

US DEPARTMENT OF COMMERCE - NOAA
NDS - NATIONAL GEODETIC SURVEY
ROCKVILLE MD 20852 - MAY 1982

VERTICAL CONTROL DATA
NATIONAL GEODETIC VERTICAL DATUM 1929
ADJUSTED BY--NGS YEAR--1981
SOURCE--L1B562

SEON--058 PG
QUAD--N39076200 LINE--103
STATE--MD DIAGRAM--NJ 1B-1
COUNTY--KENT

BENCH MARK
DESIGNATION--N 69

ORDER--2ND MONUMENTATION QUALITY--C APPROX LAT 39-15-46N
ESTABLISHED BY--CGS YEAR--1942 POSITION--LDN 076-08-42W

H - ELEVATION ABOVE NGVD 1929 (NORMAL ORTHOMETRIC HEIGHT) 13.261 METERS (43.506 FEET)	MODELED BOUGUER ANOMALY 7.7 MGALS	SIGMA 1.2	MODELED SURFACE GRAVITY 980.109 GALS	NORMAL GRAVITY (1967 FORMULA) 980.103 GALS	NORMAL GEOPOTENTIAL NUMBER (GPU=KILOGALMETER) 12.997 GPUS
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***** BENCH MARK RECOVERY *****

DESIGNATION--N 69	STATE--MD	COUNTY--KENT	QUAD--N390762 XRN--JVO315
MONUMENT BY--CGS	YR--1942	COP--UNK	MARK TYPE--BENCH MARK DISK
RECOVERY BY--CGS	YR--1964	COP--CFO	CONDITION--GOOD

STAMPING--N 69 1942
LOCATED--4.5 MI SW FROM THE CITY OR TOWN OF--WORTON

ABOUT 1.0 MILE NORTH ALONG HIGHWAY 297 FROM WORTON, THENCE 3.3 MILES WESTERLY ON HIGHWAY 298. AT SECOND HOUSE SOUTHWEST OF THE ROAD LEADING TO WORTON CREEK, THE HOUSE IS BUILT OF CINDER BLCKCS. 25.0 FEET NORTHWEST OF CENTER LINE OF THE HIGHWAY, 10.0 FEET NORTHEAST OF CENTER LINE OF THE DRIVEWAY AND 10.5 FEET SOUTHEAST OF POWER LINE POLE NO. 207, THE POST IS FLUSH WITH THE GROUND.

near intersection of Buck Neck Rd & Md 298
West side Md 298 - 2nd house s of
Buck Neck Rd. - 10' N of drive
April 1984
1.0 mi to Nicholson Rd.

522

102

U.S.G.S.

US DEPARTMENT OF COMMERCE - NOAA
NDS - NATIONAL GEODETIC SURVEY
ROCKVILLE MD 20852 - MAY 1982

VERTICAL CONTROL DATA
NATIONAL GEODETIC VERTICAL DATUM 1929
ADJUSTED BY--NGS YEAR--1981
SOURCE--L9939

SEON--060
QUAD--N39076200 LINE--103
STATE--MD DIAGRAM--NJ 18-1
COUNTY--KENT

BENCH MARK
DESIGNATION--78 USGS

ORDER--2ND MONUMENTATION QUALITY--C APPROX LAT 39-13-20N
ESTABLISHED BY--USGS YEAR--UNK POSITION--LDN 076-10-20W

H - ELEVATION	MODELED BOUQUER	MODELED	NORMAL GRAVITY	NORMAL
(NORMAL ORTHOMETRIC HEIGHT)	ANOMALY SIGMA	SURFACE GRAVITY	(1967 FORMULA)	GEOPOTENTIAL NUMBER
23.945 METERS (78.559 FEET)	16.6 MGALS 1.0	980.112 GALS	980.100 GALS	23.468 GPUS

