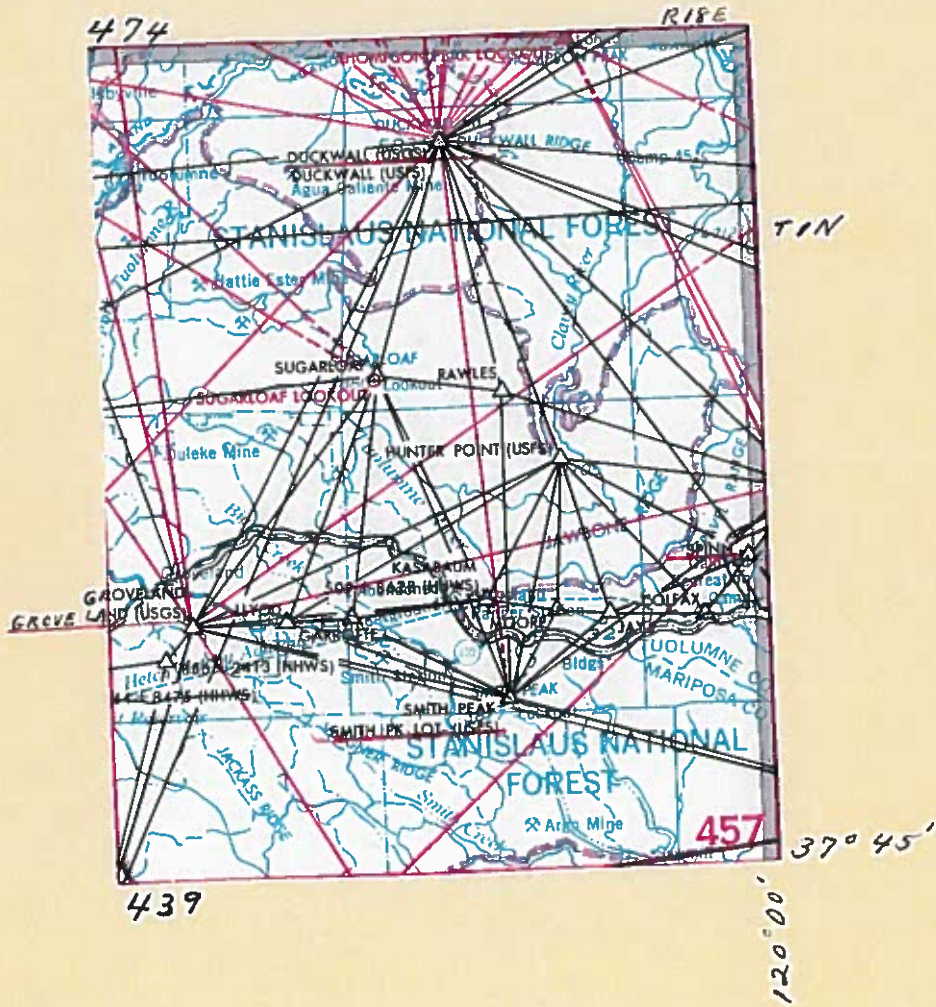


37° 45'
120 00



37°45'
120 00CALIFORNIA 457

Index

<u>Station</u>	<u>Project</u>
Duckwall	- - & (M) <i>Junora Pass</i>
Groveland	- - & (M)
Smith Peak L.O.	- - & (M)
Spinn (C&GS)	Yosemite
Sugarloaf L.O.	(M)
Thompson Peak L.O.	Big Trees & (M)

(M) = Multilith

Big Trees Project Master in CALIFORNIA 473 - Book: PH 470

Yosemite Project Master in CALIFORNIA 437 - Book: PH 470

Junora Pass Proj " " " 473 " PH 1716

CAL. 457 1927 N.A.D.

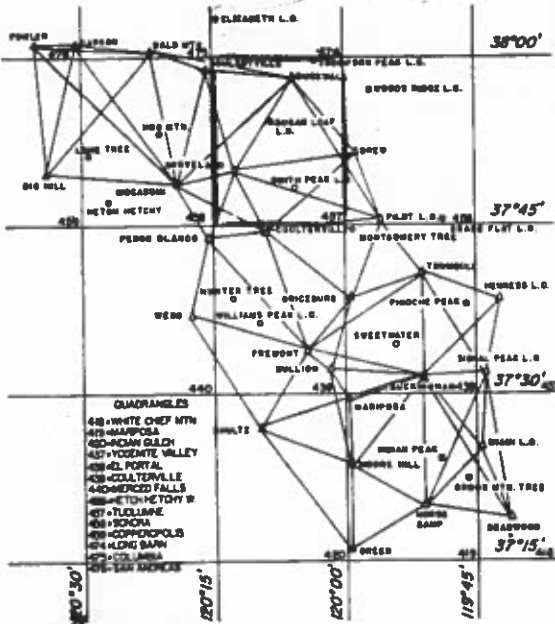
15-137 45
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CARTER

SONORA AND MARIPOSA 30' QUADRANGLES

CALIFORNIA

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



(A) True Lines determined by U.S. Coast and Geodetic Survey.

CALIFORNIA TRIANGULATION
SONORA AND MARIPOSA 30' QUADRANGLES
THIRD-ORDER

By C. N. Mortenson, 1945
Books H247a-d; H248a-j
North American Datum of 1927
2/17/47 Feb
Revised 2/17/53 -H.C.

During the field season of 1945 third-order triangulation was established for basic horizontal control on the SONORA, TULUMNE, COULTEVILLE, EL FORTAL, AND MARIPOSA 15-minute quadrangles in California.

Field work was done by C. N. Mortenson using a 10-second repeating theodolite to measure angles. The triangulation was extended from stations previously established by the U. S. Geological Survey and by the U. S. Coast and Geodetic Survey. Seven previously established U.S.G.S. stations and three U.S.C. & G.S. stations were recovered and occupied, three old U.S.G.S. stations not previously adjusted to 1927 N.A.D. were recovered and occupied, fourteen new stations were occupied and fifteen additional points located by intersection from three or more occupied stations.

The net was adjusted by a method of least squares; all values are on the North American Datum of 1927.

During the months of January to March, 1946, vertical angle elevations were established for supplemental vertical control on above quadrangles; vertical angle observations were also made by C. N. Mortenson.

Elevations were computed from reciprocal vertical angles, observed with a theodolite having vertical circles graduated to 20 seconds of arc, and using computed distances between stations. Vertical angle elevations are based on ties to spirit level bench marks by triangulated distances. The vertical angle control net was not rigidly adjusted, a mean elevation for the various stations being determined by an arbitrary adjustment through the net between the several spirit level bench marks. Elevation shown for a triangulation station is for station mark unless otherwise stated, and is probably within 3 ft. of correct value.

FILE COPY -

BALD MOUNTAIN
Toulumne County California
1945 1927 N.A.D.

Located on highest point of Bald Mountain which is about 2 mi. N. of Sonora.

To reach from Sonora, go out Lyon Street and continue on main oiled rd. 0.8 mi. from main part of town; turn left through cattle guard onto dirt rd., and go 0.4 mi. to city reservoir, from here keep straight ahead and keep ascending grade for 2.0 mi. to top of ridge, turn right onto poor rd. along ridge for 0.15 mi. to top of truck travel. From here station is about 1/4 mi. from top of hill.

Station mark: Standard tablet stamped "Bald Mountain 1945," cemented in granite rock.

Reference mark No. 1: Standard reference mark tablet stamped "No 1 1945," cemented in granite rock, 11.89 ft. from station mark in true azimuth 22°04'.

Reference mark No. 2: Copper nail and washer in 8-in. oak tree, 21.66 ft. from station mark in true azimuth 135°06'.

Signal: Black and white cross targets, centered over station mark.

V.A. Elev. 5342 ft.
Latitude: 38°00'29.853" Longitude: 120°21'43.519"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Lone Tree	33°09'28"	215°04'49"	4.307058	12.601
Big Hill	62 12 49.89	222 05 35.70	4.5277511	12.735
Fowler	93 45 26.95	273 37 27.43	4.2844721	12.075
Carson	96 54 38.29	276 49 27.34	4.0934118	7.708
Thompson Peak L.O.	272 08 12	92 19 04	4.412451	16.602
Dunkwell	281 51 48.28	101 40 47.40	4.3488429	13.550
Boulabylville	284 28 09.25	104 32 09.96	3.9844684	4.621
Quadrangle L.O.	302 38 33	122 46 23	4.55275	14.074
Greenland	328 04 57.42	148 10 16.25	4.382257	14.915
Wessasin	322 15 28.24	172 16 45.21	4.570012	14.157
Big Mountain	356 49 09	176 49 29	4.413581	8.685
Not occupied				

BIG HILL (C. & G.S., 1931)
Toulumne County California
U. N. Mortenson 1945 1927 N.A.D.
C. N. Lloyd 1941

Note by C. N. Mortenson, 1945: Station recovered as described by U.S.C. & G.S.

Latitude: 37°49'43.004" Longitude: 120°34'02.587"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Fowler	176°19'33.70"	356°18'59.41"	4.3270275	15.196
Carson	194 55 28.04	11 57 52.77	4.5158952	15.780
Bald Mountain	222 05 35.70	42 12 49.89	4.5277511	16.715
Lone Tree	216 18 46	67 02 31	3.879570	4.709
Big Mountain	251 28 40	72 04 33	4.284472	12.908
Wessasin	276 56 24.42	97 05 15.39	4.328306	13.235
Penon, Blance	291 51 55.62	111 45 12.75	4.638225	16.079
Sketch Sketchy	296 09 40	116 13 47	4.060458	6.820
Not occupied				

BRICEBURG
Mariposa County California
U. N. Mortenson 1945 1927 N.A.D.

Located about 3 mi. SW. of Briceburg, about 2 mi. S. of Texas Hill, on highest point and near S. end of low ridge that lies between Hills Gulch and its first principal fork coming in from the S.

To reach from Mariposa, take State Highway 140 N.E., and go 13.0 mi. to Briceburg on Harrod River, cross river and take steep rd. with numerous switch-backs, that climbs out of canyon to the N., go 7.2 mi. from Briceburg to crossroads on top of low ridge; take rd. left along ridge, and go 2.1 mi., take left fork, and go 200 ft., turn left on poor rd. along fire break and along ridge and go 0.6 mi. to station.

Station mark: Standard tablet stamped "Briceburg 1945," cemented in top of rock.

Reference mark No. 1: Standard reference mark tablet stamped "Briceburg No 1," cemented in top of rock, 24.22 ft. from station mark in true azimuth 199°55'.

Reference mark No. 2: Standard reference mark tablet stamped "Briceburg No 2," cemented in top of rock, 19.56 ft. from station mark in true azimuth 292°04'.

Signal: Black and white cross targets, centered over station mark.

V.A. Elev. 3149 ft.
Latitude: 37°38'53.291" Longitude: 119°59'51.391"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Present	36°23'29.51"	216°20'40.32"	4.0596564	7.129
Williams Peak L.O.	72 48 20	292 42 01	4.201777	9.888
Wheat Tree	83 15 21	266 75 42	4.268188	11.322
Coulterville	128 45 02.50	308 47 37.22	4.218819	11.054
Montgomery Tree	189 16 45	9 17 32	4.063124	7.289
Pilot L.O.	202 50 27.00	22 32 45.02	4.152672	8.944
Grass Flat L.O.	230 17 56	50 24 27	4.502279	12.645
Trumbull	250 08 26.05	60 13 23.51	4.452445	7.881
Sweetwater	308 53 27	128 57 35	4.406134	7.970
Not occupied				

Extra Copies in 419
(SURPLUS FILES)

FEB 17 1953

2. SONORA AND MARIPOSA JOI QUADRANGLES

CALIFORNIA

BUCKINGHAM Mariposa County California 1945 1927 U.S.A.D. C. F. Mortenson

CARSON (Cont'd.) Calaveras County California 1945 1927 U.S.A.D. C. F. Mortenson L. O. Newsome

Located on S. end of Buckingham Mountain, which is about 6 mi. E. and 2.5 mi. W. of Mariposa. Highest part of mountain is about 0.25 mi. NW. of station.

To reach from Mariposa, take State Highway 140 toward Yosemite Park, and go 5.0 mi. to Azusa Inn, turn right on oiled rd. and go 0.5 mi., turn left off oiled rd. and go 0.4 mi., turn left keeping main rd. and go 0.75 mi., take left fork and follow main-traveled rd. for 3.0 mi. to top of main ridge and crossroads; take rd. to right and go in a southerly direction along ridge for 3.7 mi. to station.

Station mark: Standard tablet stamped "Buckingham 1945," cemented in a rock.

Reference mark No. 1: Standard reference mark tablet stamped "No 1," cemented in bedrock, 11.32 ft. from station mark in true azimuth 74°20'.

Reference mark No. 2: Standard reference mark tablet stamped "No 2," cemented in bedrock, 16.73 ft. from station mark in true azimuth 337°20'.

Signal: Pine pole with cross targets, centered over station mark.

V.A. Elev. 4524 ft.

Latitude: 37°31'24.239" Longitude: 119°51'26.973"

Table with columns: To Station, Azimuth, Back Azimuth, Log. Meters, Miles. Rows include Moore Hill, Shulte (C&GS), Mariposa, Bullion, Fremont, Trumbull, Pinchote Peak, Buzzess L.O., Signal Peak L.O., Miami L.O., Deadwood, Indian Peak, Horse Camp.

Not occupied

BULLION Mariposa County California 1945 1927 U.S.A.D. C. F. Mortenson C. F. Urquhart

Located 3.5 mi. E. and 3.5 mi. W. from Mariposa, on highest point of SE. end of Bullion Mountain.

To reach from Mariposa, go N. on State Highway 140 for 0.7 mi., turn left onto State Highway 49, and go 2.05 mi., turn right through cable guard and go 2.35 mi. to forks of rd. in saddle, turn left and take ascending grade for 2.4 mi., turn left and go a short distance to top of peak and station. An airplane beacon light is located on top of peak and is 47.1 ft. from station mark in true azimuth 67°30'.

Station mark: An old style triangulation tablet cemented in large rock. (Sta. is identical with sta. Bullion as described in Bull. 440, p. 109.)

Signal: White cross targets, centered over station mark.

V.A. Elev. 4216 ft.

Latitude: 37°32'04.716" Longitude: 120°01'45.597"

Table with columns: To Station, Azimuth, Back Azimuth, Log. Meters, Miles. Rows include Shulte (C&GS), Fremont, Buckingham, Moore Hill.

CARSON Calaveras County California 1945 1927 U.S.A.D. C. F. Mortenson L. O. Newsome

Description by L. O. Newsome, 1944:

Located 4.0 mi. SE. of Angels Camp.

To reach from Angels Camp, take by SE. to Carson Flat 3.9 mi., turn left on dirt rd. 300 ft. and turn left up hill 0.5 mi. to saddle, leave car and walk 1000 ft. S. to top and station.

Station mark: Standard tablet stamped "Carson 1944," cemented in rock outcrop on top.

Reference mark No. 1: Standard reference mark tablet stamped "No 1 1944," cemented in rock outcrop on top, 47.2 ft. from station mark in true azimuth 88°32'.

Reference mark No. 2: Standard reference mark tablet stamped "No 2 1944," cemented in rock outcrop, 20.35 ft. from station mark in true azimuth 277°37'.

Signal: Black and white cross targets on pole, centered over station mark.

Note by C. F. Mortenson, 1945: Recovered as described by L. O. Newsome, 1944.

CONTINUED ON NEXT PAGE

Latitude: 38°01'27.964" Longitude: 120°30'08.424" V.A. Elev. 1983 ft.

Table with columns: To Station, Azimuth, Back Azimuth, Log. Meters, Miles. Rows include Big Hill (C&GS), Fowler, Bald Mountain, Hog Mountain, Nocassin, Spanish Hetchy, alone tree.

Not occupied

COULTERVILLE Mariposa County California 1945 1927 U.S.A.D. C. F. Mortenson

Located about 3 mi. NE. of Coulterville.

To reach from Coulterville, take main rd. NE. and go 2.0 mi., take right fork and go 4.0 mi. to top of ridge, turn left on Ponderosa Way and go 0.6 mi. to high top and station.

Station mark: Standard tablet stamped "Coulterville 1945," cemented in granite rock.

Reference mark No. 1: Shallow drill hole in top of granite rock, 26.63 ft. from station mark in true azimuth 30°23'.

Reference mark No. 2: Copper nail and washer in 18-in. sugar pine, 66.40 ft. from station mark in true azimuth 168°49'.

Reference mark No. 3: Standard reference mark tablet stamped "Coulterville No 3," cemented in bedrock, 0.96 ft. from station mark in true azimuth 294°15'.

Signal: Flag in top of 18-in. sugar pine, 69.31 ft. from station mark in true azimuth 170°53'.

V.A. Elev. 3629 ft.

Latitude: 37°44'34.577" Longitude: 120°09'16.110"

Table with columns: To Station, Azimuth, Back Azimuth, Log. Meters, Miles. Rows include Williams Peak L.O., Hunter Tree, Pusan Blanco, Crowland, Drew, Pilot L.O., Montgomery Tree, Briceburg, Fremont.

Not occupied

CRANE FLAT L.O. (Not occupied) Tuolumne-Mariposa Counties California 1945 C. F. Mortenson

Located on summit of main ridge about 1 mi. W. of Crane Flat Ranger Sta., in Yosemite National Park.

To reach from Crane Flat Ranger Sta., go S. on rd. along an abandoned railroad grade for 1.25 mi., turn right on rd. that leads to station.

Station mark and signal: Center of National Park Service lookout house. V.A. Elev. of ground at base of lookout house - 6644 ft.

