4914

4914

Form 504
Rev. Dec. 1933

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Topographic | *Sheet No.* A
~~*Hydrographic*~~ | Graphic Control Sheet

State Virginia

LOCALITY

~~Chincoteague Inlet~~
Chincoteaque Inlet & Vicinity
~~Eastern Shoreline Assateague,~~
~~Assateague~~ Pope Bay to
~~Wallops, Assawomen &~~ Metomkin Bay
~~Islands.~~

1934

CHIEF OF PARTY

H. A. Seran

U.S. GOVERNMENT PRINTING OFFICE: 1934

Form 537a

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

Graphic Control Sheet

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

Field Letter A

REGISTER NO. 4914

State Virginia

General locality ~~Eastern Shore, Accomac County,~~ Chincoteague Inlet & Vicinity

Locality ~~Eastern Shoreline of Assateague, Wallops, Accawoman and Metomkin Islands.~~ Pope Bay to Metomkin Bay

Scale 1-20,000 Date of survey May and June, 19 34

Vessel Sub-party Ship OCEANOGRAPHER

Chief of Party H. A. Seran

Surveyed by R. A. Earle

Inked by R.A.Earle and F.J. Kish

Heights in feet above ____ to ground to tops of trees

Contour Approximate contour Form line interval ____ feet

Instructions dated April 27, 1933

Exception: Shoreline to be obtained from air photographs.

Remarks: This sheet was executed only for the purpose of locating for control of the hydrographic survey.

U. S. GOVERNMENT PRINTING OFFICE: 1933

DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET A
"G.C.S."

Subparty Ship OCEANOGRAPHER — H.A. Seran, Comdg.
Vicinity Assateague to Metomkin I. — Scale, 1-20,000.

PROJECT H.T.142

INSTRUCTIONS:

Instructions dated April 27, 1933.

PURPOSE OF SURVEY:

The topography on this sheet was executed only to locate signals for control of the hydrographic survey.

LIMITS:

The signals located on this sheet lie along the outer coast of Assateague, Wallops, Assawaman and Metomkin Islands between Lat.38°02' and Lat. 37°43'.

CONTROL AND SURVEY METHODS:

This survey was controlled by triangulation executed during the present and previous seasons.

The positions of the tall hydrographic signals "Isle" and "Saw" were computed from triangulation cuts; however, as these signals were built on the beach they were unmarked and are unrecoverable, therefore the positions were considered of fourth rather than third order accuracy and are submitted with this report.

On Assateague Island, traverses were run between the various triangulation stations along the beach from "Pope Island Coast Guard 1908" to Hydrographic signal "Run"; which was located by cuts. These traverses all checked well within the allowable limits and were adjusted in accordance with the Topographic Manual.

In all other sections of the sheet signals were located by the intersection of two or more hydrographic cuts supplemented by short traverses between accurately located points.

LANDMARKS FOR CHARTS AND DESCRIPTION OF RECOVERABLE TOPOGRAPHIC STATIONS:

A copy of "Landmarks for Charts" and the "Description of Recoverable Topographic Signals" are attached herewith. Along these beaches practically all the objects which could be classed as "Recoverable Topographic Stations" have been previously cut in by triangulation.

Approved and forwarded:

H.A.Seran

H.A.Seran, Commdr. C&GS
Commanding Ship OCEANOGRAPHER.

Respectfully submitted:

R.A.Earle

R.A.Earle, Lieut.(j.g.) C&GS

Form 567
Ed. Dec., 1929

DIVISION OF CHARTS. FILE NO._____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Norfolk, Virginia.

February 15, 1935

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted.

H. A. Seran
H. A. Seran — Chief of Party.

DESCRIPTION	POSITION						DATUM	METHOD OF DETERMINATION	CHARTS AFFECTED
	LATITUDE			LONGITUDE					
	°	′	D. M. METERS	°	′	D. P. METERS			
CUPOLA Wallops Beach C.G.	37	52	329.6	75	26	777.8	1927	Tringulation 1933	1220-1221
AIDS TO NAVIGATION									
Toms Cove Light (ZIP)	37	51	1302	75	22	257	1927	Topographic Cuts	1220-1221

Additional "Landmarks for Charts" and "Aids to Navigation" located in this area were submitted with report for 10,000 scale sheet C.