***** BENCH MARK RECOVERY *****
DESIGNATION--78 USGS STATE--MD COUNTY--KENT QUAD--N390762 XRN--JV0316
***** MONUMENT BY--USGS ***** YR--UNK COP--UNK MARK TYPE--SURVEY DISK *****
***** RECOVERY BY--CGS ***** YR--1964 COP--MUT CONDITION--GOOD *****
***** STAMPING--78 BALTO MARYLAND *****
***** SETTING--BOULDER *****
***** LOCATED IN THE CITY OR TOWN OF--FAIRLEE *****
***** AT FAIRLEE, 172 FEET SOUTHEAST OF THE INTERSECTION OF STATE HIGHWAY 298 AND A CUTOFF ROAD RUNNING *****
***** SOUTHEASTERLY TO OLD STATE HIGHWAY NO. 20, 0.10 MILE NORTHWEST OF SALEM METHODIST CHURCH, 19.7 FEET *****
***** SOUTHWEST OF THE CENTER LINE OF THE ROAD, 26.6 FEET SOUTHEAST OF POLE C AND PBC 5, 37.7 FEET *****
***** SOUTHWEST OF POLE CEL AND P CO., AND SET VERTICALLY IN THE NORTH FACE OF A LARGE BOULDER. *****
***** RECOVERY BY--LDCSUR ***** YR--1980 COP--UNK CONDITION--GOOD *****

Fairlee
On cut-off road, south side
face of large boulder
2.4 mi. to Nicholson Rd.

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NDS - NATIONAL GEODETIC SURVEY
ROCKVILLE MD 20852 - MAY 1982

VERTICAL CONTROL DATA
NATIONAL GEODETIC VERTICAL DATUM 1929
ADJUSTED BY--NGS YEAR--1981
SOURCE--L9939

SEON--061 PG
QUAD--N39076200 LINE--103
STATE--MD DIAGRAM--NJ 18-1
COUNTY--KENT

BENCH MARK
DESIGNATION--R 69

ORDER--2ND MONUMENTATION QUALITY--B APPROX LAT 39-13-13N
ESTABLISHED BY--CGS YEAR--1942 POSITION--LDN 076-10-25W

H - ELEVATION	MODELED BOUQUER	MODELED	NORMAL GRAVITY	NORMAL
(NORMAL ORTHOMETRIC HEIGHT)	ANOMALY SIGMA	SURFACE GRAVITY	(1967 FORMULA)	GEOPOTENTIAL NUMBER
25.933 METERS (85.081 FEET)	16.6 MGALS 1.0	980.111 GALS	980.100 GALS	25.417 GPUS

***** BENCH MARK RECOVERY *****
DESIGNATION--R 69 STATE--MD COUNTY--KENT QUAD--N390762 XRN--JV0317
***** MONUMENT BY--CGS ***** YR--1942 COP--UNK MARK TYPE--BENCH MARK DISK *****
***** RECOVERY BY--CGS ***** YR--1964 COP--MUT CONDITION--GOOD *****
***** STAMPING--R 69 1942 *****
***** SETTING--FOUNDATION *****
***** LOCATED IN THE CITY OR TOWN OF--FAIRLEE *****
***** AT FAIRLEE, 0.5 MILE NORTHEAST ALONG STATE HIGHWAY 298 FROM THE INTERSECTION OF STATE HIGHWAY 20, *****
***** SET VERTICALLY IN THE SOUTHEAST FACE OF THE CONCRETE FOUNDATION OF THE FAIRLEE PUBLIC SCHOOL, 5.25 *****
***** FEET NORTHEAST OF THE SOUTHEAST CORNER, AND ABOUT 4 FEET ABOVE THE GROUND. *****

Fairlee

CHESTER, 1959 (MBCS)

KENT COUNTY

E= 1065,021.63*

N= 507,744.97*

Station is located approximately $\frac{1}{2}$ mile east of the Foxley Motel at the intersection of Route 213 and Route ~~447~~²⁹¹. It is 20' east of a lone Cedar tree, 86.6' west of CEP & P Co. Pole #55, 60' southeast of pole NI. with no number and 21' south of centerline of Route ~~447~~²⁹¹ on a high bank set in line with power poles.

To reach from the intersection Route 213 & Route ~~447~~²⁹¹, go west along Route ~~447~~²⁹¹ for 0.35 mile to station on right as described.

Plane Azimuth from south to "Chester Az. 1959": 245° 15' 05"* .

Plane Azimuth from south to Chestertown tank: 31° 55' 49"* .

2/75 J.M.A. LOST ?

* 1970 Adjustment

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• WORTON, 1963

-KENT CO.

E= 1 064 156.46

N= 513 337.35

Station is located 2.0 miles N of the Chestertown Post Office along U. S. 213 at the junction of U. S. 213 and Md. 297. 41.0 ft. SE of the centerline of U. S. 213. 30.0 ft. S of pole #1122 $\frac{1}{2}$. 6.1 ft. E of S post of a sign and 18.0 ft. S of the center of the ditch and 5.2 ft. NE of the projected centerline of Md. 297. A standard disk set in the top of a concrete post projecting 6" and stamped "WORTON, 1963".