Latitude: 37°45'35.15" Longitude: 119°49'10.70"

Table with columns: To Station, Azimuth, Back Azimuth, Log. Meters, Miles. Rows include Trumbull, Briceburg, Pilot L.O., Buzzess L.O.

CROOK MTN. TREE (Not occupied) Madera County California 1945 C. F. Mortenson

Located on S. end of Crook Mountain.

Station mark and signal: A tall digger pine tree growing at S. end of high part of mountain, and tall enough so that it shows up prominently above the other trees. Tree has a heavy foliage, the center of which was sighted.

Latitude: 37°21'47.42" Longitude: 119°05'59.74"

Table with columns: To Station, Azimuth, Back Azimuth, Log. Meters, Miles. Rows include Horse Camp, Moore Hill, Signal Peak, Deadwood.

Recovered from PH 476 Year 1946 Book No. 2 of 10 m.p. July 1946

Recovered
Book Nos

Devils Postpile
PH208 Year *1945*

FILE COPY -

SOMERA AND MATIPOSA 30' QUADRANGLES

DEADWOOD Madara County California
C. R. Mortenson 1945 1927 N.A.D.
C. R. Lloyd 1941

Description by C. R. Lloyd, 1941:

Located about 3.5 mi. N. of Coarsesgold, on highest part, which is a bare knoll, of large tablered ridge known as Deadwood Mountain. The station is identical with State Forest Service Fire Lookout Tower Deadwood.

To reach from Coarsesgold, proceed NE. along State Highway 41 for 4.6 mi. to point on hwy. just S. of Summit and about 50 yd. from 3000 ft. elevation hwy. marker, here turn left and go 0.2 mi. to T-rd. right, turn right and go 1.5 mi. to rd. fork and stream crossing, which is about 100 yd. from house in gully, take right fork up hill and proceed 2.9 mi. to station and top.

Station mark: Standard tablet stamped "Deadwood 1941," set in concrete post in ground directly under center of lookout house on metal tower.

Reference mark No. 1: Old type U.S.G.S. b.m. set in rock naturally embedded about 10 ft. N. of large oak tree, 84.5 ft. from station mark in true azimuth 9°22'16".

Reference mark No. 2: Standard reference mark tablet set in rock naturally embedded, just outside fence, 83.7 ft. from station mark in true azimuth 210°06'51".

Signal: State Forest Service Fire Lookout house, on steel tower about 40 ft. high and directly over station mark.

Note by C. R. Mortenson, 1945: Station found as described by C. R. Lloyd, 1941.

V.A. Elev. 4539 ft.

Latitude: 37°18'48.965" Longitude: 119°41'05.724"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Bear Camp	96°51'52.94"	276°45'45.19"	4.1529957	8.836
McCook Mountain	127 15 49	307 12 51	3.958611	8.649
Indian Peak	128 09 28	308 04 52	4.154306	8.865
Buckingham	146 47 01.89	326 40 44.41	4.4447953	17.341
Miami L.O.	154 24 58.25	335 52 28.65	4.1094331	7.794
Signal Peak L.O.	166 35 45.06	346 35 45.98	4.3877997	9.175

Not occupied

DREW Tuolumne County California
C. R. Mortenson 1945 1927 N.A.D.

Located about 13 mi., airline, N. and a little W. of Greveland, about 1.5 mi. SW. of Betch Betchy intake on Tuolumne River, on small peak W. and S. of Betch Betchy R.R.

To reach from Greveland, go N. on State Highway 120 for 14.6 mi. to Cliff House summer resort, continue on hwy. 0.4 mi. and turn left at rd. sign "Oakland Camp," go 0.4 mi. to Oakland Camp and turn left across bridge and follow main rd. to intake, go 3.9 mi. and turn left on poor rd. at sign "Tree Ridge Fire Line," go 0.4 mi. and take right fork, go 0.1 mi. and leave car, walk to station up ridge to right.

Station mark: Standard tablet stamped "Drew 1945," cemented in top of buried rock near W. edge of small top.

Reference mark No. 1: U.S.P.S. bronze tablet stamped "Station 10 VARN Elev 4125 T 1 N R 18 E Sec 10 1937," cemented in rock outcrop, 36.39 ft. from station mark in true azimuth 56°43".

Reference mark No. 2: Standard reference mark tablet stamped "Drew 90 2" cemented in rock outcrop, 19.83 ft. from station mark in true azimuth 213°59".

Signal: Black and white cross targets in 8-in. pine tree with tufted top, 4.82 ft. from station mark in true azimuth 10°47".

CALIF. ZONE 3 V.A. Elev. 4431 ft.
X = 2,149,944.1 Longitude: 119°39'14.411"
Latitude: 37°31'54.177"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Conitersville	47°24'49.28"	227°18'40.46"	4.5012215	12.433
Smith Peak L.O.	54 24 25	236 10 16	4.086356	7.581
Greveland	77 37 09.15	257 28 33.74	4.3178519	12.917
Deadwell	134 33 08.12	314 50 15.64	4.2125021	10.135
Orthompson Peak	154 35 53	334 30 55	4.217389	10.250
L.O.	169 17 50	349 18 15	4.026411	6.376
Woods Ridge L.O.	189 54 36.14	197 54 31.83	4.0884399	7.521

Not occupied

SEE LATER VOLUMES

CALIFORNIA
Tuolumne County California
1945 1927 N.A.D.

DUCKWELL Tuolumne County California
C. R. Mortenson 1945 1927 N.A.D.

Located about 6.6 mi. S. of Tuolumne, on highest point of Duckwall Mountain. At center of 100-ft. steel lookout tower.

To reach from Somera go NE. on State Highway 108 for about 17 mi. to summer resort of Long Barn, from Long Barn Lodge go along hwy. U.35 mi. and turn right, take rd. toward Thompson Meadow and go 2.25 mi., take rd. to right and go 0.5 mi. to bridge over North Fork of Tuolumne River, go 0.45 mi. and take right fork onto rd. along old railroad grade, go 4.05 mi. and keep to rd. straight ahead, go 1.5 mi. and keep to lower rd., go 2.1 mi. and turn left, go 1.75 mi. and keep to rd. straight ahead, go 2.75 mi. and keep to rd. straight ahead, go 6.9 mi. to station.

Station mark: Standard tablet stamped "Duckwall 1945," cemented in top of granite boulder and centered under steel lookout tower.

Reference mark No. 1: Standard reference mark tablet stamped "Duckwall No. 1," and cemented in top of an abandoned concrete footing, 6.86 ft. from station in approximate azimuth 102".

Reference mark No. 2: U.S.P.S. standard bronze tablet stamped "Duckwall VARN Elev 5837 T 1 N R 17 E Sec 4 1937," cemented in an abandoned concrete footing, 6.83 ft. from station mark in approximate azimuth 194".

Signal: Center of 100-ft. steel lookout tower, centered over station mark.

CALIF. ZONE 3 V.A. Elev 5835 ft. Y = 535 003.7
X = 2,109,892.8 Longitude: 120°07'07.624"
Latitude: 37°58'07.488"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Deugarloaf L.O.	16°18'13"	196°17'15"	3.743641	5.093
Greveland	28 36 52.07	208 34 52.74	4.2644117	11.340
Woodsain	45 21 26.95	228 13 45.98	4.117432	16.056
Soulsbyville	99 20 11.19	279 15 08.80	4.0846973	7.552
Bald Mountain	101 40 47.40	281 31 43.28	4.3368529	13.558
Elizabeth L.O.	133 05 32	313 00 48	4.185821	9.532
Orthompson Peak	232 47 56	52 49 48	3.743211	5.050
L.O.	274 32 51	94 38 26	4.123500	8.266
Woods Ridge L.O.	341 50 15.64	134 55 06.42	4.2125021	10.135
Pilot L.O.	524 60 09.22	164 66 55.49	4.14470066	17.306
Smith Peak L.O.	554 51 38	174 52 20	4.272309	11.632

Not occupied

POWLER Calaveras County California
C. R. Mortenson 1945 1927 N.A.D.
L. D. Newcome 1944

Description by L. D. Newcome, 1944:

Located 4.0 mi. SW. of Angels Camp, on S. end of Bear Mountain.

To reach from Altaville, take State Highway 4 SW. for 6.0 mi. to an iron gate on left (S. side) of hwy., enter gate and drive on dirt rd. S. 4.5 mi. to Fowler Lookout (State) and station.

Station mark: Standard tablet stamped "Powler 1944," cemented in 10-ft. boulder 24 ft. NE. of lookout tower.

Reference mark No. 1: Standard reference mark tablet stamped "No 1 1944," cemented in boulder, 23 ft. SW. of lookout tower, 34.4 ft. from station mark in true azimuth 95°11".

Reference mark No. 2: Standard reference mark tablet stamped "No 2 1944," cemented in rock level with ground, 26 ft. NW. of tower, 49 ft. from station mark in true azimuth 350°55".

Signal: Center of top of Fowler Lookout Tower, 34.1 ft. from station mark in true azimuth 42°21".

Note by C. R. Mortenson, 1945: Station found as described by L. D. Newcome, 1944.

Latitude: 38°01'10.405" Longitude: 120°34'58.378"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Carson	268°05'16.44"	88°08'15.06"	3.8198069	4.397
Bald Mountain	273 37 17.43	93 45 26.95	4.284725	12.073
Woodsain	316 34 09.06	136 12 34.45	4.5147736	20.339
Big Hill (CAOS)	356 18 59.43	176 19 53.70	4.5270975	13.196

Not occupied

Recovered *4465 - Yosemite Proj.*
Book Nos. *PH470* Year *1956*

(new values)

Recovered *Big Trees*
Book Nos. *PH470* Year *1956*
(new C.V.S. field values)

4. SONORA AND MARIPOSA 30' QUADRANGLES

PREMONT Mariposa County California
C. E. Mortenson 1945 1927 U.S.A.D.

Located about 5.5 mi. E. and 6.5 mi. W. from Mariposa. On Fremont Peak which is highest point on Bullion Mountain.

To reach from Mariposa, go E. on State Highway 140 for 0.7 mi., turn left onto State Highway 49 and go 2.05 mi., turn right through cattle guard and go 2.55 mi., to forks of rd. in saddle, turn left and take ascending grade for 2.4 mi., keep to rd. straight ahead and go 1.75 mi., keep straight ahead again, and follow rd. W., at times along crest of mountains, and at times on E. side, for 3.15 mi. to point where rd. comes back near crest of mountain, leave car and walk S. along summit for about 1000 ft. to station.

Station mark: Standard tablet stamped "Premont 1945," cemented in rock near W. edge of highest part of peak. A wood observing tower 22 ft. high is centered over station mark.

Reference mark No. 1: Standard reference mark tablet stamped "Premont No 1," cemented in large rock, 29.65 ft. from station mark in true azimuth 95°18'.

Reference mark No. 2: Standard reference mark tablet stamped "Premont No 2," cemented in large rock, 21.35 ft. from station mark in true azimuth 194°42'.

Signal: Black and white cross targets in top of dead digger pine tree that overhangs station mark and observing tower, 3.35 ft. from station mark in true azimuth 244°53'.

V.A. Elev. 4202 ft.

Latitude: 37°53'33.61d Longitude: 120°04'28.71d

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Summits (CAOS)	25°52'17.5d	205°04'14.9d	4.1168236	8.715
Webb	104°59'24.93	286°31'28.61	4.3008654	12.423
Williams Peak L.O.	118 18 19	298 14 50	3.779571	5.928
Penon Blanco	139 30 49.50	319 24 00.93	4.1012809	15.668
Southernville	160 57 08.07	340 54 10.50	4.3314467	15.397
Montgomery Tree	202 34 05	323 11 11.28	4.411278	14.028
Pilot L.O.	208 54 21.61	28 11 25.32	4.1103479	15.778
Brisburg	216 20 40.32	34 23 29.61	4.0524544	14.129
Trumbull	234 05 23.44	64 13 09.88	4.3519475	14.241
Observatory	251 75 23.44	86 02 31	4.226123	10.459
Buckingham	261 10 38.54	107 52 50	4.322211	13.280
Bullion	304 25 07.88	124 24 47.05	3.8860060	3.015

*Not occupied

GREEN (C. & O.S., 1931) Mariposa County California
C. E. Mortenson 1945 1927 U.S.A.D.
C. R. Lloyd 1941

Notes by C. E. Mortenson, 1945: Station found as described by U.S.C. & G.S.

There is now a State fire lookout station on Green Mountain with a rd. leading to same. The lookout house is about 450 ft. NW. of station mark. The old U.S.C. & G.S. station GREEN (U.S.C. & G.S. tablet) is 15 ft. N. of NW. corner of lookout house and on line with E. face, 478.4 ft. from U.S.C. & G.S. station mark in true azimuth 163°57'50".

To reach from Green Mountain School on Le Grande-Raymond rd., go W. 0.6 mi. and turn W. through gate and keep left, rd. climbs up S. face of mountain.

V.A. Elev. 1560 ft.

Latitude: 37°35'50.935" Longitude: 119°59'22.702"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Summits (CAOS)	11°44'09.85"	325°48'29.11"	4.3862229	15.120
Moore Hill	181 10 34.57	1 10 43.69	4.1482943	8.713
Indian Peak	227 16 21.21	67 52 50	4.322211	13.280
Horae Camp	240 51 20.70	80 56 37.84	4.1688854	9.167

*Not occupied

GROVELAND Tuolumne County California
C. E. Mortenson 1945 1927 U.S.A.D.

Located about 1 mi. SE. of Groveland, near W. end of small top covered with pine and manzanita.

To reach from Groveland, go W. on hwy. for 0.4 mi., turn left onto oiled rd. and follow up hill (past a mine) for 1.1 mi. to top of ridge in saddle, turn left and go 0.15 mi., turn left onto fire rd. along ridge and go 0.9 mi. to station.

Station mark: Standard tablet stamped "Groveland 1945," set in granite rock projecting 3 in. above ground, and about 4 ft. E. of pine tree.

Reference mark No. 1: Copper nail and washer in 8-in. pine tree, 39.95 ft. from station mark in true azimuth 211°35'.

Reference mark No. 2: Standard reference mark tablet stamped "No 2," cemented in granite rock, 32 ft. from station mark in true azimuth 336°01'.

Signal: Black and white cross targets in top of tree, 3.9 ft. from station mark in true azimuth 105°06'.

CONTINUES ON NEXT PAGE

SEE L.A. 1945
HOVELAND (Cont'd.) Tuolumne County California
C. E. Mortenson 1945 1927 U.S.A.D.

V.A. Elev. 3634 ft.

Latitude: 37°49'28.772" Longitude: 120°13'04.675"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Penon Blanco	19°08'29.24"	199°56'14.74"	4.0390835	6.799
Moccasin	77 22 25.84	247 18 24.55	3.9861167	6.151
Bald Mountain	108 10 16.25	328 01 57.62	4.3862229	14.915
Southville	108 39 12.91	328 37 50.38	4.2613262	11.512
Williams L.O.	174 34 29	350 34 24	4.4241499	16.517
Duckwall	208 54 21.61	28 11 25.32	4.2608817	11.524
Shugleaf L.O.	218 18 57	28 21 39	4.015321	6.457
Woods Ridge L.O.	235 18 46	55 54 59	4.124416	16.518
Tree	255 23 37.74	77 17 05.13	4.3175319	12.917
Smith Peak L.O.	284 35 23.74	104 10 08.65	4.091122	6.675
Pilot L.O.	285 20 24.21	105 10 08.65	4.426689	16.070
Coulterville	328 19 16.21	148 21 34.25	4.0275922	6.621

*Not occupied

HENNESSY LOCKOUT Mariposa County California
C. E. Mortenson 1945 1927 U.S.A.D.

Located on Hennessy Ridge, about 2 mi. S. and 4 mi. E. from El Portal.

To reach from Mariposa, take State Highway 140 into Yosemite Park, near lower end of Yosemite Valley, turn right onto Yosemite rd. and go to Chiquapien Ranger Sta., go 0.5 mi. past ranger Sta. and turn right onto rd. to Hennessy Ridge Lockout, go 1.7 mi. to lockout and station.

Station mark and signal: Center of National Park Service Lockout House.

Reference mark No. 1: Standard reference mark tablet stamped "Hennessy No 1-1945," cemented in large granite rock, 47.86 ft. from station mark in true azimuth 344°.

Reference mark No. 2: Standard reference mark tablet stamped "Hennessy No 2-1945," cemented in large granite boulder, 65.9 ft. from station mark in true azimuth 223°02'.

V.A. Elev. of ground at base of lockout house - 6320 ft. (1945)

Latitude: 37°38'20.307" Longitude: 119°43'14.410"

Latitude: 37°25'53.7" Longitude: 119°45'40.8"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Signal Peak L.O.	7°48'35.12"	187°47'53.65"	4.0893913	7.644
Buckingham	43 20 14.34	223 15 13.95	4.2241657	10.951
Trumbull	110 38 34.36	290 35 24.45	4.1297720	8.501
Grass Flat L.O.	146 57 49	326 54 11	4.204611	9.540

*Not occupied

HATCH HATCHY (Not occupied) Tuolumne County California
C. E. Mortenson 1945 1927 U.S.A.D.

Located about 1.5 mi. SE. of Hatch Hatchy R.N. Junction on highest point on oak covered hill.

To reach from Sonoma, go SE. through Jamestown on Oakdale Highway for 14.0 mi., turn left on La Grange rd. and go 5.0 mi. S. to summit of low ridge and also near power line crossing, from here station is about 0.5 mi. SE.

Station mark and signal: Top of 12-in. oak tree with copper nail and washer on E. side, tree has signal of white cross targets wired in top.