A Complete list of "Landsmarks for Charts" and "Aids to Navigation" taken from all sheets was forwarded under separate cover.

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

U. S. GOVERNMENT PRINTING OFFICE: 1931

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 27
Ed. April, 1929

POSITION COMPUTATION, THIRD-ORDER TRIANGULATION

		°	′	″
α	2 Assawamany to 3 Taylor	176	00	10.4
$2^d\angle$	&	+ 47	00	46
α	2 Assawamany to 1 Isle	223	00	56
$\Delta\alpha$				
		180	*00*	*00.0*
α'	1 Isle to 2 Assawamany 4			

		°	′	″
α	3 Taylor to 2 Assawamany 4	356	00	01.5 .02
$3^d\angle$	&	-41	38	28
α	3 Taylor to 1 Isle	314	21	34
$\Delta\alpha$				
		180	*00*	*00.0*
α'	1 Isle to 3 Taylor			

First Angle of Triangle

	°	′	″			°	′	″
ϕ	37	49	50.30	2 Assawamany 4	λ	75	29	33.13
$\Delta\phi$		+ 1	20.17		$\Delta\lambda$	-	1	34.34
ϕ'	37	51	10.47	1 Isle	λ'	75	27	58.79

	°	′	″			°	′	″
ϕ	37	52	34.89	3 Taylor	λ	75	29	47.63
$\Delta\phi$	-	01	24.42		$\Delta\lambda$	-	1	48.85
ϕ'	37	51	10.47	1 Isle	λ'	75	27	58.78

	Logarithms
s	3.529029
Cos α	9.864018
B	8.511015
h	1.904062
s^2	7.05805
$\sin^2\alpha$	9.66782
C	1.29490
	8.02077
h^2	
D	

Values in seconds	
(15270)	
322.8	
1st term	- 80.18
2d term	+ .01
3d term	+
$-\Delta\phi$	80.17

$\frac{1}{2}(\phi+\phi')$	Logarithms	Values in seconds
s	3.529029	(29.5)
Sin α	9.833910	1437.3
A′	8.509172	
Sec ϕ'	.102598	
$\Delta\lambda$	1.974709	- 94.34
$\sin\frac{1}{2}(\phi+\phi')$		
$-\Delta\alpha$		

	Logarithms
s	3.570777
Cos α	9.844575
B	8.511012
h	1.926364
s^2	7.14155
$\sin^2\alpha$	9.70857
C	1.29560
	8.14572
h^2	
D	

Values in seconds	
1st term	84.404
2d term	+ .014
3d term	+
$-\Delta\phi$	84.418

$\frac{1}{2}(\phi+\phi')$	Logarithms	Values in seconds
s	3.570777	
Sin α	9.854286	
A′	8.509172	
Sec ϕ'	.102598	
$\Delta\lambda$	2.036833	- 108.85
$\sin\frac{1}{2}(\phi+\phi')$		
$-\Delta\alpha$		

11—9362 U. S. GOVERNMENT PRINTING OFFICE: 1929

Note: Computed from auto
For hydrographic location only
Fourth order.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 27
Ed. April, 1929

POSITION COMPUTATION, THIRD-ORDER TRIANGULATION

					°	′	″										°	′	″
α	2	Dennis	to 3	Barnes	207	28	51.5	α	3	Barnes	to 2	Dennis					27	29	56
2d ∠			&		+ 65	01	14	3d ∠			&						− 26	43	43
α	2	Dennis	to 1	Saw	272	30	06	α	3	Barnes	to 1	Saw					0	46	13
Δα								Δα											
					180	00	00.0										180	00	00.0
α′	1		to 2					α′	1		to 3								

First Angle of Triangle

	°	′	″			°	′	″		°	′	″			°	′	″
φ	37	47	08.51	2 Dennis	λ	75	33	07.82	φ	37	49	48.63	3 Barnes	λ	75	31	22.81
Δφ		−	3.56		Δλ		1	42.24	Δφ		2	43.68		Δλ	+		2.77
φ′	37	47	04.95	1 Saw	λ′	75	31	25.58	φ′	37	47	04.95	1 Saw	λ′	75	31	25.58