Plane azimuth from south to Chestertown tank approx. mile south:

02-42-07

BUCK (Kent County, Md., J.C.P., 1935)--Station BUCK is on the W shore of Eastern Shore, about 1.5 miles inland and on the farm property of John A. Redding known as the Holiday farm on Corey's Cross Road. Station is in a field NW of farmhouse and the field is at the junction of the road to Tri-State Yacht Club running from Melitota to Handy Point and the lane to Mr. Roger's farm, this lane being marked by a large oak on left side of road. Station is about 295.24 feet E of N-S fence line separating Mr. Redding's farm from farm tenanted by E.H. Dulin and owned by Hinson Rogers, measured at right angles to fence line, place of measurement being 174.5 feet S of intersection of road extended to fence line. It is 879.2 feet S of edge of large oak tree at entrance to lane of Roger's farm, and 1252.2 feet from grey barn with red tin roof on Mr. Redding's farm.

E 1 034 012.89 N 521 328.40

Station marked, as described in note 7a, by a standard subsurface monument 3.5 feet below surface and standard surface mark marked as described in note 1a, 1.5 feet below surface-- both marked "BUCK 1935."

Reference marks are standard bronze disks set in concrete as described in note 11a. Reference mark No.1 and reference mark No.2 both lie just within the N-S fence line separating the Redding and Rogers farms. Reference mark No.2 is 57.8 feet S of intersection of extension of road to fence line and reference mark No.1 is 409.785 feet S of reference mark No.2. Reference marks are marked "BUCK R.M. NO.1 1935" and "BUCK R.M. NO.2 1935."

Station BUCK may be reached by proceeding N on 9-foot concrete road from Fairlee, Maryland, for 0.5 mile to fork. Bear left on dirt road for 2.2 miles to lane leading to Redding farm. Turn left to and through farmyard proceeding into field and to station. Bear right beyond first barn.

OBJECT	DISTANCE	DIRECTION
LEE		0°00'00"0
R.M.No.1 (Az.Mk.)	123.42 meters	59 16 00
R.M.No.2	96.093 meters	127 21 20
R.M.No.1 to R.M.No.2	124.903 meters	
Height of light above station mark - 25 meters.		

PLANE A2 23-13-16

BUCK (Kent County, Md., J.C.P., 1935; L.W.S., 1939)--Reference mark No.1 and reference mark No.2 recovered as described by J.C. Partington in 1935. Station mark (underground) not dug for due to cultivation. Description adequate.

South of Handy Point Rd.
West of Fish Hatchery Rd.

Lat. 39°15'42.910"

Long. 76°10'24.752"

QUAD 390762-1023

LEE (Kent County, Md., J.C.P., 1935)--Station LEE is on the eastern shore of Chesapeake Bay and what is known as the Eastern Shore of Maryland, about 3 miles inland and about 1.4 miles W of the village of Fairlee. It is on the highest ground of a cultivated field on the farm owned by Mrs. Emma E. Cooper at the junction of Bay Side Road and the road to Georgetown. It is 127.7 meters E of NE corner of farmhouse, 112.8 meters SE of center line of junction of lane leading to farmhouse and Bay Side Road, 51.8 meters S of center line of Bay Side Road, and 90 meters W of center line of Georgetown road.

E 1 028 740.55 N 509 039.65

The station is marked by standard subsurface monument set with a bronze disk, as described in note 7a, about 4 feet below surface of ground. Surface mark is a 2-foot concrete monument with a bronze disk, as described in note 1a, set 1.5 feet below surface of ground. Both station marks are stamped "LEE 1935."

Reference mark No.1 is set about 4 inches above ground, 289.58 meters W of station in a row of cedars separating two cultivated fields and is the azimuth mark.

Reference mark No.2 is set 45.63 meters NE of station in fence line paralleling S side of Bay Shore Road. Reference mark No.1 is 276.86 meters W of reference mark No.2. Both reference marks are standard concrete monuments 3 feet long set with bronze disks as described in note 11a and marked "LEE 1935 R.M. No.1" and "LEE 1935 R.M. No.2", respectively.