V.A. Elev. of ground at base of tree - 1495 ft.

Latitude: 37°47'05.85" Longitude: 120°27'19.99"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Big Hill (CAOS)	136°13'47"	296°09'40"	4.040438	6.820
Carson	171 04 16	331 05 01	4.124750	16.523
Moccasin	248 43 34	78 43 17	4.041342	7.157
Penon Blanco	288 48 26	108 55 36	4.259522	11.893

HOG MOUNTAIN (Not occupied) Tuolumne County California
C. E. Mortenson 1945 1927 U.S.A.D.

Located about 7 mi. S. of Sonoma, on top of brush and timber covered peak, locally known as Hog Mountain.

To reach from Jamestown, take oiled rd. toward Stant and go 1.1 mi., turn left on oiled rd. and go 1.1 mi., keep on oiled rd. straight ahead and go 3.4 mi., leave oiled rd. and turn right, go 0.7 mi. and from here top is visible to E.

Station mark and signal: Tall dark colored pine tree with sharp top and signal pole in top, growing at N. edge of top of hill; tree has copper nail and washer on W. side.

V.A. Elev. for top of hill, approximately 50 ft. S. of station - 2481 ft.

Latitude: 37°53'01.39" Longitude: 120°21'12.08"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Big Hill (CAOS)	72°04'33"	251°56'40"	4.296757	12.106
Carson	119 30 20	319 24 51	4.34168	12.518
Bald Mountain	176 49 29	328 49 09	4.141384	8.805
Moccasin	345 24 46	165 15 43	3.954942	5.601

*Not occupied

SEE L.A. 1945

Recovered (PHH) 7/19/70

Lock Nos 1945

Not occupied

SONORA AND MARIPOSA JOINT QUADRANGLES

5.
CALIFORNIA

HORSE CAMP Mariposa County California
C. W. Hoffmann 1945 1927 N.A.D.
C. H. Lloyd 1941

Description by C. H. Lloyd, 1941:

Located on grassy, oak-covered ridge 8.5 mi. W. of Raymond.

To reach from Raymond Post Office, go N. on main rd. for 0.15 mi. to T-rd. N. and sign "MARIPOSA 25 mi., MARINA 24 mi., MARONA 43 mi., YOSEMITE 69 mi." turn left and go 0.7 mi. to fork of rd. and sign "MATHOON 3/4 mi., MARIPOSA 24 mi.," take right-hand fork (straight ahead) and proceed down canyon and up river for 7.55 mi. to forks of rd. and sign on tree "BAILEY PLATS," turn left and go 1.7 mi. to point where rd. crosses stream and sand wash, cross wash and turn right at fork of rd., go up hill on ranch rd. 2.0 mi. to ranch house passing gate and stream crossing at 1.4 mi., follow this pasture rd. back of house E. on side of ridge for 0.5 mi. to stream fork and end of truck travel. Peak southwards along ridge on well defined saw trail to watering trough, from trough continue on saw trail around side of ridge into saddle and southward on ridge and trail to point where trail passes just E. of second definite top of ridge and about 1 mi. from end of truck travel. Station is located on this top.

Note: There is an old U.S.O.B. vertical angle b.m. on top just W. and above watering trough about 1/2 mi. from ranch house, this is not the station.

Station mark: Standard tablet stamped "Horse Camp 1941," set in rock in ground, on top directly under signal.

Reference mark No. 1: Copper nail and washer, set horizontally in burk on 14-in. oak tree, 12 ft. from station mark in true azimuth 272°21'.

Reference mark No. 2: Copper nail and washer in small cut triangle on 5-in. oak tree, 65.1 ft. from station mark in true azimuth 229°56'53'.

Signal: Black and white cross targets on 3- by 3-in. pole in tree directly over station mark.

Note by C. W. Hoffmann, 1945: Station found as described by C. H. Lloyd, 1941 except that azimuth to reference mark No. 1 is in error by 180°, it should be 92°28', also signal is not now directly over station mark.

V.A. Elev. 1912 ft.

Latitude: 37°19'43.680" Longitude: 119°50'59.315"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Green (CAOS)	40°54'17.81"	240°51'20.70"	4.1688854	9.167
Moore Hill	118 44 17.99	298 59 07.51	4.1549475	8.919
Buckingham	176 33 54.52	356 55 24.56	4.1350375	13.440
Indian Peak	202 04 12	22 07 21	3.885448	4.775
Signal Peak L.O.	202 34 57.85	22 36 26.94	4.3821124	14.978
Mead L.O.	221 20 40.28	41 24 18.82	4.1271669	8.527
Crook Mountain				
Tree	240 50 32	61 01 21	3.895860	4.889
Deadwood	276 45 45.19	96 51 32.94	4.1529957	8.859

Not occupied

HUNTER TREE (Not occupied) Mariposa County California
C. W. Hoffmann 1945 1927 N.A.D.

Located on Hunter Valley Mountain, about 2 mi. W. of railroad siding at Kittridge.

Station mark and signal: Top of lone umbrella-shaped pine tree growing on summit of ridge and about 60 yd. NW. of small top.

V.A. Elev. of ground at base of tree 2629 ft. (Average ground elevation of small top to SE. is 2644 ft.; elevation at top of large rocks on above top is 2673 ft.)

Latitude: 37°36'27.47" Longitude: 120°12'27.47"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Marlton	38°10'29"	198°00'08"	4.168043	9.149
Webb	47 42 19	247 39 17	4.203610	4.777
Oaklerville	201 56 45	21 58 42	4.098158	7.769
Wiseburg	268 25 42	88 35 24	4.268186	11.522

INDIAN PEAK (Not occupied) Mariposa County California
C. W. Hoffmann 1945 1927 N.A.D.

Located on top of Indian Peak, which is about 6.5 mi. S. and 8.5 mi. E. of Mariposa.

To reach from Mariposa, take rd. S. to Mormon Bar, and thence E. to T-rd. S. about 4.8 mi. from Mariposa, turn S. and keep on main-traveled rd. for 3.5 mi., turn left and go 0.8 mi., keep straight ahead and go 2.2 mi., turn left fork and go 1.0 mi., turn left and go 0.5 mi., turn right and go 0.4 mi. to ranch house and Indian Peak School, leave car and walk to top of peak, which is about 0.75 mi. SE.

Station mark and signal: Trimmed oak tree growing about 40 ft. NW. of highest part of top, and on ground that is about 2 ft. lower. Tree has copper nail and washer on S. side.

Note: There is an old V.A.S.M. tablet 121 ft. from station mark in approximate azimuth 330°.

V.A. Elev. of highest part of hill is 3085 ft., and that of old V.A.S.M. is 3061 ft.

CONTINUED ON PAGE 5.

Recovered
Book Nos. _____ Year _____
Recovered
Book Nos. _____ Year _____
Recovered
Book Nos. _____ Year _____

INDIAN PEAK (Not occupied) (Cont'd.) Mariposa County California
C. W. Hoffmann 1945 1927 N.A.D.

Latitude: 37°23'34.63" Longitude: 119°48'41.76"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Horse Camp	22°07'29"	202°06'12"	3.885448	4.775
Green (CAOS)	47 52 56	227 46 21	4.328211	13.250
Moore Hill	89 12 56	289 06 14	4.189714	9.618
Buckingham	184 20 46	344 19 08	4.177156	9.345
Signal Peak L.O.	202 34 58	22 51 45	4.215186	10.205
Deadwood	308 04 52	128 09 28	4.154306	8.865

LOVE TREE (Not occupied) Tuolumne County California
C. W. Hoffmann 1945 1927 N.A.D.

Located about 8 mi. SW. of Jamestown, on S. side of Sonora-Oakdale Highway, on middle peak of three most prominent peaks in some low hills, locally known as Red Hills.

To reach from Sonora, take Sonora-Oakdale Highway and go 14.0 mi., turn left on oiled rd. and follow this rd. SE. for 0.8 mi., turn left on ranch rd. through gate, and go about 0.5 mi. to ranch house, car can be taken through pasture for about 0.25 mi. beyond house, leave car and walk N. to station, about 3/4 mile on oiled rd.

Station mark and signal: A lone pine tree, growing 50 ft. W. and 30 ft. S. of highest point of hill.

V.A. Elev. at top of hill SE. of signal tree is 1755 ft.

Latitude: 37°51'18.96" Longitude: 120°29'17.24"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Big Hill (CAOS)	67°02'51"	246°59'56"	3.879570	4.709
Carson	176 07 57	356 07 26	4.287618	11.502
Bald Mountain	213 04 49	33 09 28	4.307058	12.601
Wassain	291 25 13	111 29 08	4.182177	9.452

MARIPOSA Mariposa County California
C. W. Hoffmann 1945 1927 N.A.D.
C. F. Urquhart 1906

Located on top of ridge about 1.3 mi. W. and a little N. of Mariposa. Station is identical with station Mariposa as described in Bull. 440, p. 111.

Station mark: Drill hole in bedrock, partially filled with cement.

Note: The old triangulation tablet is missing, but the imprint of the shank of tablet is visible in cement in above hole.

Signal: Flagpole in small cairn, centered over station mark.

V.A. Elev. 2757 ft.

Latitude: 37°29'27.201" Longitude: 119°59'25.743"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Bullion	144°21'21.06"	324°19'54.68"	3.778429	3.714
Buckingham	252 50 09.61	72 51 53.90	4.088279	7.611
Moore Hill	358 22 34.25	178 22 42.02	4.0255849	6.896

Recovered

Book Nos

News Postpile
PH208 Year 1917
2 Rm's set

SINOVA AND MARIPOSA JOI QUADRANGLES

CALIFORNIA

MIAMI LOOKOUT Mariposa County California
C. R. Mortenson 1945
C. P. Urquhart 1906
1845
1927 N.A.D.

MOORE HILL Mariposa County California
C. R. Mortenson 1945
C. P. Urquhart 1906
1927 N.A.D.

To reach from Mariposa, take county rd. S. and E. through
Hornum Bar and Bootjack toward Almahnee, leave county rd. at
point approximately 4 mi. N. of Almahnee, and take forest service
rd. that leads to station.

Located 6.5 mi. S. and 1.0 mi. W. from Mariposa, on prominent
hill locally known as Moore Hill. Station is near SE. edge and on
highest part. It is identical with old U.S.G.S. station Moore
Hill, as described in Bull. 440, p. 111.

Station mark and signal: Center of U. S. Forest Service
lookout house on steel tower. 4326.594 (1952)

To reach from Mariposa, go S. toward Hornum Bar for 1.5 mi.,
turn right across bridge and go 4.05 mi. to crossroads; turn left
toward Raymond, and follow on oiled rd. for 2.35 mi. to Y-rd. fork,
keep right and go 2.3 mi., turn sharp to right on poor rd. that
goes through wooden gate, and follow this ending rd. W. for
2.35 mi. to top of hill and station.

V.A. Elev. of ground under lookout house - 4325 ft.

Station mark: An old style bronze tablet stamped "VA 2600 1909,"
and cemented in rock outcrop.

Latitude: 37°25'09.899" Longitude: 119°44'59.281"

Reference mark No. 1: Standard reference mark tablet stamped
"Moore Hill No. 1," set in rock outcrop, 21 ft. from station mark
in true azimuth 108°41'.

Table with 5 columns: To Station, Azimuth, Back Azimuth, Log. Meters, Miles. Rows include Horse Camp, Buckingham, Signal Peak L.O., Deadwood.

Reference mark No. 2: Copper nail and washer in 10-in. oak
tree, 9.78 ft. from station mark in true azimuth 329°41'.

Signal: White cross targets in top of 10-in. oak tree, 8.39 ft.
from station mark in true azimuth 315°20'.

V.A. Elev. 2608 ft.

MOCCASIN Tuolumne County California
C. R. Mortenson 1945
C. R. Lloyd 1941
1927 N.A.D.

Latitude: 37°25'27.240" Longitude: 119°59'10.955"

Description by C. R. Lloyd, 1941:
Located on highest part of Moccasin Ridge, about 0.8 mi. W. of
Moccasin Creek Power Plant.

Table with 5 columns: To Station, Azimuth, Back Azimuth, Log. Meters, Miles. Rows include Green (C&GS), Shute (C&GS), Bullion, Mariposa, Buckingham, Indian Peak, Creek Mountain, Tree, Horse Camp.

To reach station from Moccasin Creek Power Plant, go W. across
the Reservoir dam and turn left at sign "COULTEVILLE 11 MILES -
SINOVA 20.0 MILES - DARDALE 39 MILES," go 0.75 mi. and turn left on
graded rd., go 2.55 mi. on main-traveled rd., take right rd. fork,
go 0.1 mi. and pass through swinging gate, go 0.3 mi. and pass
through gate opposite ranch buildings, go 0.15 mi. and pass through
swinging gate, (this gate is usually locked, obtain key from a Mr.
Hughes, whose residence is 0.4 mi. N. of the power plant) and go
0.3 mi., turn right onto dirt rd. opposite a lone oak tree and just
W. of drain creek in pipe line, which follows along E. side of rd.,
follow dirt rd. and go 0.1 mi. pass through wire gate, go 0.35 mi.
across drain, go 0.1 mi. and turn left off rd., about 100 yds. W. of
steel power line tower, go 1.0 mi. and pass through saddle and keep
to S. side of hill until reaching spur ridge, follow up spur to
ridge top, turn N. up ridge to fence line and end of truck travel,
keep up ridge to top and station.

Not occupied

Station mark: Standard tablet stamped "Moccasin 1940," cemented
in rock outcrop.

PEÑON BLANCO Mariposa County California
C. R. Mortenson 1945
C. R. Lloyd 1941
1927 N.A.D.

Description by C. R. Lloyd, 1941:

Reference mark No. 1: Standard reference mark tablet stamped
"No. 1," cemented in rock outcrop, 38.35 ft. from station mark in
true azimuth 127°17'.

Located about 3.9 mi. SW. of Coulterville and about 12 mi. NE.
of La Grange, on highest part of Peñon Blanco Ridge.

Reference mark No. 2: Forest Service bench mark tablet stamped
"Moccasin Elev 2954," cemented in rock outcrop on E. end of top,
256.40 ft. from station mark in true azimuth 261°00'.

To reach from La Grange, take main rd. towards Coulterville for
11.05 mi. to rd. intersection, keep left (N.) on Coulterville rd.
for 4.65 mi., and turn E. at sign "COULTEVILLE 9 MILES," go 5.1 mi.
to point where rd. crosses saddle, turn right through gate and
follow rd. to station.

Signal: Black and white cross targets on 3- by 3-in. staff
18 ft. long, mounted in top of oak tree, 57.83 ft. from station
mark in true azimuth 118°29'.

Station mark: Center of lookout tower.

Note by C. R. Mortenson, 1945: Station found as described
by C. R. Lloyd, 1941, except "sump" stamping on Reference mark No. 2.
This should be "Moccasin Peak Elev. 2943 1957."

Reference mark No. 1: Standard reference mark tablet stamped
"To 1," cemented in rock outcrop, 184.35 ft. from station mark in
true azimuth 140°15'.

Reference mark No. 2: Chiseled cross in rock outcrop,
72.26 ft. from station mark in true azimuth 172°25'.

Signal: Center of lookout tower (identical with station mark).

Note by C. R. Mortenson, 1945: Station found as described
by C. R. Lloyd, 1941.

V.A. Elev. 2948 ft.

V.A. Elev. of ground at base of lookout house - 2072 ft.

Latitude: 37°48'18.639" Longitude: 120°19'58.231"

Latitude: 37°43'55.198" Longitude: 120°15'37.316"

Table with 5 columns: To Station, Azimuth, Back Azimuth, Log. Meters, Miles. Rows include Betha Notch, Big Hill (C&GS), Lone Tree, Fowler, Carson, Bog Mountain, Bald Mountain, Coulterville, Buckwall, Groveland, Peñon Blanco.

Table with 5 columns: To Station, Azimuth, Back Azimuth, Log. Meters, Miles. Rows include Webb, Betha Notch, Big Hill (C&GS), Moccasin, Groveland, Coulterville, Pilot L.O., Present, Williams Peak L.O.

MONTEGOMERY TREE (Not occupied) Mariposa County California
C. R. Mortenson 1945
1927 N.A.D.

PILOT LOOKOUT Tuolumne-Mariposa Counties California
C. R. Mortenson 1945
1927 N.A.D.

Located on Montgomery Ridge about 5 mi. SE. of Pilot Peak.

Located on highest point of Pilot Peak. This is a prominent
peak about 15 mi., air-line, E. and N. of town of Coulterville.

Station mark and signal: Top of 24-in. pine tree with flag and
trimmed top, growing near S. end of top.

To reach from Mariposa, take Yosemite to all-year hwy. to Bridgeburg
on Merced River, cross river and take second-class rd. up Bridgeburg
grade and on N. through Kingsley Guard Sta. to old Coulterville rd.,
go N. to top of high ridge and rd. forks known as "The Mail Box,"
take rd. marked "Pilot Peak" S. for 1.5 mi. to peak and station.

V.A. Elev. at top of hill, 120 ft. N. of station - 1046 ft.

Latitude: 37°44'48.80" Longitude: 119°50'34.13"

Table with 5 columns: To Station, Azimuth, Back Azimuth, Log. Meters, Miles. Rows include Bridgeburg, Present, Coulterville, Pilot L.O., Trumbull.

To reach from Groveland, go E. on Oak Flat-Yosemite rd. to point
about 1 mi. E. of Berkeley Camp, turn right and go SE. to old
Coulterville rd. W. to rd. forks at "The Mail Box" described above.

Station mark and signal: Center of U. S. Forest Service lookout
house.