	Logarithms	Values in seconds
s	3.398649	(1697.1)
Cos α	8.639968	152.6
B	8.511019	
h	0.549636	1st term 3.545″
s²	6.797298	
Sin² α	9.999170	
C	1.29420	
	8.090668	2d term + .012
h²	1.099272	
D		
		3d term +
		−Δφ + 3.56

	°	′	″	Logarithms	Values in seconds
½(φ+φ′)					
s				3.398649	(842.2)
Sin α				9.999586	625.9
A′				8.509174	
Sec φ′				.102198	
Δλ				2.009607	102.24″
Sin ½(φ+φ′)					
−Δα					

	Logarithms	Values in seconds
s	3.703012	
Cos α	9.999960	
B	8.511016	
h	2.213988	1st term 163.68″
s²	7.406024	
Sin² α	6.257022	
C	1.29490	
	4.957946	2d term +
h²	4.428232	
D		
		3d term +
		−Δφ 163.68

	°	′	″	Logarithms	Values in seconds
½(φ+φ′)					
s				3.703012	
Sin α				8.128512	
A′				8.509174	
Sec φ′				.102198	
Δλ				.442896	2.77″
Sin ½(φ+φ′)					
−Δα					

11—9362 U. S. GOVERNMENT PRINTING OFFICE: 1930

Note: Computed from cuts
Fourth Order – For hydrographic location only.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 25
Ed. Jan., 1929

COMPUTATION OF TRIANGLES

11—9121

State: Virginia

NO.	STATION	OBSERVED ANGLE	CORR'N	SPHER'L ANGLE	SPHER'L EXCESS	PLANE ANGLE AND DISTANCE	LOGARITHM
	2-3						3.750452
	1 Isle	(71 11 24)					0.023837
	2 Barnes	38 44 48*					9.796490
	3 Taylor	70 03 48*					9.973160
	1-3					3722.0	3.570779
	1-2						3.747449
	2-3						3.706439
	1 Isle	(91 20 46)					0.000120
	2 Assawamany	47 00 46*					9.864218
	3 Taylor	41 38 28*					9.822470
	1-3					3722.0	3.570777
	1-2					3380.9	3.529029
	2-3						3.428586
	1 Isle	(20 09 22)					0.462711
	2 Assawamany	134 06 26					9.856148
	3 Barnes	25 44 12					9.637725
	1-3						3.747445
	1-2					3380.8	3.529022
	2-3						
	1						
	2						
	3						
	1-3						
	1-2						

Comp. R.A.E.
C.R.D.

Note Fourth order
For hydrographic location only

Do not write in this margin

*See reverse side for methods of computing.

At Barnes

Azimuth to Assawamany	268	53	23.5
" to Taylor	204	24	23.2
Angle Taylor to Assawamany	64	29	00.3
" Isle to "	25	44	12
" Taylor to Isle	38	44	48

At Taylor

Azimuth to Barnes	24	25	21.5
" to Assateague Lt.	252	36	42.1
Angle Assateague Lt. to Barnes	131	48	39.4
" " " to Isle	61	44	51
" Isle to Barnes	70	03	48

At Taylor

Azimuth to Assawamany	356	00	01.5
" to Assateague Lt.	252	36	42.1
Angle Assateague Lt. to Assawamany	103	23	19.4
" " " to Isle	61	44	51
" Isle to Assawamany	41	38	28

At Assawamany

Azimuth to Taylor	176	00	10.4
" to Barnes	88	54	30.8
Angle Barnes to Taylor	87	05	39.6 (40)
~~Angle Barnes to Taylor~~			
Angle Barnes to Isle	134	06	26
" " to Taylor	87	05	40
" Taylor to Isle	47	00	46

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 25
Ed. Jan., 1929

COMPUTATION OF TRIANGLES

11—9121

State: Virginia

NO.	STATION	OBSERVED ANGLE	CORR'N	SPHER'L ANGLE	SPHER'L EXCESS	PLANE ANGLE AND DISTANCE	LOGARITHM
	2-3						3.745462
	1 Saw	(88 15 03)					0.000202
	2 Dennis	65 01 14					9.957348
	3 Barnes	26 43 43					9.652985
	1-3					5046.8	3.398649
	1-2						
	2-3						3.428586
	1 Saw	(27 33 59)					.334629
	2 Barnes	91 52 49					9.999766
	3 Assawamany	60 33 12					9.939925
	1-3						3.762981
	1-2					5048.2	3.703140
	2-3						
	1					Note: Fourth order	
	2					For hydrographic use only	
	3						
	1-3						
	1-2						
	2-3						
	1						
	2						
	3						
	1-3						
	1-2						

Comp RAE
V C.R.D.