To reach station from Fairlee, proceed westward on dirt Bay Shore Road 1.4 miles. The station is in cultivated field on farm on S side of road and opposite farmhouse on N side of road.

OBJECT	DISTANCE	DIRECTION
FAIRLEE TOWER NO.10		0°00'00"0
R.M.No.2	45.63 meters	79 54 12
Top white silo		202 41 35
Cupola Red Barn		325 14 19

Plane Azimuth from South

To RM No 1 : 120-48-43

R.M.No.1 (Az.Mk.) 289.58 meters 345 27 07
Chy. Ctr. Yellow Hse. 347 16 37
Height of telescope above station mark - 16 meters.

near intersection of Bay Shore Rd & Georgetown Ch. Rd.

LEE (Kent County, Md., J.C.P., 1935; L.W.S., 1939)--Reference mark No.2 was recovered in good condition as described by J.C. Partington in 1935. Station mark was not dug for due to cultivation. Description is adequate.

Lat. 39°13'41.918"

Long. 76°11'33.163"

QUAD 390762-2089

(Tracing-typed)

CHESTER, AZ., 1959 (MBCS)

KENT COUNTY

E= 1068,999.83* N= 509,579.07*

STATE HIGHWAY ADMIN. DISTRICT OFFICE

Station is located on the property of the ~~Chestertown American Legion~~, ^{1 1/2} miles northeast of Chestertown. It is set in the southeast corner of the property, 122' southwest of the northeast corner of the building, 92.5' southeast of the southeast corner of the building, 196' south of the center-line of Route 447, 14' west of a fence line, 27' north of a EW fence line.

Station is a standard MBCS disk, set in the top of a concrete post, stamped "CHESTER, AZ. 1959" and projects 2".

To reach from Foxley Motel, at the intersection of Route ²⁹¹ 447 and Route 213, go east-northeast on Route 291 for 2 mile to Legion on the right, turn in drive and go to the extreme southeast corner of the lot and station as described.

2/75 JMA. recovered as described in good condition.

Plane Az. to Chester: 65 - 15 - 05*

" " " Chestertown Trip: 53-52-49

* 1970 Adjustment

HORIZONTAL CONTROL DATA

by the
 National Ocean Survey
 NORTH AMERICAN 1927 DATUM

QUAD 390762 SE STATION 2033
 MD
 LATITUDE 39° 00' TO 39° 30'
 LONGITUDE 76° 00' TO 76° 30'
 DIAGRAM NJ 18-1 BALTIMORE

ADJUSTED HORIZONTAL CONTROL DATA

CLOUGH (Kent County, Md., F.W.P., 1896)--About 2 miles SW of Fairlee, on the road to Tolchester Beach. Station is on the farm of A.A. Reinhart, known as Hulme Farm, at the highest point of a field. There are two roads leading from this farmhouse, one to the Chestertown Road and the other to the Tolchester Road. The station is about 20 feet W of the middle of the latter farm road and about 350 feet from the Tolchester Road. Marking not known.

CLOUGH (Kent County, Md., F.W.P., 1896; R.D.H., 1933)--This station was recovered as originally described and occupied as a first-order station. A 90-foot tower was used.

It is on the Hulme Farm, now owned by Mr. H.W. Hadaway. It is 180 paces from the center of Highway 21 and 19 feet NW of the center of the lane from Highway 21 to the farmhouse. It is 33.15 feet W of nail in triangle out on twin 4-inch cedar, 12.60 feet N of nail in triangle out on 4-inch cedar, and 30.00 feet SW of nail in triangle out on 4-inch cedar, and 24 feet NW of wire fence. The underground mark is a 6- by 6-inch marble post 3 feet long 3 feet 4 inches below ground. The surface mark is an irregular block of concrete, roughly 18 inches square, 1.5 feet below ground, with a standard disk stamped "CLOUGH 1933." Reference marks are standard bronze disks set in concrete as described in note 11b.

Reference mark No.1 the azimuth mark, is in fence line on NW side of lane, 3 (5?) paces SW of S corner of truck shed, 14 paces NW of corner of chicken house, 6 paces N of center of lane, and about 50 paces W of house.

Reference mark No.2, projecting 6 inches above ground is 1 foot N of fence line, 4 feet S of center of lane and 18 paces ESE of twin 4-inch cedar.

Reference mark No.3 is 1 foot N of fence line, 4 feet S of center of lane and 7 paces ESE of 6-inch cedar.