CONTINUED ON NEXT PAGE

Recovered *Yosemite Proj*
 Book Nos. *PH470* Year *1952* FILE COPY -
sent to 1945 cross station
PILOT PEAK.

457

SICHOPE AND MARIPOSA JOINT QUADRANGLES
 PILOT LOOKOUT (Cont'd.) Tuolumne-Mariposa Counties California
 U. S. Mortenson 1945 1927 U.S.A.D.

Reference mark No. 1: Standard reference mark tablet stamped "Pilot No 1 1945" set in bedrock, 38.45 ft. from station mark in true azimuth 38°56'.

Reference mark No. 2: Standard reference mark tablet stamped "Pilot No 2 1945" set in bedrock, 25.64 ft. from station mark in true azimuth 15°40'.

CALIF. ZONE 3
 X = 2,76
 Y = 350.2

V.A. Elev. of ground at base of lookout house - 6018 ft.
 Latitude: 37°45'45.630" Longitude: 119°56'05.714"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Briarburg	22°52'45.02"	202°50'27.00"	4.1592672	8.966
Freewest	28 41 28.92	208 56 21.61	4.1181879	7.978
Montgomery Tree	64 16 02.92	204 41 12	3.609285	7.006
Parson Blanks	83 19 43.30	263 07 52.08	4.4686647	17.848
Caulterville	85 36 28.96	265 28 25.04	4.2894219	12.100
Groveland	105 30 18.85	289 20 24.21	4.1256689	16.070
Smith Peak L.O.	106 16 56	286 10 52	4.179631	9.397
Duckwall	141 46 55.49	324 40 09.22	4.4474066	17.408
Thompson Peak L.O.	156 00 33	335 55 39	4.458622	17.864
Drew	157 24 51.83	337 62 56.14	4.0886399	7.621
Woods Ridge L.O.	172 25 51	352 24 38	4.302401	13.670
Cream Flat L.O.	211 47 14	81 51 28	4.007050	8.315
Pineche Peak	215 24 23	155 10 32	4.301882	12.852
Trumbull	324 40 07.59	146 42 47.37	4.0439306	6.875

Not occupied
 PINOCH PEAK (Not occupied) Mariposa County California
 U. S. Mortenson 1945 1927 U.S.A.D.

Located on main divide between Merced River and South Fork Merced River, about 3 mi. S. of El Portal.

Station mark and signal: Highest tip of Pinoche Peak.

V.A. Elev. 5769 ft.
 Latitude: 37°38'05.04" Longitude: 119°46'28.54"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Duckwall	30°40'10"	210°37'18"	4.157256	8.925
Trumbull	125 44 59	303 41 16	3.962100	5.787
Pilot L.O.	135 10 16	315 04 23	4.501882	12.452

SHULEY (C. & O.S., 1931) Mariposa County California
 U. S. Mortenson 1945 1927 U.S.A.D.
 C. R. Lloyd 1941

Note by C. R. Mortenson, 1945: Station recovered as described by U.S.C. & G.S.

Latitude: 37°26'44.222" Longitude: 120°08'37.695"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Webb	144°34'25.84"	324°29'01.81"	4.5523372	13.986
L.O.	172 23 01	352 22 04	4.237912	10.746
Freewest	205 49 45.95	82 52 17.54	4.186536	8.715
Bullion	227 29 42.81	82 43 12	4.1506138	8.790
Duckwall	251 05 19.52	71 15 48.77	4.4273898	16.424
Moore Hill	293 29 50.51	113 35 34.87	4.1618934	9.444
Green (C&G)	345 48 29.11	145 54 05.85	4.3862229	15.120

Not occupied
 SIGNAL PEAK LOOKOUT Mariposa County California
 U. S. Mortenson 1945 1927 U.S.A.D.

Located on highest point of Signal Peak, which is prominent peak about 12 mi. E. and 3 mi. S. of Mariposa.

To reach from Mariposa, take rd. S. to Morson Bar, and thence E. 6.9 mi. from Mariposa to Bootjack rd. take right fork and go 0.9 mi., keep rd. straight ahead and go 1.15 mi., take left fork and go 0.7 mi., take right fork and go 0.95 mi., take left fork and go 0.7 mi., turn left up hill and go 4.0 mi. to rd. fork in saddle, turn sharp to right and go 2.65 mi., turn sharp to left and go 1.0 mi., turn left on ascending grade and go about 1 mi. to station.

Station mark and signal: Center of U. S. Forest Service lookout house.

Reference mark No. 1: Standard reference mark tablet stamped "Signal Peak No 1 1945" cemented in large rock, 32.9 ft. from station mark in true azimuth 110°53'.

Reference mark No. 2: Standard reference mark tablet stamped "Signal Peak No 2 1945" cemented in rock, 23 ft. from station mark in true azimuth 208°34'.

V.A. Elev. of eaves of lookout house - 7001 ft. (Elev. of ground at base is approximately 10 ft. lower.)

CONTINUED ON PAGE 7

Recovered *Beavils Postpile*
 Book Nos. *PH208* Year *1956*

Recovered *Cross intersected*
 Book Nos. *n.d.* Year *1956*

Recovered *Yosemite Proj*
 Book Nos. *PH470* Year *1952*

SIGNAL PEAK LOOKOUT (Cont'd.) Mariposa County California
 U. S. Mortenson 1945 1927 U.S.A.D.

Latitude: 37°51'45.498" Longitude: 119°44'22.400"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Miami L.O.	1°56'57.37"	181°56'47.08"	4.0864643	7.583
McCreek Mountain	7 24 07	187 23 08	4.269345	11.553
Tree	22 38 26.94	202 34 37.85	4.3821104	14.678
Horse Camp	22 51 45	202 49 00	4.215386	10.205
Indian Peak	36 26 18.73	266 22 00.11	4.0189134	6.491
Duckwall	109 26 28	289 21 10	4.131101	8.444
Trumbull	147 18 08.46	327 13 38.63	4.3082775	12.463
Bernasa L.O.	187 47 53.65	7 48 35.12	4.0693933	7.634
Deadwood	348 33 45.56	168 35 45.06	4.3877997	15.175

SMITH PEAK LOOKOUT (Not occupied) Tuolumne-Mariposa Counties California
 C. R. Mortenson 1945 1927 U.S.A.D.

Located about 1.75 mi., air line, SE. of Smith Sta. on Hotel Hetchy R.N., about 2.5 mi. of Tuolumne Ranger Sta., at U. S. Forest Service lookout house on Smith Peak.

Station mark and signal: Center of lookout house.

V.A. Elev. of ground at base of lookout house - 3947 ft.
 Latitude: 57°48'02.74" Longitude: 120°05'59.00"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Groveland	104°19'40"	284°13'20"	4.051122	6.675
Duckwall	174 52 29	344 51 58	4.272309	11.648
Drew	234 10 36	44 44 25	4.066372	7.581
Pilot L.O.	286 10 52	166 16 56	4.179631	9.397

SOULSBYVILLE Tuolumne County California
 U. S. Mortenson 1945 1927 U.S.A.D.

Located about 0.5 mi. E. of Soulsbyville, on high point of ridge running SW-NE.

To reach from Soulsbyville Post Office, go SW. on hwy. 0.1 mi., turn right (W.) and go about 200 ft., turn right (E.) and go about 200 ft., turn NE. and follow poor rd. for 0.5 mi. from hwy., leave car and walk up ridge to station.

Station mark: Standard tablet stamped "Soulsbyville 1945" cemented in bedrock on highest point.

Reference mark No. 1: Standard reference mark tablet stamped "No 1" cemented in bedrock, 23.55 ft. from station mark in true azimuth 73°13'.

Reference mark No. 2: Standard reference mark tablet stamped "No 2" cemented in bedrock, 16.21 ft. from station mark in true azimuth 341°45'.

Signal: Black and white cross targets, centered over station mark.

V.A. Elev. 3565 ft.
 Latitude: 37°59'11.347" Longitude: 120°15'19.010"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Moccasin	17°29'51.20"	197°27'11.98"	4.3240970	13.105
Bald Mountain	104 32 05.96	284 28 09.25	3.8063681	6.021
Elizabeth L.O.	185 12 57	5 13 16	5.931702	5.309
Duckwall	279 15 08.80	99 20 11.19	4.0846573	7.581
Sugarloaf L.O.	315 21 05	135 25 07	4.140173	8.581
Groveland	349 37 50.38	169 39 12.91	4.2613282	11.542

Not occupied
 SUGARLOAF LOOKOUT (Not occupied) Tuolumne County California
 U. S. Mortenson 1945 1927 U.S.A.D.

Located about 6.5 mi., air line, SE. of Tuolumne and about 6 mi., air line, SE. of Groveland, at U. S. Forest Service lookout house on Sugarloaf.

Station mark and signal: Center of lookout house.

V.A. Elev. ground at base of lookout house - 3880 ft.
 Latitude: 37°53'53.32" Longitude: 120°08'41.80"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Groveland	58°21'40"	218°18'57"	4.025321	6.437
Bald Mountain	122 46 34	302 38 33	4.355675	14.094
Soulsbyville	135 25 07	515 21 03	4.140173	8.581
Duckwall	196 17 15	16 18 13	5.913654	5.693

Sugarloaf L.O.

B. SUCRA AND MARIPOSA JOI CHAINANGES

CALIFORNIA

SHREVEATER (Not occupied) Mariposa County California
 U. S. Mortenson 1945 1927 N.A.D.

WEBB Mariposa County California
 C. E. Mortenson 1945 1927 N.A.D.
 C. H. Lloyd 1941

Located about 4.5 mi. E. and about 6 mi. N. of Mariposa, on prominent top 5.5 mi. NW. of Buckingham Mountain.

Description by C. H. Lloyd, 1941:

To reach from Mariposa, take State Highway 140 and go 5.0 mi. toward Yosemite Park to Acorn Inn, turn right on oiled rd. and go 0.5 mi., turn left off oiled rd. and go 0.4 mi., turn left keeping to main rd. and go 0.75 mi., take left fork and follow main-traveled rd. for 3.0 mi. to top of main ridge at cross road, turn left and go N. along ridge for 2.5 mi. to cross road, turn left on rd. up hill to Sweetwater point and go 0.7 mi. to top and station.

Located 5.8 mi. N. and 2.0 mi. E. from Merced Falls, and about 1 mi. E. of Webb, on an outstanding point which forms S. end of Webb Mountain Range.

To reach from Merced Falls Post Office, take Coulterville rd. for 6.35 mi. and turn right (E.) through wire gate about 150 yd. S. of Webb ranch house, turn left around fence corner and follow dirt rd. for 0.45 mi., go through a wire gate for 0.95 mi. and go through another wire gate, and continue up hillside to top of ridge. Leave car at this point and follow along ridge to station.

Station mark and signal: Small cairn with pole and flag.
 V.A. Elev. 4635 ft. (Ground at base of cairn.)

Station mark: Standard tablet stamped "Webb 1940 VAM 1795," cemented in naturally embedded boulder.

Reference mark No. 1: Chiseled cross on naturally embedded boulder, 35.31 ft. from station mark in true azimuth 210°22'.

Reference mark No. 2: Chiseled cross on naturally embedded boulder, 11.93 ft. from station mark in true azimuth 350°37'.

Notes by C. E. Mortenson, 1945:

Station has since been occupied by U.S.C. & G.S.

Found station as described with exception that distances to U.S.C. & G.S. reference points were transposed, that is, the distance given for No. 1 is the distance to No. 2 and likewise, that given for No. 2 is the distance to No. 1.
 No. 1 should be 11.93 ft.
 No. 2 should be 35.31 ft.

U.S.C. & G.S. has occupied our station and has set two standard reference tablets; these are stamped "Webb No 1 1945," and "Webb No 2 1945."

U.S.C. & G.S. reference mark No. 1 is 25.40 ft. from station mark in true azimuth 58°17'.

U.S.C. & G.S. reference mark No. 2 is 40.49 ft. from station mark in true azimuth 296°26'.

Signal: Black and white cross targets, centered over station mark.

V.A. Elev. 1794 ft.

Latitude: 37°36'38.812" Longitude: 120°17'29.635"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Panor Blanco	191°33'12.27"	11°34'20.91"	4.1377486	8.533
Hunter Tree	247°39'17"	67°42'19"	3.905610	4.977
Williams Peak L.O.	276°16'15"	96°20'43"	4.034277	6.724
Freemont	286°31'28.61"	106°39'24.93"	4.300864	12.423
Smalts (CAGS)	324°29'01.81"	144°34'25.84"	4.9523372	13.986

Not occupied

WILLIAMS PEAK LOOKOUT (Not occupied) California
 Mariposa County 1927 N.A.D.

C. E. Mortenson 1945
 C. H. Lloyd 1941

Located 4.9 mi. W. thence 8.8 mi. E. of Merced Falls, on top of high ridge between Merced River and Hunter Valley.

Station mark and signal: Center of State Fire Lookout House on tower.

V.A. Elev. of ground at base of lookout house - 5206 ft.

Latitude: 37°36'00.25" Longitude: 120°10'11.14"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Webb	36°20'43"	276°16'15"	4.034277	6.724
Panor Blanco	181°29'43"	11°34'20.91"	4.222270	10.566
Coulterville	184°51'23"	4°51'57"	4.201781	9.888
Ericeburg	252°42'01"	72°48'20"	4.201777	9.888
Freemont	298°14'50"	118°18'19"	3.979571	5.928

WOODS RIDGE LOOKOUT (Not occupied) California
 Tuolumne County 1927 N.A.D.

C. E. Mortenson 1945

Located about 15 mi. airline, E. of Tuolumne, 1.0 mi. S. and 4.5 mi. W. from Lake Eleanor Reservoir Dam, on divide between Cherry Creek and Jarbome Creek, at U. S. Forest Service Woods Ridge Lookout tower.

Station mark and signal: Center of lookout cabin on steel tower.

V. A. Elev. of ground under lookout - 6003 ft.

Latitude: 37°57'52.93" Longitude: 119°38'04.42"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Draw	9°10'13"	189°17'50"	4.026616	6.876
Groveland	44°10'59"	255°15'45"	4.426616	16.418
Duskwell	62°08'26"	273°12'53"	4.123840	8.886
Pilot L.O.	352°24'38"	172°25'51"	4.332401	13.670

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Freemont	86°02'51"	269°55'14"	4.226129	10.459
Ericeburg	128°57'35"	308°45'27"	4.108114	7.970
Trumbull	189°00'38"	9°01'27"	4.077284	7.776
Signal Peak L.O.	289°21'10"	109°26'28"	4.135384	8.444

THOMPSON PEAK LOOKOUT (Not occupied) California
 Tuolumne County 1927 N.A.D.

C. E. Mortenson 1945

Located on Thompson Peak at U. S. Forest Service lookout house.
 To reach from Summit Report of Long Barn on State Highway 108, take Forest Service rds.

Station mark and signal: Center of lookout house - 5293 (1916)

V.A. Elev. of ground at base of lookout - 5293 ft.

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Duskwell	52°19'48"	232°47'56"	3.748211	3.480
Gold Mountain	58°19'04"	278°08'12"	4.432451	16.602
Draw	131°00'13"	168°59'47"	4.217496	10.250
Pilot Peak L.O.	355°55'39"	154°00'35"	4.458422	17.844

TRUMBULL Mariposa County California
 U. S. Mortenson 1945 1927 N.A.D.

Located about 5 mi. W. of El Portal and about 1 mi. E. of Merced River, on crest of rocky ridge, about 0.5 mi. SW. of Trumbull Peak at U. S. Forest Service Lookout.

To reach from Mariposa, take State Highway 140 to Yosemite Park, from park entrance go 4.75 mi. to junction with Oak Flat rd., turn left on Oak Flat rd. and go 10.25 mi. to Grass Flat Ranger Sta., turn left onto rd. that is on an abandoned railroad grade, and go 1.25 mi. to fork, keep straight ahead and go 4.05 mi. to fork near saddle, take left fork toward Merced Grove and go 0.6 mi., take right fork and go 0.25 mi., take left fork and go 3.5 mi., take right fork and go 3.5 mi. to an abandoned machine shop in saddle, take faint rd. past N. face of shop and on up hill for 1.0 mi. to end of rd., trail leads to station which is 0.25 mi. on down ridge.

Station mark: Standard tablet stamped "Trumbull 1945," cemented in bedrock and at exact center of U. S. Forest Service steel lookout tower.

Reference mark No. 1: Small chiseled cross in metal base plate on NW. footing of tower, 9.23 ft. from station mark in true azimuth 135°48'.

Reference mark No. 2: Standard reference mark tablet stamped "Trumbull No 2," cemented in bedrock, 14.82 ft. from station mark in true azimuth 207°34'.

Signal: Top of 50-ft. steel lookout tower, centered over station mark.

V.A. Elev. 4853 ft.

Latitude: 37°40'52.744" Longitude: 119°51'44.586"

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Sweetwater	9°01'27"	189°00'38"	4.077284	7.776
Freemont	58°13'09.88"	234°05'23.14"	4.3459475	14.365
Ericeburg	70°15'25.51"	290°08'26.05"	4.1034145	7.881
Montgomery Tree	118°29'43"	168°59'47"	4.073160	7.700
Pilot L.O.	184°51'23"	169°00'07.59"	4.0899286	8.875
Grass Flat L.O.	289°23'42.97"	89°25'14"	3.977112	5.895
Merced L.O.	290°35'24.65"	118°38'36.36"	4.1257720	8.361
Ericeburg Peak	303°11'44"	123°04'59"	3.969110	5.787
Signal Peak L.O.	327°15'38.63"	167°18'08.16"	4.5022775	12.465
Buckingham	358°35'11.48"	170°35'22.15"	4.2438438	10.894

Not occupied

Recovered by June Book No. PH 470 Year 1958
 new values

DESCRIPTION

HORIZONTAL CONTROL STATION

37 120 11
DIAGRAM San Jose
USGS QUAD NO. 457

1st Order

Triangulation

Electronic - Distance Traverse

Intersected Object

Station DUCKWALL USGS County Tuolumne State CA

Established by USGS Year 1945 Project H 248

Check one: New Station: Write full description below
 Recovery of Old Station: Recovered by USGS Year 1974 Project PH 470
PH 1716

Object	Bearing	Distance		AZIMUTH
		Feet	Meters	
COPPER USGS				217°13'56.7"
RM 1		14.73		315 05 14
RM 1 USGS		6.87		102 45 11
DUCKWALL USFS		6.81		193 40 20

Described in National Geodetic Survey description list 37 120 1, station 1006. All marks in good condition.