Do not write in this margin

See reverse side for methods of computing

At Barnes

Azimuth to Dennis	27	29	55.9
" to Assawamany	268	53	23.5
Angle Assawamany to Dennis	118	36	32.4
" " to ## Saw	91	52	49
" Saw to Dennis	26	43	43

At Dennis

Azimuth to Gargathys	341	46	15.0
" to Barnes	207	28	51.5
Angle Barnes to Gargathys	134	17	23.5
" Saw to Gargathys	69	16	09
" Barnes to Saw	65	01	14

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 24A
Rev. Oct., 1932

LIST OF DIRECTIONS

Station Barnes *State* Virginia

Chief of party H.A. Seran *Date* 4/27/34 *Computed by* C.R. Dodson

Observer R.A. Earle *Instrument* Buff & Buff # 266 *Checked by* R.A. Earle

U. S. GOVERNMENT PRINTING OFFICE: 1932 11—9503

	OBSERVED STATION	Observed direction	Eccentric reduction	Sea level reduction*	Corrected direction with zero initial	Adjusted direction*
		° ′ ″	′ ″	″	° ′ ″	′ ″
Δ	Assawaman 4	0 00 00.00			0 00 00.00	
	Dog	23 39 14				
	Eat	34 56 18				
	Fag	56 18 38				
	Gas	72 04 45				
	Hit	83 51 01				
⊙	Saw	91 52 49				
	Ice	95 36 30				
	Jig	98 43 20				
	Isle	334 15 48				
⊙	Cat	351 36 54				

Cuts taken to facilitate topography.

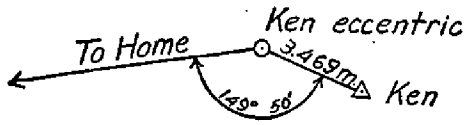
* These columns are for office use and should be left blank in the field.

Station: Ken | *State:* Maryland

Chief of party: C. V. H. | *Date:* 1917 | *Computed by:* O. P. S.

Observer: C. V. H. | *Instrument:* No. 168 | *Checked by:* W. F. R.

OBSERVED STATION	Observed direction	Eccentric reduction	Sea level reduction	Corrected direction with zero initial	Adjusted direction
	° ′ ″	′ ″	″	° ′ ″	′ ″
Chevy	0 00 00.00	− 7.31		0 00 00.00	
Tank west of △ Dulce	29 03 37.0	−1 09.8		29 02 34.5	
Ken (center), 3.469 meters	176 42				
Forest Glen standpipe	313 24 53.0	+3 01.2		313 28 01.5	
Home	326 31 30.21	+ 31.33		326 32 09.45	
Bureau of Standards, wireless pole	352 17 20.8	+ 5.7		352 17 33.8	
Reno	357 28 48.63	− 1.16		357 28 54.78	
Reference mark, 16.32 m	358 31 20				



This form, with the first three and fifth columns properly filled out and checked, must be furnished by field parties. *To be acceptable it must contain every direction observed at the station.*

It should be used for observations with both repeating and direction theodolites.

The directions at only one station should be placed on a page.

If a repeating theodolite is used, do not abstract the angles in tertiary triangulation. The local adjustment corrections (to close horizon only) are to be written in the Horizontal Angle Record, and the List of Directions is to be made from that record directly.

Choose as an initial for Form 24A some station involved in the local adjustment, and preferably one which has been used as an initial for a round of directions on objects not in the main scheme. Use but one initial at a station. Call the direction of the initial 0° 00′ 00.″ 00, and by applying the corrected angles to this, fill in opposite each station its direction reckoned *clockwise* around the whole circumference regardless of the direction of graduation of the instrument. The clockwise reckoning is necessary for uniformity and to make the directions comparable with azimuths.