To reach station from Chestertown go W on Highway 20, 8.0 miles to intersection, turn sharply right on Highway 21 and go 0.2 mile. Turn right and follow old lane with wire fence on right and cedars on left 180 paces from center of Highway 21. Station is 5 paces N of center of lane.

OBJECT	DISTANCE	DIRECTION
MITCHELL BLUFF TOWER NO.11, 1918		0°00'00"
AIR BEACON, FLASHING WHITE LIGHT, V.G.		07 05 30.00
R.M.No.1 (Az.Mk.) V.G. (approx.)	0.1 mile	103 52 43.02
R.M.No.2	175.40 feet	111 15 54.4
R.M.No.3	121.63 feet	272 31 45.3

CLOUGH (Kent County, Md., F.W.P., 1896; R.D.H., 1933) and reference marks recovered in good condition. The recovery description is adequate.

A 70-foot tower was built over this station.

CLOUGH (Kent County, Md., F.W.P., 1896; U.S.G.S., 1953)

Reference mark 3 was found, but reference marks 1 and 2 were not found. The station was looked for but not dug for, and the land is under cultivation at the present time. The cedar trees have been destroyed.

(J.C.E., 1957)--Station was recovered as described by R.D.H. in 1933 and all marks were found to be in good condition. Reference mark 1 (azimuth mark) is behind a building and could not be taken. A small difference was found in the distance and direction to reference marks 2 and 3. The 1953 description is adequate except the fence line mentioned in the description is now gone.

1957 observations taken from a 77-ft. tower.

OBJECT	DISTANCE	DIRECTION
	meters feet	0°00'00"
BA 30 31 Fairlee, AT&T Micro Wave Relay Tower		120 34 55.8
R.M. 2	53.440 175.32	121 34 16
R.M. 3	37.063 121.59	282 48 04

NAME OF STATION: CLOUGH

STATE: MARYLAND

YEAR: 1896

SECOND

-ORDER

LOCALITY:

SOURCE: G-11572

FIELD SKETCH:

GEODETIC LATITUDE:	39 12 06.1318	ELEVATION:	23	METERS
GEODETIC LONGITUDE:	76 11 27.4923	SCALED		FEET

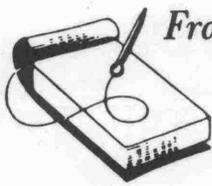
STATE COORDINATES (FWS)				
STATE & ZONE	CODE	X	Y	PLANE AZIMUTH
MD	1900	1,029,272.65	499,353.13	+ 0 30 28 "

* PLANE AZIMUTH HAS BEEN COMPUTED BY THE PLANE AZIMUTH FORMULA NEGLECTING THE SECOND TERM.

TO STATION OR OBJECT	GEODETIC AZIMUTH (From south)	PLANE AZIMUTH (From south)	CODE
AZ MK RM 1	224 24 09.4	223 53 41 "	1900

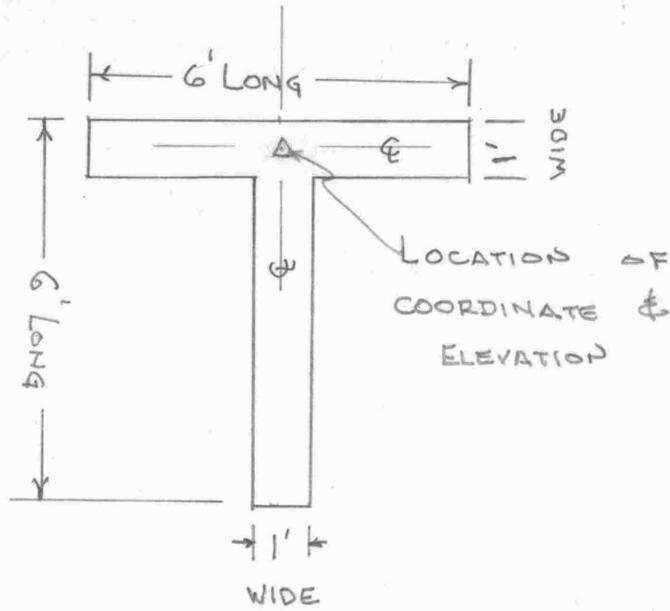
near McCleens Cor.

MY 091



From the desk of

LEO E. ALLUISI



40A

1" = 1320'

APPROX. LOCATION OF
4 TARGETS

