E. H. Kirsch in 1957

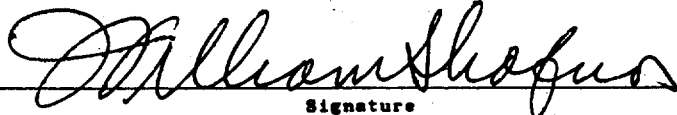
Plane of reference is mean lower low water, reading

3.8 ft. on tide staff at Fenimore Pass

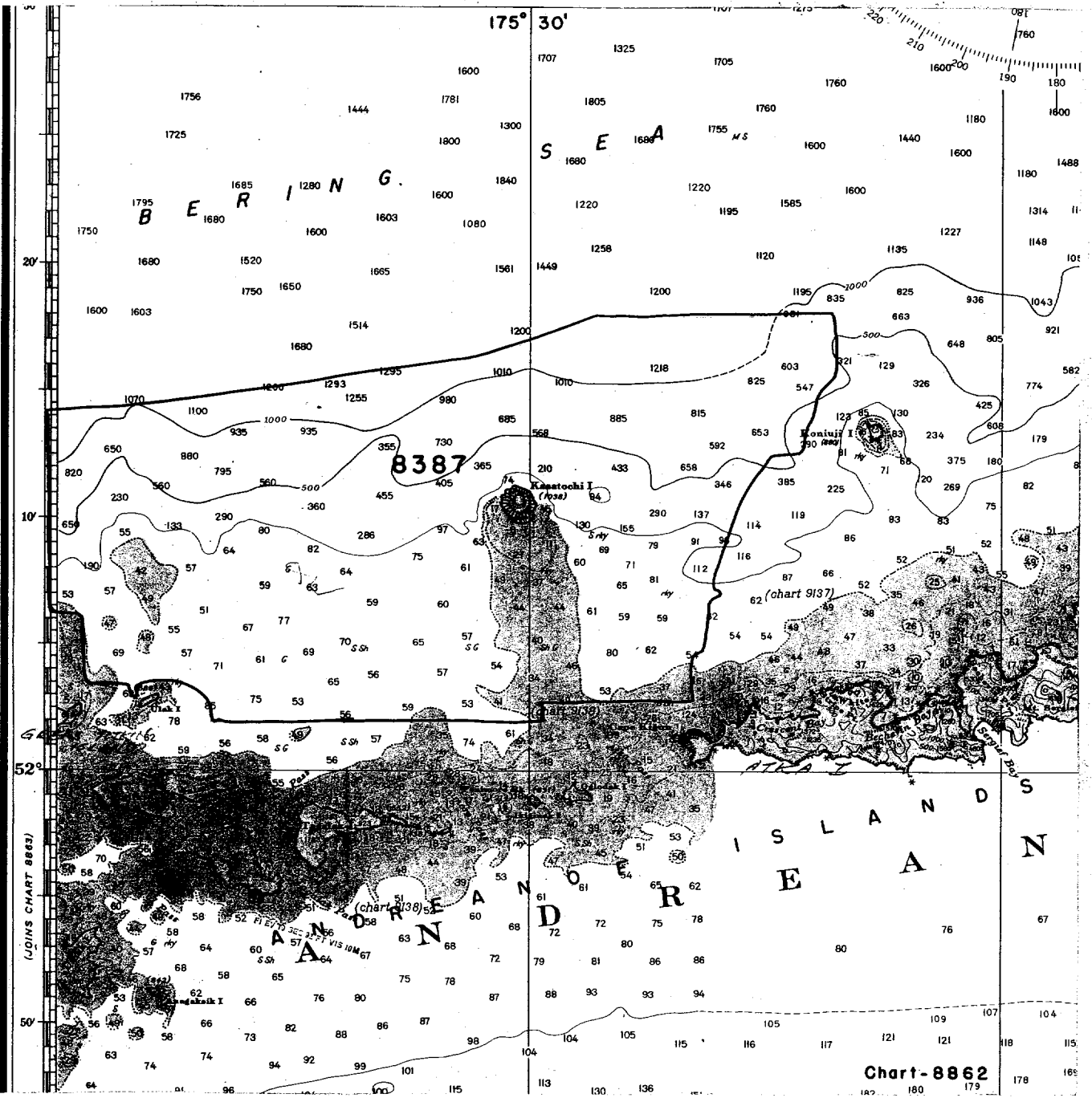
13.5 ft. below B.M. 2 (1956)

Height of mean high water above plane of reference is 3.3 feet

Condition of records satisfactory except as noted below:



Signature
Chief, Tides Branch



(JOINS CHART 8863)

Chart-8862

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8387

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
7-16-58	^{Reconst} 8863	C.R. Wittmann	Before After Verification and Review <i>Completely applied</i>
4/29/59	9193	dehmer	Before After Verification and Review <i>Exam. No corrections</i>
5-15-59	8862	R. H. DeLander	Before After Verification and Review <i>Area covered by chart 9193 same than that chart - no corr. Area covered by 8863 Reconst made Before - After Verification and Review to agree with that chart.</i>
10-15-59	9138	<i>Anthony</i>	Before After Verification and Review <i>Partial appl</i>
9/7/60	9139	E. E. Thomas	<i>Exam no actual corr, no revisions</i> Before After Verification and Review <i>Before V & R - not applied</i>
12/9/69	9137	C. Kermitis	<i>Fully Appl'd</i> Before After Verification and Review
5/6/70	9138	Cynthia Kromida	<i>Fully Applied</i> Before After Verification and Review <i>Before</i>
7/19/77	9102	M. Sager	<i>CLASS I</i> Before After Verification and Review <i>Applied thru 9138 & 9139 - Fully applied</i>
10-28/77	8862	M. Sager	Before After Verification and Review <i>Applied thru charts 9138 & 9139 in common area, remainder app'd thru survey directly to Chart 8862, Added several sand's, and made revisions to 50 & 50 fm. curves. Considered ^{as} final application. as Category I</i>
12/24/77	8863	KAWIS	Before Verification - <i>applied thru 8862 and directly considered AS A Final application to Cat I survey</i>
1-8-90	16471 (9193)	John Pierce	<i>Adequately applied through charts 9137, 9138, 9139</i>
4/16/92	16484 16486	Skennar " "	<i>CAT 1 / Fully apply " " " "</i>

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

Explorer Edo

H = 8387

(see if these are significant)

Pay 32 E (school before)

$$808 = 94.3$$

$$Edo = 97$$

Pay 40 E

$$808 = 81.0$$

$$Edo = 83$$

Pay 6 E

$$808 = 59.6 + 1.2 = 60.8$$

$$Edo = 62$$