USGS 1956: Recovered as described. All marks in good condition. Direction to DUCKWALL USFS does not check NGS value within a limit of 3 minutes.

CDH 1972: For new description refer to CDH recovery.

USGS 1974: Recovered as described by NGS. All marks in good condition. RM's not measured. Station reached by helicopter. Occupied for horizontal scaling and vertical control only.

NGS Adjusted Coordinates

CALIFORNIA ZONE 3	ELEV 5831.3 FT
X= 2109891.30	± 2.4
Y= 535005.25	
MAPPING ANGLE=+0 14 0	QUAD 37 120 11

DUCKWALL USGS LAT 37 58 7.5360 LONG 120 7 7.6640

FILE COPY

JUL 7 1975

C465
See 371201 Station 1008

California (457)

Tuolumne County

GROVELAND

1927 N.A.D.

C. N. Mortenson, 1945

Books: H 247, H 248

Located about 1.0 mi. SE. of Groveland, near W. end of small top covered with pine and manzanita.

To reach from Groveland, go W. on hwy. for 0.4 mi., turn left onto oiled rd. and follow up hill (past a mine) for 1.1 mi. to top of ridge in saddle, turn left and go 0.15 mi., turn left onto fire rd. along ridge and go 0.9 mi. to station.

Station mark: Standard tablet stamped "GROVELAND 1945", set in granite rock projecting 3 in. above ground, and about 4 ft. E. of pine tree.

Reference mark No. 1: Copper nail and washer in 8 in. pine tree, 39.95 ft. from station mark in azimuth $241^{\circ}39'$.

Reference mark No. 2: Standard R.M. tablet stamped "NO 2", cemented in granite rock, 32.01 ft. from station mark in azimuth $336^{\circ}01'$.

Signal: Black and white cross targets in top of tree, 3.9 ft. from station mark in azimuth $105^{\circ}04'$.

V.A. Elevation: 3634 ft.

Latitude: $37^{\circ}49'28.772''$

Longitude: $120^{\circ}13'04.675''$

11/16/60 hd ← *ce*

FILE COPY

California (457) Tuolumne-Mariposa Counties SMITH PEAK L.O. (n)

1927 N.A.D.

C. N. Mortenson, 1945

Books: H 247, H 248

Located about 1.75 mi. (air line) SE. of Smith Station, on Hetch Hetchy RR., about 2.5 mi. S. of Tuolumne Ranger Station, at U. S. Forest Service lookout house on Smith Peak.

Station mark and Signal: Center of lookout house.

V.A. Elevation: 3877 ft.
(Ground at base of lookout house)

Latitude: $37^{\circ}48'02.74''$ Longitude: $120^{\circ}05'59.08''$

n = Not Occupied

FILE COPY

11/17/60 hd *LC*

SPINN (C&GS)

Tuolumne County

Calif. (457)

USC&GS, 1956

1927 N.A.D.

USGS, 1956 (Not occupied)

Books: PH 469-470

FILE COPY

Described by U. S. Coast and Geodetic Survey in ^{Quad.} 1956 37 1201,
~~Reconnaissance Notes~~ as follows:

Station 1021

"The station is on a small brush covered hill about 0.5 mi. W. of the main rd. to Early Intake. It is about 11.5 mi. airline E. of Groveland; 13.5 mi. airline NE. of Coulterville; 3.5 mi. SW. of Early Intake Powerhouse and 15 mi. airline SE. of Tuolumne.

"To reach from the Post Office in Groveland, go E. on State Highway 120 for 15.1 mi. to fork; take left fork, paved, and go 2.2 mi. to dirt rd. left; turn back sharp left and go 0.5 mi.; keep left on main rd. and go 0.25 mi. to fork; go left and go 0.05 mi.; turn left on old RR. grade and go 0.1 mi.; take right fork and go 0.2 mi.; turn right; up hill and go 0.1 mi. to summit of hill and station site.

"The station mark is 27 ft. SSW. of a boulder projecting 6 ft. The mark projects 1 ft. and the disk is stamped "SPINN 1956".

"Reference mark No. 1: Is about 1 ft. lower than station The mark projects 8 inches and the disk is stamped "SPINN NO 1 1956".

"Reference mark No. 2: Is 10 ft. NNW. of a 6 ft. boulder. The mark is flush and the disk is stamped "SPINN NO 2 1956".

"Duckwall lookout tower was cut in for ground azimuth.

CALIFORNIA ZONE 3

X=2,142,427.3

Y= 488,411.8

SEE LATER VALUES

*Elevation 3507.885 ft. (Spirit Leveling by C&GS)

*Latitude: 37°50'25.379"

*Longitude: 120°00'24.424"

*=Field values by C&GS

SEE LATER VALUES

FILE COPY

11/9/56 mk

THOMPSON PEAK L.O. Tuolumne County Calif.(457)

C. N. Mortenson; 1945 (Not occupied) 1927 N.A.D.(Prelim.)
L. B. Mansfield, 1956

Books: H247-248; PH 469-470

FILE COPY

Described 1953 in "SONORA AND MARIPOSA 30' QUADRANGLES"
multilith as follows:

"Located on Thompson Peak at U. S. Forest Service lookout
house.

"To reach from Summer Resort of Long Barn on State
Highway 108, take Forest Service Roads.

"Station mark and signal: Center of lookout house."

Note by L.B.M., 1956: Located about 17.0 mi. E. of
Sonora and 7.3 mi. SE. of Long Barn; at an abandoned L.O.
on Thompson Pk.

Station may be reached from Long Barn on State
Highway 108 by following rd. signs on forest service roads.

Station mark and signal: Center of L.O.H.

Reference mark No. 1: US DA Forest Service bronze tablet
stamped "THOMPSON PEAK LOOKOUT VA BM ELEV 5305 T2n, R17E, Sec.
26, 1937" cemented in top of concrete step on NE. corner of
L.O.H. and 1.2 ft. higher than ground, 11.83 ft. from station
mark in azimuth 221°25'.

Signal data:	Apex of L.O.	27.8 ft.
	Eaves of L.O.	22.9
	Floor of L.O.	14.9

Photo No. 1-99 GS VJM

CALIF. ZONE 3
X=2,124,482.
Y= 546,169.

Elevation 5293 ft.(Ground at
center of L.O.H.

Latitude: 37°59'57.28" Longitude: 120°04'04.82"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Bourland	223°43'27.	43°48'20."	54,990.
Woods Ridge L.O.	296 48 13.	116 51 55.	32,339.

FILE COPY

11/14/56 mk *V.S.W.*

FILE COPY

37 120 1

CALLIF. 457
37°45'
120°00'

<u>NAME</u>	<u>STATION</u>
✓ 856 + 2413 (HMWS)	1002
COIFAX	1005
DUCKWALL (USGS)	1006
DUCKWALL (USFS)	1006
✓ GARROTTE	1007
GROVELAND	1008
GROVELAND (USGS)	1008
HUNTER POINT (USFS)	1010
JAY	1011
KASABAUM	1012
✓ 509 + 8628 (HMWS)	1012
✓ LLOYD	1013
MOORE	1016
RAWLES	1018
SMITH PEAK	1020
SMITH PEAK LOOKOUT (USFS)	1020
SPINN	1021
SUGARLOAF	1022

WHITE BROWN



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JULY 1963
 U.S. DEPARTMENT OF COMMERCE
 COAST AND GEODETIC SURVEY
 WASHINGTON D. C.

JUL 1979

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 371201 STATION 1001,1001A
 CALITE 37°30' NO 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NJ 10-9 SAN JOSE

DESCRIPTION OF TRIANGULATION STATION

DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY STATION NO. 1001	STATE: California	COUNTY: Mono		
NAME OF STATION: 77 + 8164 (HHWS)	Year: 1956	Described by: J.E.J.		
CHIEF OF PARTY: H. E. Saylor	HEIGHT OF INSTRUMENT STATION GYS: 1.68 METERS	HEIGHT OF LIGHT MARK: REFERENCE MARKS AND FOUNDATION OBJECTS WHICH CAN BE SEEN FROM THE STATION		
NOTE: RISE OF HITCHCOCK ABOUT STATION BASE	DISTANCES AND DIRECTIONS TO ADJACENT MARKS AND FOUNDATION OBJECTS WHICH CAN BE SEEN FROM THE STATION			
MARK	OBJECT	BEARING	DISTANCE	DIRECTION
11A	MOCOCASIN (USFS) B. M. 2059 932 R.M. No. 1	23.18 7.06 116.05	35.372	00 00 00.0 131 12 26 232 36 02

Detailed description:
 The station is located on the large concrete anchor block of the penstock on the brow of the ridge overlooking Moccasin Power House. It is about 1/2 mile east-north-east of Moccasin, 4 miles southwest of Groveland and 8 1/2 miles northwest of Coulterville.
 To reach station from the postoffice in Big Oak Flat, go west on State Highway 120 for 1.05 mile to Priest Station and junction. Take middle road toward Moccasin and go about 100 feet, go left, uphill and go 0.9 mile to fork, take left fork and go 0.2 mile, on south side of penstock to fork, take right fork and go 0.2 mile to top of bare hill and concrete anchor for penstock. The station is a City of San Francisco Hatch Hetchy Water Dept. Mark set flush in top of penstock, stamped 77 + 8164.

R. M. No. 1 is 1 foot north of television antenna and 2x.6 five south of road to penstock. The disk is stamped 77 + 8164, NO 1 1956 and is set flush.
 B. M. 2059 932 was used in lieu of R.M. No. 2. It is a City of San Francisco Hatch Hetchy Water Dept. Mark and is set flush in top of Concrete Penstock Anchor. It is stamped B M BMSV 2059 932.
 No Azimuth Mark was set at this station. MOCOCASIN USFS may be used for an azimuth.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: 77 + 8164 HHWS	LOCALITY: Hetch Hetchy To Mono Lake	YEAR: 1956
STATE: California	SOURCE: G-11404	
Second-order Triangulation		
FIELD SKETCH: CALIF 427		
MARK	COORDINATES (F+M)	PLANE AZIMUTH
STATE: CALIF	N 2,061,502.59	E 478,342.84
ZONE: 3	Y	+ 0 07 49
CODE: 0403		
STATE: CALIF		
ZONE: 3		
CODE: 0403		

POSITION	GEODETIC DATA	SECONDS IN METERS	ELEVATION
LATITUDE: 37°48'14.847	LATITUDE: 37°48'14.847	NORTH	628.60 METERS
LONGITUDE: 120°17'13.555	LONGITUDE: 120°17'13.555	WEST	2,062.3 METERS
TO STATION		GEODETIC AZIMUTH (From mark)	DISTANCE
		75°09'11.1	
		LOCALITY (From mark)	

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: BENCH MARK 2059 932 HHWS	LOCALITY: Hetch Hetchy to Mono Lake	YEAR: 1956
STATE: California	SOURCE: G-11404	
Second-order Traverse		
(No check on this position)		
FIELD SKETCH: CALIF 427		
MARK	COORDINATES (F+M)	PLANE AZIMUTH
STATE: CALIF	N 2,061,512.82	E 479,363.59
ZONE: 0403	Y	+ 0 07 49
CODE: 0403		
STATE: CALIF		
ZONE: 3		
CODE: 0403		

POSITION	GEODETIC DATA	SECONDS IN METERS	ELEVATION
LATITUDE: 37°48'14.952	LATITUDE: 37°48'14.952	NORTH	628.60 METERS
LONGITUDE: 120°17'13.427	LONGITUDE: 120°17'13.427	WEST	2,062.3 METERS
TO STATION		GEODETIC AZIMUTH (From mark)	DISTANCE

Computed from station 77+8164 (HHWS)

* Refer to notes for remarks of observations and such modifications of triangulation.
 † To compare under study, when not requirements for leveling in being done.

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 U. S. DEPARTMENT OF COMMERCE
 COAST AND GEODETIC SURVEY
 WASHINGTON D. C.

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 371201 STATION 1002
 CALIF
 LATITUDE 37°30' TO 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NJ 10-9 SAN JOSE

CALIFORNIA

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: 856 + 2413 HWS YEAR: 1956
 STATE: California LOCALITY: Hetch Hetchy To Mono Lake
 Second-order Triangulation SOURCE: G-11404 FIELD-SKETCH: Calif 427

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: 856 + 2413 (BRAS) STATE: California COUNTY: Tuolumne
 CHIEF OF PARTY: H. E. Syjar YEAR: 1956 DESCRIBED BY: J. E. J.

NOTE: BEARS OF TELESCOPE ABOVE STATION MARK 1.48 METERS. HEIGHT OF LIGHT ABOVE STATION MARK METERS.
 SURFACE-STATION MARK DISTANCE AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE CHANGING AT THE STATION

OBJECT	DISTANCE		DIRECTION
	feet	meters	
FENON-BLANCO			
R. M. No. 2	34.53	10.525	00 00 00.0
R. M. No. 1	26.05	7.942	29 41 34 -
Williams Pk. L. O.			257 54 40 -
			330 58 33.8 -

The station is on the summit of a brush covered hill, on the Hetch Hetchy right of way. It is about 4 miles airline east of Meccasin, 1 1/2 miles airline south-southwest of Groveland and 10 miles airline south of Tuolumne.

To reach from the postoffice in Groveland, go west on State Highway 120 for 0.5 mile to side road left, turn left and go 0.3 mile to fork, take right fork and go 0.7 mile to fork, take right fork and go 0.1 mile to fork, take right fork and go 0.7 mile to fork, take right fork and go 0.15 mile to summit of hill and station site. The station mark is a City of San Francisco Hetch Hetchy Water Dept. It is a punch mark on the cap on a 2 inch iron pipe set in concrete. It is 26.05 feet west of power line pole. The mark is stamped 856 + 2413 and projects 12 inches.

R. M. No. 1 is 1 foot south of power line pole. The mark is set flush and the disk is stamped 856 + 2413 NO 1 1956.

R. M. No. 2 is 12 feet southeast of center of power strip and is about 2 feet lower than station. The disk is stamped 856 + 2413 NO 2 1956.
 Station FENON-BLANCO may be used for an Azimuth Mark.

*Refer to notes to manuals of triangulation and state subdivisions of triangulation. (Distance-angle measured observations referred to called stations. (To prevent error only, when no triangulation leveling is being done. 30-5020-1 U. S. GOVERNMENT PRINTING OFFICE

GRID DATA	COORDINATES (P+41)	PLANE AZIMUTH θ (FORWARD ANGLE)	MARK
STATE: Calif	X=2,078,344.39		
ZONE: 3	Y=479,161.46	+ 0 09 58	
CODE: 0403			
STATE: ZONE: CODE:			
GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION
LATITUDE:	37°48'56"510	NORTH	1,036.7
LONGITUDE:	120 13 43.644	WEST	3,401
TO STATION		GEODETIC AZIMUTH (From center)	DISTANCE
FENON-BLANCO		16°43'59"1	METERS

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 COAST AND GEODETIC SURVEY
 WASHINGTON D. C.

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 371201 STATION 1005
 CALIF
 LATITUDE 37°30' TO 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NO. 10-9 SAN JOSE

CALIFORNIA

451

DESCRIPTION OF TRIANGULATION STATION

DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY
 NAME OF STATION: COLPAX STATE: California COUNTY: Tuolumne
 Year: 1956
 Chief of Party: H. R. Saylor
 Described by: H. J. W.