If a station has been occupied eccentrically, reduce to the center and enter in this form, in ink, the resulting corrections to the observed directions in the column provided for them. If an eccentric reduction is necessary, but not made in the field, leave the column blank. If the station was occupied centrally, and no eccentric reduction is required, put dashes in the column to show that no corrections are necessary.

Directions in the main scheme should be entered to hundredths of seconds in first-order triangulation; otherwise to tenths only. Points observed upon but once, direct and reverse, should be carried to tenths in first-order and second-order triangulation, and to even seconds only in third-order triangulation. In general, but two uncertain figures should be given.

It is recommended that the following simple plan of observing be used with a repeating instrument: Measure each single angle in the scheme at each station and the outside angle necessary to close the horizon. *Measure no sum angles.* Follow each measurement of every angle immediately by a measurement of its explement. Six repetitions are to constitute a measurement. The local adjustment will consist simply of the distribution of the error of closure of the horizon.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 24A
Rev. Oct., 1932

LIST OF DIRECTIONS

Station Taylor *State* Virginia

Chief of party H.A. Seran *Date* 4/27/34 *Computed by* C.R. Dodson

Observer R.A. Earle *Instrument* Buff & Buff #266 *Checked by* R.A. Earle

U. S. GOVERNMENT PRINTING OFFICE: 1933 11—9503

OBSERVED STATION	Observed direction	Eccentric reduction	Sea level reduction*	Corrected direction with zero initial	Adjusted direction*
	° ′ ″	′ ″	″	° ′ ″	′ ″
Assateague Lt.	0 00 00.00			0 00 00.00	
Isle	61 44 51				
Banner	82 40 36				

Cuts taken to obtain hydrographic location only.
Fourth Order

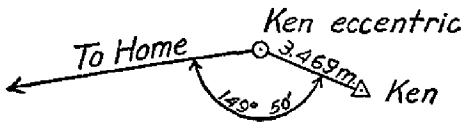
* These columns are for office use and should be left blank in the field.

Station: Ken | *State:* Maryland

Chief of party: C. V. H. | *Date:* 1917 | *Computed by:* O. P. S.

Observer: C. V. H. | *Instrument:* No. 168 | *Checked by:* W. F. R.

OBSERVED STATION	Observed direction	Eccentric reduction	Sea level reduction	Corrected direction with zero initial	Adjusted direction
	° ′ ″	′ ″	″	° ′ ″	′ ″
Chevy	0 00 00.00	− 7.31		0 00 00.00	
Tank west of △ Dulce	29 03 37.0	−1 09.8		29 02 34.5	
Ken (center), 3.469 meters	176 42				
Forest Glen standpipe	313 24 53.0	+3 01.2		313 28 01.5	
Home	326 31 30.21	+ 31.93		326 32 09.45	
Bureau of Standards, wireless pole	352 17 20.8	+ 5.7		352 17 33.8	
Reno	357 28 48.63	− 1.16		357 28 54.78	
Reference mark, 16.32 m	358 31 20				



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The directions at only one station should be placed on a page.

If a repeating theodolite is used, do not abstract the angles in tertiary triangulation. The local adjustment corrections (to close horizon only) are to be written in the Horizontal Angle Record, and the List of Directions is to be made from that record directly.

Choose as an initial for Form 24A some station involved in the local adjustment, and preferably one which has been used as an initial for a round of directions on objects not in the main scheme. Use but one initial at a station. Call the direction of the initial 0° 00′ 00.″ 00, and by applying the corrected angles to this, fill in opposite each station its direction reckoned *clockwise* around the whole circumference regardless of the direction of graduation of the instrument. The clockwise reckoning is necessary for uniformity and to make the directions comparable with azimuths.