MARK	HIGH OR TALLEST POINT	DISTANCES AND DIRECTIONS TO ADJUTANT MARKS, REFERENCE MARKS AND PRODUCE OBJECTS WHICH CAN BE SEEN FROM THE STATION	HEIGHT OF LIGHT ABOVE STATION MARK	HEIGHT OF LIGHT ABOVE STATION MARK	MARKS
1A	CONCRETE DISK 12 INCHES DIAMETER				
1B	CONCRETE DISK 12 INCHES DIAMETER				
1C	CONCRETE DISK 12 INCHES DIAMETER				
1D	CONCRETE DISK 12 INCHES DIAMETER				
1E	CONCRETE DISK 12 INCHES DIAMETER				
1F	CONCRETE DISK 12 INCHES DIAMETER				
1G	CONCRETE DISK 12 INCHES DIAMETER				
1H	CONCRETE DISK 12 INCHES DIAMETER				
1I	CONCRETE DISK 12 INCHES DIAMETER				
1J	CONCRETE DISK 12 INCHES DIAMETER				
1K	CONCRETE DISK 12 INCHES DIAMETER				
1L	CONCRETE DISK 12 INCHES DIAMETER				
1M	CONCRETE DISK 12 INCHES DIAMETER				
1N	CONCRETE DISK 12 INCHES DIAMETER				
1O	CONCRETE DISK 12 INCHES DIAMETER				
1P	CONCRETE DISK 12 INCHES DIAMETER				
1Q	CONCRETE DISK 12 INCHES DIAMETER				
1R	CONCRETE DISK 12 INCHES DIAMETER				
1S	CONCRETE DISK 12 INCHES DIAMETER				
1T	CONCRETE DISK 12 INCHES DIAMETER				
1U	CONCRETE DISK 12 INCHES DIAMETER				
1V	CONCRETE DISK 12 INCHES DIAMETER				
1W	CONCRETE DISK 12 INCHES DIAMETER				
1X	CONCRETE DISK 12 INCHES DIAMETER				
1Y	CONCRETE DISK 12 INCHES DIAMETER				
1Z	CONCRETE DISK 12 INCHES DIAMETER				

The station is located 12 miles northeast of Coulterville, 11 miles east of Groveland, 1/4 mile north of Colfax Spring, on the summit of a partially timbered hill just north of State Highway 120.
 To reach the station from the post office in Groveland go west on State Highway 120 for 13.2 miles, turn sharp left on an old railroad grade for 200 feet, turn sharp right through an opening in fence line and go uphill on track road for 0.1 mile to the summit and station.
 Station mark, a standard disk stamped COLPAX 1956, is 8.0 feet north of the crest of ridge and 7.5 feet southwest of a triangle base on a large oak tree. The monument projects 1/2 inches.
 Reference mark No. 1, a standard disk stamped COLPAX NO 1 1956 cemented in a drilled hole in a boulder, is on the north slope of the ridge and 1/4 foot lower in elevation than the station mark. The boulder projects 12 inches.
 Reference mark No. 2, a standard disk stamped COLPAX NO 2 1956 cemented in a drilled hole in a boulder, is on the southwest edge of hill and 2.5 feet lower in elevation than the station mark. The boulder projects 12 inches.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: COLPAX LOCALITY: Hetch Hetchy To Mono Lake
 STATE: California SOURCE: G-11404
 Second-order Triangulation FIELD SKETCH: CALIF 427
 YEAR: 1956

GRID DATA	COORDINATES (FEET)	PLANE AZIMUTH FROM ADJ. MARK	MARK
STATE: CALIF	X: 2,137,294.15	+ 0 17 28	
ZONE: 3	Y: 482,288.61		
CODE: 0403			
STATE: 3			
ZONE: 7			
CODE: 0403			
GEODETIC DATA	POSITION	SECOND IN METERS	ELEVATION METERS
LATITUDE: 37°49'25"103	NORTH	968.77	968.77
LONGITUDE: 120°01'28.803	WEST	3,178.4	3,178.4
TO STATION	POSITION	GEODETIC AZIMUTH (From center)	LOCANITHM (Meters)
JAY		96°17'45"7	

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* Refer to manual for methods of triangulation and other publications of the Department of Commerce, Coast and Geodetic Survey, Washington, D. C.



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 COAST AND GEODETIC SURVEY
 WASHINGTON D. C.
 JUL 1979

HORIZONTAL CONTROL DATA
 by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

CALIFORNIA 457
 STATE COORDINATE SYSTEM
 CALIFORNIA ZONE 3
 LATTITUDE 37°30' TO 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NO 10-9 SAN JOSE

FILE COPY

DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY
 NAME OF STATION: DUCKWALL (USGS) STATE: California COUNTY: Tuolumne
 YEAR: 1956
 DESCRIBED BY: F.T.L.
 NAME OF PHOTO: N. E. Saylor
 CHIEF OF PARTY: N. E. Saylor
 HEIGHT OF TELESCOPE ABOVE STATION MARK: 1.36 METERS
 DISTANCES AND DIRECTIONS TO ADJUTANT MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION
 BEARING DISTANCE BEARING DISTANCE BEARING DISTANCE
 HOG MTN 6.87 NW 2.09 00° 00' 00.0"
 USGS BM No. 1 14.75 SE 4.496 37 22 19
 R. M. No. 1 6.80 N 2.073 249 38 11
 USFS BM N 2.073 128 42

The station is on a high prominent mountain that is known as Duckwall Mountain, that has been burnt off except for some timber on the summit. There is a forest beyond Lookout Tower at the station site. It is about 6 1/2 miles airline northeast of Groves-1 and 1 1/2 miles east of Sonora.
 To reach from main intersection in Sonora, go east on State Highway 108 for 2.7 miles, take right fork toward Tuolumne and go 7.6 miles, passing through north edge of Tuolumne, turn left and go 0.3 mile to junction of 3 roads, take center fork toward Basin Creek and go 2.7 miles, take right fork and cross N. Fork Tuolumne River and go 2.9 miles, keep right fork and go 0.4 miles, keep left fork and go 6.5 miles, keep left and follow MTS for 1.3 miles, keep left fork and go 3.0 miles, take left fork as per sign "Duckwall Lookout" and go 0.4 miles, take left fork and go 3.3 miles, turn back sharp left and go 0.6 miles, take left fork and go 1.3 miles to lookout tower and station site at summit of mountain.
 The station mark is a USGS BM stamped DUCKWALL 1945. It is set in a boulder near the center of the lookout and projects 2 inches.
 R. M. No. 1 is a standard reference mark set in a drill hole in the northeast leg of the lookout tower. The disk is stamped DUCKWALL NO 1 1956.
 USGS BM 1 is set in a concrete monument about 18 inches square. The mark projects 6 inches and the disk is stamped BM 1.
 USFS BM is set in a concrete block 18 inches square. The disk is stamped V.A.B.H. KEY. 5837 DUCKWALL T. 1 B 17 S. SEC. 4 1937.

NAME OF STATION: DUCKWALL (USGS)
 ESTABLISHED BY: N. E. Saylor YEAR: 1956 STATE: California BENCHMARK ALSO
 RECOVERED BY: R. M. Bishop YEAR: 1972 COUNTY: Tuolumne
 AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN: 6.5 miles east of Tuolumne
 HEIGHT OF TELESCOPE ABOVE STATION MARK: 5.12 FEET HEIGHT OF LIGHT ABOVE STATION MARK: FEET
 DISTANCES AND DIRECTIONS TO ADJUTANT MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

OBJECT	BEARING	FEET	METERS	DIRECTION:
HOG MTN, 1956 (VG)	N	6.845	2.087	0 00 00.0
RM 1 (USGS)	NW	14.75	4.496	37 22 19
Mc. Elizabeth lookout tower	N	6.80	2.073	249 38 11
USFS VABM	SE	2.073	0.631	128 42
RM 1 USC & GS	SE	14.75	4.495	249 38 11

ADJUSTED HORIZONTAL CONTROL DATA
 ADJUSTMENT BY NGS
 NAME OF STATION: DUCKWALL USGS
 STATE: CALIFORNIA LOCALITY: Hetch Hetchy To Mono Lake
 YEAR: 1956
 FIRST ORDER TRIANGULATION SOURCE: G-11404
 FIELD MECH: CALIF 427, 430
 YEAR: 1956
 FEB 7 1981

GRID DATA	COORDINATES (FEET)	PLANE AZIMUTH (FROM MONO)	MARK
STATE: CALIF	2,109,891.31	+ 0 14 00	
ZONE: 3	535,005.24		
CODE: 0403			

ADJUSTED HORIZONTAL CONTROL DATA
 ADJUSTMENT BY NGS
 NAME OF STATION: DUCKWALL USGS
 STATE: CALIFORNIA LOCALITY: Hetch Hetchy To Mono Lake
 YEAR: 1956
 FIRST ORDER TRIANGULATION SOURCE: G-11404
 FIELD MECH: CALIF 427, 430
 YEAR: 1956
 FEB 7 1981

DESCRIPTIVE DATA	POSITION	SECOND IN METERS	ELEVATION METERS
HOG MTN	LATITUDE: 37°58'07.4536 LONGITUDE: 120°07'07.664	NORTH: 1,777.6 WEST: 5,832	1,777.6 METERS 5,832 FEET
	TO STATION	65°26'02.1"	

ADJUSTED HORIZONTAL CONTROL DATA
 ADJUSTMENT BY NGS
 NAME OF STATION: DUCKWALL USGS
 STATE: CALIFORNIA LOCALITY: Hetch Hetchy To Mono Lake
 YEAR: 1956
 FIRST ORDER TRIANGULATION SOURCE: G-11404
 FIELD MECH: CALIF 427, 430
 YEAR: 1956
 FEB 7 1981

DESCRIPTIVE DATA	POSITION	SECOND IN METERS	ELEVATION METERS
HOG MTN	LATITUDE: 37°58'07.4536 LONGITUDE: 120°07'07.664	NORTH: 1,777.6 WEST: 5,832	1,777.6 METERS 5,832 FEET
	TO STATION	65°26'02.1"	

ADJUSTED HORIZONTAL CONTROL DATA
 ADJUSTMENT BY NGS
 NAME OF STATION: DUCKWALL USGS
 STATE: CALIFORNIA LOCALITY: Hetch Hetchy To Mono Lake
 YEAR: 1956
 FIRST ORDER TRIANGULATION SOURCE: G-11404
 FIELD MECH: CALIF 427, 430
 YEAR: 1956
 FEB 7 1981

DESCRIPTIVE DATA	POSITION	SECOND IN METERS	ELEVATION METERS
HOG MTN	LATITUDE: 37°58'07.4536 LONGITUDE: 120°07'07.664	NORTH: 1,777.6 WEST: 5,832	1,777.6 METERS 5,832 FEET
	TO STATION	65°26'02.1"	

(CONTINUED ON NEXT PAGE)

THESE DATA OBTAINED FROM ADJUSTMENT OF AUG 1977

QUAD 371201 STATION 1006
 LATITUDE ° ' TO ° ' ;
 LONGITUDE ° ' TO ° ' ;
 DIAGRAM

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HORIZONTAL CONTROL DATA
 by the
 NATIONAL GEODETIC SURVEY
 NORTH AMERICAN 1927 DATUM

U.S. DEPARTMENT OF COMMERCE
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 NATIONAL OCEAN SURVEY

DUCKWALL (USGS) (continued)

To reach from Tuolumne City Post Office in Tuolumne County, go east on Fir Street one block to Carter Street, then left on Carter Street for 0.2 mile to a northeast bend in Carter Street, continue on Carter Street for 0.4 mile to Buchanan Road, go northeast on Buchanan Road from junction with Tuolumne Confidence Road 2.7 miles to Hunter Creek Road, continue straight ahead on Basin Creek Road for 2.3 miles to a bridge, cross bridge and continue 5.7 miles to a road right (2 Dog Pass Road), continue straight ahead for 3.7 miles to a logging road right, turn right and go 1.3 miles to a road right, go straight ahead 100 feet and cross Thirteen Mile Creek, then go left 0.5 mile to a road fork at crest of hill, take right fork and go 0.7 mile to a junction of several roads, take right road and go 0.5 mile to a road fork and sign "Duckwall L.O. 1 mi", take right fork and go 0.4 mile to a USGS bench mark GWM 56 set in 6 inch by 8 inch concrete monument which is 9 inches above original ground and 12 feet left of road centerline, proceed straight ahead for 0.5 mile to a*locked chain barrier, go thru barrier and continue for 0.7 mile to top of hill and station.

* Key can be obtained from USFS Ranger Station in Mi-Muk Village.
 The station mark is a USGS BM stamped DUCKWALL 1945. It is set in a boulder near the center of the lookout and projects 2 inches.

RM 1 USC & GS is a standard reference mark set in a drill hole in the southeast leg of the lookout tower. The disk is stamped DUCKWALL USGS NO 1 1956.

RM 1 USGS is set in a concrete monument about 17 inches square. The mark projects 6 inches and the disk is stamped NO 1 DUCKWALL.

USFS BM is set in a concrete block 17 inches square. The disk is stamped V.A.B.M. ELEV. 5837 DUCKWALL T.I.N. R.17E. SEC. 4 1937.

* Name of chief of party should be inserted here. The person who actually visited the station should sign the name at the end of the recovery date.

FORM CGS-528a (12-68)

U.S. DEPARTMENT OF COMMERCE
 COAST AND GEODETIC SURVEY

JUL 1979
 U.S. DEPARTMENT OF COMMERCE
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 NATIONAL OCEAN SURVEY • NATIONAL GEODETIC SURVEY

HORIZONTAL CONTROL DATA

By the
 National Ocean Survey
 NORTH AMERICAN 1977 DATUM

CALIFORNIA
 QUAD 371201 STATION 1006 B
 CALIF LATTITUDE 37° 30' 70" 38° 00'
 LONGITUDE 120° 00' 10" 120° 30'
 DIAGRAM NJ 10-9 SAN JOSE

DUCKWALL USGS BM 1 USGS (K.M.B., 1972, Tuolumne County, CA)
 BM 1 USGS is set in a concrete monument about 17 inches square. The mark projects 6 inches and the disk is stamped NO 1 DUCKWALL.

ADJUSTED HORIZONTAL CONTROL DATA

ADJUSTMENT BY NGS

NAME OF SECTION: DUCKWALL USGS BM 1 USGS OBS BY CADM
 STATE: CALIFORNIA YEAR: 1972 SECOND

SOURCE: G-15967

GEODETIC LATITUDE: 37 58 07.55071 ELEVATION: 1777.2 METERS
 GEODETIC LONGITUDE: 120 07 07.74707 5831 FEET

STATE & ZONE	CODE	STATE COORDINATES (Feet)		E (cm Δ) or ANGLE °
		X	Y	
CA 3	0403	2,109,884.64	535,006.70	+ 0 14 00

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

TO STATION OR OBJECT	HDC MOUNTAIN	GEODETIC AZIMUTH (From mark)		PLANE AZIMUTH (From mark)		CODE
		°	'	°	'	
		65	25 50.5	65	11 50	0403

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U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY • NATIONAL GEODETIC SURVEY

HORIZONTAL CONTROL DATA

by the
National Ocean Survey
NORTH AMERICAN 1927 DATUM

CALIFORNIA

451

QUAD 371201 STATION 1006 C
CALIF
LATITUDE 37° 30' TO 38° 00'
LONGITUDE 120° 00' TO 120° 30'
DIAGRAM NJ 10-9 SAN JOSE

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ADJUSTED HORIZONTAL CONTROL DATA
ADJUSTMENT BY NGS

NO TEXT

NAME OF STATION: DUCKWALL LOT OBS BY CADM
STATE: CALIFORNIA YEAR: 1972 THIRD ORDER

SOURCE: G-15987
NO OBSERVATION CHECK ON THIS POSITION

GEODETTIC LATITUDE: 37 58 07.54260 METERS
GEODETTIC LONGITUDE: 120 07 07.65755 FEET
ELEVATION:

STATE COORDINATES (FMT)			
STATE & ZONE	CODE	X	Y
CA 3	0403	2,109,691.81	535,005.91

* PLANE AZIMUTH HAS BEEN COMPUTED BY THE $\rho \cos \Delta \theta$ FORMULA FOLLOWING THE SECOND TERM.

TO STATION OR OBJECT	GEODETTIC AZIMUTH (From mark)	PLANE AZIMUTH* (From mark)	CODE

THESE DATA OBTAINED FROM ADJUSTMENT OF AUG 1977

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 COAST AND GEODETIC SURVEY
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HORIZONTAL CONTROL DATA

by the
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 NORTH AMERICAN 1927 DATUM

CALIFORNIA 457
 QUAD 371201 STATION 1007
 CALIF
 LATITUDE 37°30' TO 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NO 10-9 SAN JOSE

DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY
 DIST. MAP 328

NAME OF STATION: GARROTTES STATE: California COUNTY: Tuolumne

YEAR: 1956

Checked by: P. J. L.

CHIEF OF PARTY: M. E. SYLAR
 NUMBER OF TRIANGULATION STATION MARKS: 1,39
 NUMBER OF LIGHT BATTERY MARKS: 1
 NUMBER OF SIGHT BATTERY MARKS: 1
 NUMBER OF ADJUTANT MARKS, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION: 1

MARK NO.	MARK DESCRIPTION	HEIGHT ABOVE STATION MARK	DISTANCE	DIRECTION
11a	GROVELAND R. M. No. 2	35.68'	10.876'	00 00 00.0'
11b	KASABAD R. M. No. 1	29.60'	9.024'	00 00 00.0'

The station is on a small brush and timber covered hill about 100 yards north of the Hetch Hetchy power line. It is also ut 2 miles airplane southeast of Groveland, about 10 miles airplane south-southeast of Tuolumne, 7 1/2 miles airplane north of Ferrisville and about 6 miles airplane east of Lodi.

To reach from the post office in Groveland, go east on State Highway 120 for 3.1 miles to summit of grade and cross roads, go right on dirt road for 0.55 mile to top of hill and station will be on right.

The station mark is 7 feet north of pine tree with triangle base, 1/4 feet west of dirt road. The mark projects 6 inches and the disk is stamped GARROTTES 1956.

R. M. No. 1 is 25 feet west of pine tree with triangle base. The mark projects 2 inches and the disk is stamped GARROTTES NO 1 1956.

R. M. No. 2 is 6 feet southwest of pine tree and 12 feet west of dirt road. The mark is set flush and the disk is stamped GARROTTES NO 2 1956.

Another mark, belonging to the City of San Francisco Hetch Hetchy Water Dept. was cut in. It is a steel capped pipe set in a concrete monument that projects 6 inches. It is 1/4 feet west of dirt road. The mark is stamped 718 + 1064.

Station KASABAD was used as azimuth mark.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: GARROTTES LOCALITY: Hetch Hetchy To Mono Lake YEAR: 1956

STATE: California SOURCE: G-11404 FIELD SKETCH: G811F 427

GRID DATA	COORDINATES (FEET)	PLANE ANGLE	MARK
STATE: G811F	X 2,091,702.88	± 0 11 40	
ZONE: 3403	Y 4,821,144.34		
CODE: 0403			

DESCRIPTIVE DATA	POSITION	SECONDS IN METERS	ELEVATION METERS
LATITUDE: 37°49'25.586"	NORTH		1,073.21 METERS
LONGITUDE: 120 10 57.041"	WEST		3,521.0 FEET

TO STATION	GEODETIC AZIMUTH (FROM SOUTH)	LOCALITY (METERS)	DISTANCE METERS
GROVELAND	91°46'51.14"		

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* Markers in outline are examples of triangulation and were published in the Bulletin of the Coast and Geodetic Survey, U.S. Department of Commerce, Washington, D.C., 1956.

† The permanent marker only, unless the triangulation is being done.

‡ The number in parentheses is the number of the station in the series.

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COAST AND GEODETIC SURVEY
WASHINGTON D. C.

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

CALIFORNIA

QUAD 371201 STATION 1008.1008A
CALIF
LATITUDE 37°30' TO 38°00'
LONGITUDE 120°00' TO 120°30'
DIAGRAM NJ 10-9 SAN JOSE

FILE COPY

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: GROVELAND STATE: California COUNTY: Tuolumne

CHIEF OF PARTY: H. E. Saylor Year: 1956 Described by: J. S. Johnson

NOTE: HEIGHT OF TELESCOPE ABOVE STATION MARK 23.509 METERS; HEIGHT OF LIGHT ABOVE STATION MARK METERS.
1a Surface-station mark, DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS, AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

OBJECT	BEARING	DISTANCE		DIRECTION
		feet	meters	
PENON BLANCO	WNW	43.56	13.278	0 00 00.0
GROVELAND USGS	ESS	52.22	15.918	84 14 42.6
Reference Mark NO. 1	SE	77.44	23.502	265 53 29.
Reference Mark NO. 2				317 02 13.

The station is on the highest point of timber and brush covered hill about 1.0 mile SSE of Groveland 14 miles SE of Sonora, 4 1/2 miles WNW of Moccasin, and 8 miles WNW of Conterville.

To reach from the Post Office in Groveland, go west on State Highway 120 for 0.5 mile to a reverse "Y" from the left, turn sharp left and go 0.4 mile to a fork, take right fork and go 0.7 mile to a WNW road right on a curve, keep left and go 0.1 mile to the top of a hill and a dirt track road to the left, turn left and go .05 mile to a fork, take left fork and go 0.85 mile along the top of a ridge to the highest point and Reference Mark NO. 2 on the right side of the road. The station mark is 77 1/2 feet north of the dirt track road, 31 1/2

feet west of a dirt track road, it is a standard disk stamped GROVELAND 1956 and it is set flush with the ground.

Reference Mark NO. 1 is 6 feet of a track fire road, and 2 feet south of twin pine trees. It is standard disk stamped GROVELAND NO. 1 1956 and it is set flush with the ground surface.

Reference Mark NO. 2 is 6 feet south of a track fire road. It is a standard disk stamped GROVELAND NO. 2 1956 and it is set flush with the ground surface.

There is no Azimuth Mark to the station. A connection was made to a USGS mark. The station disk was gone but a tie was made to the center of the drill hole.

* Refer to notes for remarks of triangulation and also publications of triangulation. (Distances-angles measured clockwise, referred to initial meridian. (To measure interior angle, when the instrument is leveling in being taken.) U. S. Government Printing Office

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: GROVELAND YEAR: 1956

STATE: California LOCALITY: Hetch Hetchy To Mono Lake

First -ORDER Triangulation source: G-11404 FIELD SKETCH: Calif 427

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ (OR ANGLE)	MARK
STATE: Calif	x 2,081,502.67		
ZONE: 3	y 482,426.83	+0 10 22	
CODE: 0403			
STATE: Calif			
ZONE: 3			
CODE: 0403			
GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION METERS FEET
	LATITUDE: 37°49'28".702	NORTH	1,107.8
	LONGITUDE: 120 13 04.162	WEST	3,635
TO STATION	GEODETIC AZIMUTH (From center)	LOGARITHM (Meters)	DISTANCE METERS
PENON BLANCO	20°05'40".9		

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: GROVELAND USGS YEAR: 1956

STATE: California LOCALITY: Hetch Hetchy to Mono Lake

First -ORDER Traverse source: G-11404 FIELD SKETCH: CALIF 427
(No check on this position)

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ (OR ANGLE)	MARK
STATE: Calif	x 2,081,460.44		
ZONE: 3	y 482,437.52	+ 0 10 22	
CODE: 0403			
STATE: Calif			
ZONE: 3			
CODE: 0403			
GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION METERS FEET
	LATITUDE: 37°49'28".809	NORTH	
	LONGITUDE: 120 13 04.688	WEST	
TO STATION	GEODETIC AZIMUTH (From center)	LOGARITHM (Meters)	DISTANCE METERS
Computed from station GROVELAND			

DECEMBER 1973
 U.S. DEPARTMENT OF COMMERCE
 ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
 COAST AND GEODETIC SURVEY
 JUL 1979

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 371201 STATION 1009 B
 CALIF 37°30' 10" 38°00'
 LATITUDE 120°00' 10" 120°30'
 LONGITUDE 10-9 SAN JOSE
 DIAGRAM NO 10-9

U.S. DEPARTMENT OF COMMERCE
 COAST AND GEODETIC SURVEY
 DESCRIPTION OF TRIANGULATION STATION 371201-1009

NAME OF STATION: HOG MTN 2 STATE: California COUNTY: Tuolumne
 CHIEF OF PARTY: L. F. Smith YEAR: 1971 DESCRIBED BY: L.A.C.

NOTE	HEIGHT OF TELESCOPE ABOVE STATION MARK	1 METERS, HEIGHT OF LIGHT ABOVE STATION MARK	METERS
12A	MOCASSIN (USFS) 1956	SSW	22.13
RM 3		NNW	25.72
12A	RM 1	NNW	59.68
	HOG MTN 1956		

The station is located near the top of Hog Mountain, a promontory brush and tree covered hill about 6-1/2 miles south of Sonora, 6 miles southeast of Jamestown and 3 miles north-northeast of Jackson-ville and is in the NW 1/4 of Sec. 5, T 1 S, R 15 E and on property owned by Mr. George G. Trout, P. O. Box 256, Sonora, California.

To reach the station from the center of Jamestown go south-southeast on Seco Street 1.0 mile to an intersection. Turn left onto the Stent Outcrop Road and go south-southeast 1.2 miles to a fork. Take the left fork and go southeast on Algerine Road 3/4 mile to a side road on the right. Turn right onto Twist Road and go south 0.35 mile to a side road on the left. Turn left and go southeast on a paved road 0.5 mile to a fork. Take the right fork and go south on a paved road 0.5 mile to a locked gate. Pass through the gate and go south 0.1 mile to a side road on the right. Turn right onto a graded road and go south 0.5 mile to the highest point of the hill and the station.

The station mark is a C&GS triangulation station disk stamped "HOG MTN 2 1971" set in a 12-inch block of concrete in a depression hollowed in bedrock 1.5 feet below the surface of the ground and is about 60 feet south-southeast of and about 8 feet lower than the highest point of the hill, 24.6 feet east of a 17-inch digger pine tree and 15 feet southwest of the centerline of a graded road on the outside of a curve.

Reference mark 1 is a C&GS reference mark disk stamped "HOG MTN NO 1 1956" cemented in a drill hole in outcropping bedrock projecting 0.3 foot above the ground and is 32 feet west of the centerline of the graded road, 15.0 feet north of a 7-1/2-inch digger pine tree and about 6 feet higher than the station mark.

Reference mark 3 is a C&GS reference mark disk stamped "HOG MTN 2 NO 3 1971" cemented in a drill hole in outcropping bedrock projecting 0.3 foot above the ground and is 10.7 feet east of a 14-inch live oak tree and about 1 foot lower than the station mark.

RECOVERY NOTE, TRIANGULATION STATION

371201-1009

NAME OF STATION: HOG MTN 2
 ESTABLISHED BY: L.F.S.
 RECOVERED BY: L.F. Smith
 YEAR: 1972
 STATE: California
 COUNTY: Tuolumne
 BEICH MARK ALSO
 YEAR: 1972
 COUNTY: Tuolumne
 BEICH MARK ALSO
 AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN: 3 miles NNE of Jacksonville
 HEIGHT OF TELESCOPE ABOVE STATION MARK: 4 FEET
 HEIGHT OF LIGHT ABOVE STATION MARK: FEET.

OBJECT	BEARING	DISTANCE		DIRECTION
		FEET	METERS	
MOCASSIN (USFS) 1956	SSW	22.13	6.745	00 00 00
RM 3	NNW	25.72	7.839	40 49 39
RM 1	NNW	59.68	18.192	42 42 45
HOG MTN 1956				180 00 04

RM 1 to RM 3: 35.59 ft. 10.847 m.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: HOG MOUNTAIN 2 OBS BY CADM
 STATE: CALIFORNIA YEAR: 1972 SECOND ORDER

BENCH MARK		ADJUSTED HORIZONTAL CONTROL DATA	
NO. OBSERVATION	CHECK ON THIS POSITION	ADJUSTED HORIZONTAL CONTROL DATA	ADJUSTMENT BY NGS
COORDINATE	120 21 11 74496	ADJUSTMENT BY NGS	
STATE COORDINATES (feet)			
STATE ZONE	CODE	N	V
CA 3	0403	2,042,349.43	503,731.89
			+ 0 05 23

TO STATION OR MARK	GEODETIC AZIMUTH (true north)	PLUMB AZIMUTH (true north)	CODE

THESE DATA OBTAINED FROM ADJUSTMENT OF AUG 1977

The station mark and reference marks 1 and 3 were recovered in good condition. The drill hole in which triangulation station HOG MTN 1956 had been set was found, a traverse connection between the two triangulation stations was made, the point was held and a 1-1/2-inch unstamped bronze disk was set in cement in the same exact position on this date, reestablishing station HOG MTN 1956. The distances and directions to reference marks 1 and 3 and to HOG MTN 1956 measured on this date agreed with the 1971 measurements. The 1971 description is adequate.

38 056

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 371201 STATION 1010
CALIF
LATITUDE 37°30' TO 38°00'
LONGITUDE 120°00' TO 120°30'
DIAGRAM NJ 10-9 SAN JOSE

CALIFORNIA

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: HUNTER POINT (USPS) STATE: California COUNTY: Tuolumne

CHIEF OF PARTY: N.E. Saylor YEAR: 1956

NOTE: HEIGHT OF TELESCOPE ABOVE STATION MARK 1.87 METERS; HUNTER POINT STATION MARK
Surface-station mark, DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS
Underground-station mark WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

OBJECT	BEARING	DISTANCE	DIRECTION
12c	SSE	39.97	000 00 00.00
	S	(3.0 mile)	62 47 50.
12c	SSW	24.13	88 15 02.95
		7.353	104 03 12.

The station is on the first prominent brush covered knob south of the timber on
jambone ridge and just north of Hunterpoint. It is about 10 1/2 miles airline S.E. of
Tuolumne, 8 1/2 miles airline ENE of Groveland, and 12 1/2 miles airline N.E. of Coulterville.
To reach from the Post Office in the town of Tuolumne, go north on Pine street for
0.2 mile to hard surfaced road (just north of the school house) turn right and go .05
mile to a three way fork, take left fork towards Basin Creek for 0.3 mile, take center
fork of three and go 2.5 miles to a fork, take right fork across creek and go .05
mile to a fork, take right fork across creek and go 0.4 miles to a fork,
take left fork and go 2.7 miles to a fork, take right fork across creek and go 0.4 miles to a fork,
take left fork and go 2.8 miles to a fork, take right fork and go 1.1 miles to the top
of a ridge and three forks of the road, take the right fork as per sign "HUNTER BEND"
and "COOPER SITE" and go 1.7 miles to a fork and sign "GRAPEVINE SPUR", take left fork
and go 1.8 miles to the end of truck trail. From here pack south down the top of ridge
for about 0.4 miles to station.

The station is on the highest point of knob which is bare and covered with
boulders. It is stamped HUNTER POINT V.A.B.M. ELEV. 3705 T.1.S. R. 17 E. Sec. 11 1937
U.S. Dept. of Agriculture Forest Service and it is set in a drill hole in a boulder.
Reference Mark NO. 1 is about 1 foot lower than the station and it is stamped
HUNTER POINT NO 1 1956 and it is set flush in a drill in a boulder which is about
2 feet high.

Reference Mark NO. 2 is about 6 feet lower than the station and it is stamped
HUNTER POINT NO 2 1956 and it is set flush in a drill hole in a boulder which projects
about 6 inches.

The Azimuth Mark is Station MOORE 1956 to reach see station description.

* Refer to notes for maximum of triangulation and state publications of triangulation. † Direction-angle measured clockwise, referred to local meridian.
† To measure more easily, when no trigonometric leveling is being done. 16-54887-1 U. S. GOVERNMENT PRINTING OFFICE

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: HUNTER POINT USFS YEAR: 1956
STATE: California LOCALITY: Hetch Hetchy To Mono Lake
Second -order Triangulation source: G-11404 FIELD SKETCH: Calif 427

GRID DATA	COORDINATES (FATH)	PLANE AZIMUTH θ FOR ANGLE	MARK
STATE: Calif	x 2,121,671.89	2° 32'23"	AZIMUTH MARK MOORE
ZONE: 3	y 499,403.47	+0 15 29	
CODE: 0403			
STATE: 3			
ZONE: 7			
CODE:			
GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION METERS
LATITUDE: 37°52'15.054	NORTH		1,128.8
LONGITUDE: 120 04 42.551	WEST		3,703
TO STATION	GEODETIC AZIMUTH (From zero)	LOCALITY (Name)	DISTANCE METERS
AZIMUTH MARK MOORE	SECOND-ORDER 2 47 51.77	3.676 9493	4,752.80

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JULY 1963
 PUBLISHED AND PRINTED BY:
 U. S. DEPARTMENT OF COMMERCE
 COAST AND GEODETIC SURVEY
 WASHINGTON D. C.

HORIZONTAL CONTROL DATA
 by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

CALIFORNIA 457
 QUAD 371201 STATION 1011
 CALIF LATTITUDE 37°30' TO 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NO 10-9 SAN JOSE

DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY
 DESCRIPTION OF TRIANGULATION STATION

NAME OF PARTY: JAY STATE: California COUNTY: Tuolumne

YEAR: 1956
 DISTANCE FROM STATION: 1.72 METERS
 HEIGHT OF LIGHT ABOVE STATION: METERS

POINT	HEIGHT OF TELESCOPE ABOVE STATION	DISTANCE AND DIRECTION TO ADJUTANT MARK, REFERENCE MARK AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE STATION	HEIGHT OF LIGHT ABOVE STATION	METERS
1a	1.72			
11a		HUNTER POINT (USPS)		
11a		Reference Mark NO. 1	22.11'	6.728'
11a		Reference Mark NO. 2	30.66'	9.348'
11a		Asimuth Mark (Station SMITH PK)	(3.0 MI @)	

The station is on the N.W. end of a timber and brush covered ridge, about 9 miles airline E. of Groveland, 13 1/2 miles airline S.E. of Tuolumne, 6 miles airline S.W. of Karyl Inlake and 11 miles airline N.E. of Coulterville.
 To reach from the Post Office in Groveland, go east on State Highway 120 for 11.35 miles to a track road across a cattle guard 0.1 mile to a fork, take left for 1.0 mile uphill to the top of ridge and three forks of the road, take extreme right fork and go uphill for 0.3 mile to top of ridge and a "Y" road, turn sharp left and go 0.2 mile to highest point of ridge and station on the left.
 The station is 7 1/2 feet east southeast of a triangular blazed tree, about 12 feet west of track road. It is a standard disk and it is stamped JAY 1956 and it is set flush with the ground surface.

Reference Mark NO. 1 is 8 feet east of a track road, and about 2 feet lower than the station. It is a standard disk and it is stamped JAY NO 1 1956 and it is flush with the ground surface.
 Reference Mark NO. 2 is 12 feet west of the center of track road and on the same elevation as the station. It is a standard disk stamped JAY NO 2 1956 and it is set flush with the ground surface.
 The distance between Reference Mark NO. 1 and Reference Mark NO. 2 is 39.8 feet.
 The Asimuth Mark is Station SMITH PK. To reach see station description.

* Refer to notes by number of triangulation and date publications of triangulation.
 † Distances are measured directly, referred to listed station.
 ‡ The number under only when an explanation is needed in being shown.
 42-5000-1 6. A. S. DEPARTMENT OF COMMERCE

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: JAY YEAR: 1956

STATE: California LOCALITY: Hetch Hetchy To Mono Lake

Second-order Triangulation SOURCE: G-11404 FIELD SURVEY: CALIF 427

GRID DATA	COORDINATES (FT+M)	PLANE AZIMUTH # ON ADM ANGLE	MARK
STATE: CALIF	X 2,126,592.80	+ 0 16 06	
ZONE: 3	Y 483,414.30		
CODE: 0403			
STATE: CALIF	X		
ZONE: 3	Y		
CODE: 0403			

GEODETIC DATA	POSITION	GEODETIC AZIMUTH (From mark)	SECONDS IN METERS	ELEVATION METERS	LOGARITHM (METERS)	DISTANCE METERS
LATITUDE:	37°49'36.749"	NORTH		1,065.8		
LONGITUDE:	120°03'42.114"	WEST		3,497		

HUNTER POINT USPS 163°09'43.74"
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 COAST AND GEODETIC SURVEY
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HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

CALIFORNIA 457

QUAD 371201 STATION 1012, 1012A
 CALIF
 LATITUDE 37°30' TO 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NJ 10-9 SAN JOSE

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FEB 7 1981

DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY
 FORM NO. 104

NAME OF STATION: KASABAUM STATE: California COUNTY: Tuolumne

CHIEF OF PARTY: H. E. Syles YEAR: 1956

NOTE: HEIGHT OF TELESCOPE ABOVE STATION MARK 1.44 METERS; HEIGHT OF LIGHT ABOVE STATION MARK DESCRIBED BY: F. T. L.
 1a Surface-station mark, DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION METERS.
 7a Underground-station mark

OBJECT	BEARING	FEET	METERS	DIRECTION
LLOYD				
509 + 8628 (H.H.S.)	EZE	72.30	22.036	00 00 00.0
R.M. No. 1	EZE	19.41	5.917	179 02 54.5
R.M. No. 2	S	22.71	6.922	183 38 03
				277 20 08

The station is on the Hetch Hetchy power line on a small timber and brush covered hill. It is about 6 miles east of Groveland, 11 miles airline southeast of Tuolumne, 9 1/2 miles airline northeast of Coulterville and 8 1/2 miles airline west-southwest of Early Intake.