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It is recommended that the following simple plan of observing be used with a repeating instrument: Measure each single angle in the scheme at each station and the outside angle necessary to close the horizon. *Measure no sum angles.* Follow each measurement of every angle immediately by a measurement of its explement. Six repetitions are to constitute a measurement. The local adjustment will consist simply of the distribution of the error of closure of the horizon.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 24A
Rev. Oct., 1932

LIST OF DIRECTIONS

Station Dennis *State* Virginia

Chief of party H.A. Seran *Date* 4/27/34 *Computed by* C.R. Dodson

Observer R.A. Earle *Instrument* Buff & Buff #266 *Checked by* R.A. Earle

U. S. GOVERNMENT PRINTING OFFICE: 1932 11—9503

OBSERVED STATION	Observed direction	Eccentric reduction	Sea level reduction*	Corrected direction with zero initial	Adjusted direction*
	° ′ ″	′ ″	″	° ′ ″	′ ″
Δ Gargarthy 3	0 00 00.00			0 00 00.00	
Saw	290 43 51				
Cuts taken in order to compute hydrographic location					

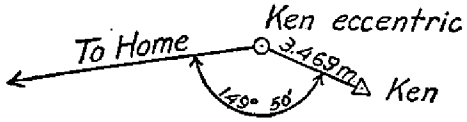
* These columns are for office use and should be left blank in the field.

Station: Ken | *State:* Maryland

Chief of party: C. V. H. | *Date:* 1917 | *Computed by:* O. P. S.

Observer: C. V. H. | *Instrument:* No. 168 | *Checked by:* W. F. R.

OBSERVED STATION	Observed direction	Eccentric reduction	Sea level reduction	Corrected direction with zero initial	Adjusted direction
	° ′ ″	′ ″	″	° ′ ″	′ ″
Chevy	0 00 00.00	− 7.31		0 00 00.00	
Tank west of △ Dulce	29 03 37.0	−1 09.8		29 02 34.5	
Ken (center), 3.469 meters	176 42				
Forest Glen standpipe	313 24 53.0	+3 01.2		313 28 01.5	
Home	326 31 30.21	+ 31.93		326 32 09.45	
Bureau of Standards, wireless pole	352 17 20.8	+ 5.7		352 17 33.8	
Reno	357 28 48.63	− 1.16		357 28 54.78	
Reference mark, 16.32 m	358 31 20				



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The directions at only one station should be placed on a page.

If a repeating theodolite is used, do not abstract the angles in tertiary triangulation. The local adjustment corrections (to close horizon only) are to be written in the Horizontal Angle Record, and the List of Directions is to be made from that record directly.

Choose as an initial for Form 24A some station involved in the local adjustment, and preferably one which has been used as an initial for a round of directions on objects not in the main scheme. Use but one initial at a station. Call the direction of the initial 0° 00′ 00.″ 00, and by applying the corrected angles to this, fill in opposite each station its direction reckoned *clockwise* around the whole circumference regardless of the direction of graduation of the instrument. The clockwise reckoning is necessary for uniformity and to make the directions comparable with azimuths.

If a station has been occupied eccentrically, reduce to the center and enter in this form, in ink, the resulting corrections to the observed directions in the column provided for them. If an eccentric reduction is necessary, but not made in the field, leave the column blank. If the station was occupied centrally, and no eccentric reduction is required, put dashes in the column to show that no corrections are necessary.

Directions in the main scheme should be entered to hundredths of seconds in first-order triangulation; otherwise to tenths only. Points observed upon but once, direct and reverse, should be carried to tenths in first-order and second-order triangulation, and to even seconds only in third-order triangulation. In general, but two uncertain figures should be given.

It is recommended that the following simple plan of observing be used with a repeating instrument: Measure each single angle in the scheme at each station and the outside angle necessary to close the horizon. *Measure no sum angles.* Follow each measurement of every angle immediately by a measurement of its explement. Six repetitions are to constitute a measurement. The local adjustment will consist simply of the distribution of the error of closure of the horizon.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 24A
Rev. Oct., 1932

LIST OF DIRECTIONS

Station Assawaman 4 *State* Virginia

Chief of party H.A. Seran *Date* 4/30/34 *Computed by* C.R. Dodson

Observer R.A. Earle *Instrument* C.L. Berger & Sons #255 *Checked by* R.A. Earle

U. S. GOVERNMENT PRINTING OFFICE: 1932 — 11—9503

OBSERVED STATION	Observed direction	Eccentric reduction	Sea level reduction*	Corrected direction with zero initial	Adjusted direction*
	° ′ ″	′ ″	″	° ′ ″	′ ″
Barnes	0 00 00.00			0 00 00.00	
Isle	134 06 26				
Saw	299 26 48				

Cuts taken in order to compute location of all hydrographic [redacted] signals. — Fourth order.

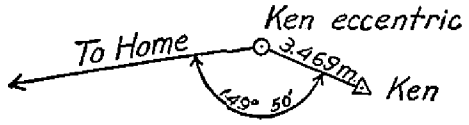
*These columns are for office use and should be left blank in the field.

Station: Ken | *State:* Maryland

Chief of party: C. V. H. | *Date:* 1917 | *Computed by:* O. P. S.

Observer: C. V. H. | *Instrument:* No. 168 | *Checked by:* W. F. R.

OBSERVED STATION	Observed direction	Eccentric reduction	Sea level reduction	Corrected direction with zero initial	Adjusted direction
	° ′ ″	′ ″	″	° ′ ″	′ ″
Chevy	0 00 00.00	− 7.31		0 00 00.00	
Tank west of △ Dulce	29 03 37.0	−1 09.8		29 02 34.5	
Ken (center), 3.469 meters	176 42				
Forest Glen standpipe	313 24 53.0	+3 01.2		313 28 01.5	
Home	326 31 30.21	+ 31.93		326 32 09.45	
Bureau of Standards, wireless pole	352 17 20.8	+ 5.7		352 17 33.8	
Reno	357 28 48.63	− 1.16		357 28 54.78	
Reference mark, 16.32 m	358 31 20				



This form, with the first three and fifth columns properly filled out and checked, must be furnished by field parties. *To be acceptable it must contain every direction observed at the station.*

It should be used for observations with both repeating and direction theodolites.

The directions at only one station should be placed on a page.

If a repeating theodolite is used, do not abstract the angles in tertiary triangulation. The local adjustment corrections (to close horizon only) are to be written in the Horizontal Angle Record, and the List of Directions is to be made from that record directly.

Choose as an initial for Form 24A some station involved in the local adjustment, and preferably one which has been used as an initial for a round of directions on objects not in the main scheme. Use but one initial at a station. Call the direction of the initial 0° 00′ 00.″ 00, and by applying the corrected angles to this, fill in opposite each station its direction reckoned *clockwise* around the whole circumference regardless of the direction of graduation of the instrument. The clockwise reckoning is necessary for uniformity and to make the directions comparable with azimuths.

If a station has been occupied eccentrically, reduce to the center and enter in this form, in ink, the resulting corrections to the observed directions in the column provided for them. If an eccentric reduction is necessary, but not made in the field, leave the column blank. If the station was occupied centrally, and no eccentric reduction is required, put dashes in the column to show that no corrections are necessary.

Directions in the main scheme should be entered to hundredths of seconds in first-order triangulation; otherwise to tenths only. Points observed upon but once, direct and reverse, should be carried to tenths in first-order and second-order triangulation, and to even seconds only in third-order triangulation. In general, but two uncertain figures should be given.

It is recommended that the following simple plan of observing be used with a repeating instrument: Measure each single angle in the scheme at each station and the outside angle necessary to close the horizon. *Measure no sum angles.* Follow each measurement of every angle immediately by a measurement of its explement. Six repetitions are to constitute a measurement. The local adjustment will consist simply of the distribution of the error of closure of the horizon.

Triangulation SaW

Form 28 B

GEOGRAPHIC POSITIONS

Accession No. of Computation: _____

ocality Chincoteague Inlet Datum North American 1927 State Virginia

U. S. GOVERNMENT PRINTING OFFICE: 1936 — 11—10288

STATION	LATITUDE AND LONGITUDE	SECONDS IN METERS	AZIMUTH	BACK AZIMUTH	TO STATION	DISTANCE		
						LOGARITHM (METERS)	METERS	FEET
	° ′ ″		° ′ ″	° ′ ″				
s/e	37 51 10.47	(1527.0) 322.8						
nd nm.	75 27 58.79	(29.5) 1437.3						
			•	•				
aw	37 47 04.95	(1697.1) 152.6						
	75 31 25.58	(842.2) 625.9						
		Fourth Order						
		Computed from cuts as hydrographic signal.						By RAE & CRD.
			•	•				