To reach from post office at Grove land, go east on State Highway 120 for 8.3 miles to fork as per sign "Jawbone Station 13.6 miles", take left fork and go 1.0 mile, turn right as per sign "Big Oak Flat Road 1.5" and go 0.5 mile, turn sharp left up ridge and go 0.1 mile to highest point and station site.
 The station is about 1 foot lower than highest point of hill, 19.4 feet west-south-west of power line pole No. 101A. The mark is set flush and the disk is stamped KASABAUM 1956.

R. M. No. 1 is 2 feet northwest of powerline pole 101A. The mark is set flush and the disk is stamped KASABAUM NO 1 1956.
 R. M. No. 2 is 29 feet south-southwest of power pole No. 101A and is on the summit of hill. The mark is set flush and the disk is stamped KASABAUM NO 2 1956.
 Another mark belonging to the City of San Francisco, Hetch Hetchy Water Dept., was cut in. It is 43 feet west of power line pole No. 1013. The mark is an iron pipe with cap set in a concrete monument that projects 16 inches. The mark is stamped 509 + 8628 Station LLOYD may be used for azimuth.

* Refer to notes in manuals of triangulation and state publications of triangulation.
 † Direction-angle measured clockwise, referred to initial meridian.
 ‡ Direction-angle bearing to bearing down.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: KASABAUM YEAR: 1956

STATE: California LOCALITY: Hetch Hetchy To Mono Lake FIELD SKETCH: Calif 427
 Second-order Triangulation source: G-11404

GRID DATA	COORDINATES (Foot)	PLANE AZIMUTH θ FOR Δφ ANGLE	MARK	POSITION		ELEVATION METERS FEET
				LATITUDE	LONGITUDE	
STATE: Calif ZONE: 3 CODE: 0403	X Y	2,112,411.27 7 484,865.36	+ 0 14 18	37°49'51".122	NORTH WEST	999.7 3,280
STATE: ZONE: CODE:	X Y					
GEODETIC DATA						
	TO STATION	GEODETIC AZIMUTH (From mark)		82°15'17".4		

LLOYD

NAME OF STATION: 509-8628 HHWS LOCALITY: Hetch Hetchy to Mono Lake YEAR: 1956

STATE: California SOURCE: G-11404 FIELD SKETCH: CALIF 427
 Second-order Traverse (No check on this position)

GRID DATA	COORDINATES (Foot)	PLANE AZIMUTH θ FOR Δφ ANGLE	MARK	POSITION		ELEVATION METERS FEET
				LATITUDE	LONGITUDE	
STATE: Calif ZONE: 3 CODE: 0403	X Y	2,112,482.70 7 484,816.58	+ 0 14 18	37°49'51".230	NORTH WEST	
STATE: ZONE: CODE:	X Y					
GEODETIC DATA						
	TO STATION	GEODETIC AZIMUTH (From mark)				

Computed from station KASABAUM

JULY 1963
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 U.S. DEPARTMENT OF COMMERCE
 COAST AND GEODETIC SURVEY
 WASHINGTON D. C.

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

CALIFORNIA 457
 QUAD 371201 STATION 1013
 CALIF
 LATITUDE 37°30' TO 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NO 10-9 SAN JOSE

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: LLOYD STATE: California COUNTY: Toulumne

CHIEF OF PARTY: H. E. Sytar YEAR: 1956 DESCRIBED BY: J. R. Johnson

MARK	HEIGHT OF LIGHT ABOVE STATION MARK	HEIGHT OF LIGHT ABOVE STATION MARK	MARK
11a	Reference mark NO. 1	ENE	000 00 00.00
11a	KASBAUM (Arithmetic mark)	R	170 07 29.96
11a	Reference mark NO. 2	SSW	177 50 12.56
			280 07 51.

The station is about 1 1/2 miles east-southeast of Groveland, and about 1/2 mile north of State Highway 120, and on the power line co. right-of-way. To reach from the Post Office in Groveland, go east on State Highway 120 for 4.3 miles to where the highway bends to the south and a dirt track road takes off to the left on the curve, turn left on dirt track and go 0.2 mile to a fork, take left fork and go about 100 feet to a power line crossing, continue across power line and go 0.5 mile to a second power line right-of-way and station. The station is 221/2 feet east northeast of a powerline pole no. 13/6, 6 feet north of center of right-of-way. It is a standard disk stamped LLOYD 1956 and it is set flush with the ground surface. Reference mark NO. 1 is 10 feet north of center of right-of-way, it is a standard disk stamped LLOYD NO 1 1956 and it is set flush with the ground surface. Reference mark NO. 2 is 16 feet south of center of right-of-way, it is a standard disk and it is stamped LLOYD NO 2 1956 and it projects 2 inches. The arithmetic mark used was Station KASBAUM to reach see station description.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: LLOYD LOCALITY: Hetch Hetchy To Mono Lake YEAR: 1956

STATE: California SOURCE: 0-11404 FIELD SKETCH: Calif 457

GRID DATA	COORDINATES (Feet)	PLANE ANGLE (RADIANS ANGLE)	MARK
STATE: CALIF	X 2,098,467.68	+ 0 12 31	
ZONE: 3	Y 482,849.75		
CODE: 0403			
STATE: CALIF	X		
ZONE: 3	Y		
CODE: 0403			

GEODETIC DATA	POSITION	GEODETIC AZIMUTH (From mark)	ELEVATION METERS
LATITUDE:	37°49' 32" 325	NORTH	947.85 METERS
LONGITUDE:	120°09' 32" 695	WEST	3,107.8 FEET
TO STATION		GEODETIC AZIMUTH (From mark)	DISTANCE METERS
		84°15' 18" 45	

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Refer to notes to manuals of triangulation and other publications of the National Bureau of Standards for information on the use of this data. The accuracy of the data is as indicated in the accompanying leveling in being shown.



JULY 1963
 U.S. DEPARTMENT OF COMMERCE
 ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
 COAST AND GEODETIC SURVEY
 REV: SEPT 1971

Coast and Geodetic Survey
 by the
 NORTH AMERICAN 1927 DATUM

QUAD 371201 STATION 1015
 CALIF 37°30' TO 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NJ 10-9 SAN JOSE

HORIZONTAL CONTROL DATA

MOCOCASIN (USGS) (Tulare County, Calif., N.E.S., 1956) ---

MOCOCASIN (USGS) 1956 is a USGS disk stamped "MOCOCASIN 1940" cemented in a drill hole in outcropping bedrock projecting 0.6 foot above the ground and 19.4917 feet southwest of the south metal gate post of a board gate, 25.0 feet west of a fence line and about the same elevation as the station mark.

ADJUSTED HORIZONTAL CONTROL DATA

YEAR: 1956

NAME OF STATION: MOCOCASIN USGS
 STATE: California LOCALITY: Hatch Hatchy to Mono Lake
 Second-order Triangulation source: 0-11404 FIELD WORK: CALIF 427

OHID DATA	COORDINATES (FEET)	PLANE ANGLE 8 FORM ANGLE	MARK
STATE: CALIF ZONE: 3 CODE: 0403	x 2,049,896.53 y 475,265.91	+ 0 06 21	
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION		ELEVATION METERS FEET
	LATITUDE: LONGITUDE:	NORTH WEST	
	37°48'18"662 120 19 38.260		898.7 2,948

TO STATION	GEODETIC AZIMUTH (FROM OHID)	DISTANCE METERS

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 COAST AND GEODETIC SURVEY
 WASHINGTON D. C.

HORIZONTAL CONTROL DATA

By the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 371201 STATION 1016
 CALIF 37°30' TO 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NJ 10-9 SAN JOSE

CALIFORNIA

DESCRIPTION OF TRIANGULATION STATION

DEPARTMENT OF COMMERCE
 U.S. COAST AND GEODETIC SURVEY
 27, Apr. 1963

NAME OF STATION: MOORE

STATE: California

COUNTY: Tuolumne

CHIEF OF PARTY: N.E. 571A.F. Year: 1956 Described by: J.C. Johnson

NOTE: RIGHT OF TELESCOPE ABOVE STATION MARK 1.72 METERS; RIGHT OF LIGHTBOLT STATION MARK METERS.
 SURFACE-STATION MARK, DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE STATION

No.	OBJECT	BEARING	DISTANCE		DIRECTION
			Feet	Meters	
11a	SMITH PK	SSW	(2.0 mile)	000	00 00.00
11a	Azimuth Mark (Station Smith Pk.)	SSW	33.83	10.310	08 32 31.
11a	Reference Mark No. 2	SE	30.99	9.1442	285 45 51.
7a	Reference Mark No. 1				

The station is on a brush covered hill just south of the Hatch Hetchy power line. About 8 miles air-line E of Groveland, 12 1/2 miles strike S.E. of Tuolumne, 10 miles air-line N.E. of Colkersville and 7 miles air-line S.W. of Earl's Intake. To reach from the Post Office in Groveland, go east on State Highway 120 for 11.25 mile to the Tuolumne County line, (0.15 mile east of the Big Oak Lodge) take a trail to the top of a ridge and junction of three track roads, continue straight ahead on left road of three for 1.5 mile to the base of a steep rounded hill and small forest service boundary sign on a white post, turn right off track road and go up hill for about 0.1 mile to top of hill and station. The station is about 250 feet SW of a power line pole NO. 8-20. It is a standard disk stamped MOORE 1956 and it is set flush with the ground surface. Reference Mark No. 1 is a standard disk stamped MOORE NO 1 1956 and it is set flush with the ground surface. Reference Mark No. 2 is a standard disk stamped MOORE NO 2 1956 and it is set flush with the ground surface. The Azimuth Mark used was station SMITH PK to reach see station Description.

* Refer to notes in manuals of triangulation and other publications of triangulation. (Direct-reading measured observations, referred to initial station. (To nearest meter only, unless an trigonometric leveling is being done.)

ADJUSTED HORIZONTAL CONTROL DATA

YEAR: 1956

NAME OF STATION: MOORE

STATE: California

LOCALITY: Hetch Hetchy To Mono Lake

Second -order Triangulation SOURCE: G-11404 FIELD SKETCH: Calif 427

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ (ON Azimuth)	MARK
STATE: Calif	X 2,120,981.00		
ZONE: 3	Y 483,826.76	+ 0 15 23	
CODE: 0403			
STATE: I			
ZONE: Y			
CODE:			
GEODETIC DATA	LATITUDE: LONGITUDE	POSITION 37°49'41.7081 120 04 52.037	ELEVATION 1,077.4 3,535
			METERS FEET
TO STATION	TO STATION	GEODETIC AZIMUTH (From mark)	DISTANCE LOGARITHM (Refer)
		28°32'23.8	

SMITH PEAK

FILE COPY
 1981
 FEB 9

FORM 344 (8-51-61)

UNCLASSIFIED

JULY 1963
 PUBLISHED AND PRINTED BY:
 U. S. DEPARTMENT OF COMMERCE
 COAST AND GEODETIC SURVEY
 WASHINGTON D. C.

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 371201 STATION 1017, 1017A
 CALIF
 LATITUDE 37°30' TO 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NJ 10-9 SAN JOSE

DESCRIPTION OF TRIANGULATION STATION

DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY
 NAME OF STATION: PENON BLANCO STATE: California COUNTY: Mariposa

CHIEF OF PARTY: M. E. Syjar Year: 1956 Described by: J. E. Johnson

MARK	HEIGHT OF TRIANGULATION MARK ABOVE MEAN SEA LEVEL, IN FEET	DISTANCES AND DIRECTIONS TO ADJUTING MARKS, SURVEYING STATIONS AND POINTS OF INTEREST WHICH CAN BE SEEN FROM THE STATION AT THE STATION	HEIGHT
11c	Reference Mark No. 1		
12c	Reference Mark No. 2		

The station is located on a high prominent table like point, about 7 1/2 miles SSW of Groveland, and 6 miles SSW of Moccasin, and 4 miles NNE of Coulterville, 79 1/2 feet north of the Penon Blanco Lookout.
 To reach from the Post Office in Moccasin, go 0.5 mile on hard surface road to the junction of State Highway 49, turn left and go SE and on State Highway 49 for 6.0 miles to the Mariposa county line, continue for 1.6 miles to a fork, take right fork and go 1.3 mile on hard surfaced road to the summit of ridge and a "T" road right, turn right on graded road and go 1.25 mile to the Azimuth Mark on the left, continue on graded road for 0.45 mile to the Penon Blanco Lookout and station.
 The station mark is a standard disk, set in a large flat boulder about 5 feet high, and it is stamped PENON BLANCO 1956.
 Reference Mark No. 1 is 72.6 feet north of the northeast corner of lookout,
 15 feet northeast of lookout weather station, and about 3 feet lower than the station, and it is stamped PENON BLANCO NO. 1 1956.
 Reference Mark No. 2 is 21 1/2 feet north of the northwest corner of the lookout, and about 3 feet lower than the station. It is stamped PENON BLANCO NO. 2 1956.
 The Azimuth Mark is 12 feet southeast of the center of a gravel road, and 3 feet south of a large conical shaped boulder, and it is set in a large round boulder about 6 feet higher than the surface of the road, it is stamped PENON BLANCO 1956.
 The distance between Reference Mark No. 1 and Reference Mark No. 2 is 63.0 feet.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: PENON BLANCO LOCALITY: Hetch Hetchy To Mono Lake YEAR: 1956

MARK	COORDINATES (FPM)	PLANE AZIMUTH & IONOSPHERIC ANGLE	MARK	SECOND IN METERS	ELEVATION METERS
STATE: CALIF	2,069,298.17	215°06'41"	AZIMUTH MARK	877.2	
ZONE: 3	448,752.63	+ 0 08 48		2,878	
CODE: 0403					

TO STATION	POSITION	GEODETIC AZIMUTH (From mark)	DISTANCE METERS
		37°43'56"102	2,878
		120 15 37.351	

TO STATION	POSITION	GEODETIC AZIMUTH (From mark)	DISTANCE METERS
		37°43'56"102	2,878
		120 15 37.351	

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: PENON BLANCO LOOKOUT TOWER LOCALITY: Hetch Hetchy to Mono Lake YEAR: 1956

MARK	COORDINATES (FPM)	PLANE AZIMUTH & IONOSPHERIC ANGLE	MARK	SECOND IN METERS	ELEVATION METERS
STATE: CALIF	2,069,300.89	+ 0 08 48			
ZONE: 3	448,653.13				
CODE: 0403					

TO STATION	POSITION	GEODETIC AZIMUTH (From mark)	DISTANCE METERS
		37°43'55"217	2,878
		120 15 37.320	

Computed from station PENON BLANCO

*Refer to notes on reverse of this page for details of observations and data reduction of this station.
 †To correct station data, when an independent leveling is being done.

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 WASHINGTON D.C.

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 371201 STATION 1018
 CALIF
 LATITUDE 37°30' TO 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NJ 10-9 SAN JOSE

CALIFORNIA

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: RAWLES STATE: California COUNTY: Tuolumne

CHIEF OF PARTY: H. E. Svir YEAR: 1955 Described by J. R. Johnson
 HEIGHT OF TELEGRAPH ABOVE STATION MARK: 1.06 METERS HEIGHT OF LIGHT ABOVE STATION MARK: NONE
 TRIANGULATION MARK: DISTANCES AND DIRECTIONS TO ADJACENT MARKS, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE STATION

MARK	OBJECT	BEARING	DISTANCE	DIRECTION	METERS
DREW (USGS)				0	00.00
As. Mt. (Station DUCKWALL (USGS))		N	(2.0 MI)	211 40	18.6
R M 1		N	65.76	226 11	50.
R M 2		N	20.07	256 12	35.

The station is located about 1 1/4 miles north northeast of Coulterville, 9 miles southeast of Tuolumne, 7 1/2 miles northeast of Groveland and on a high prominent hill. To reach from the Post Office in Tuolumne City, go north on Pine Street for 0.2 mile to a hard surface road, (0.05 mile north of the School) turn right and go 0.05 mile to three forks of the road, take the left fork of three towards Basin Creek for 0.5 mile for 2.7 mile to a fork, take right fork across the N. Fork Tuolumne River for 2.9 mile to a fork, take right fork across creek for 0.4 mile to a fork, take left fork for 6.5 mile to a fork, take left fork for 1.5 mile to a fork, take left fork and go 3.0 mile to a fork, take right fork for about 1.5 mile to three forks of the road, take right fork as per sign "GRAPESIDE SPUR" and go 1.7 mile to a fork, take right fork as per sign and follow ridge up steep hill for about 0.15 mile to highest point and station.

Station Mark, a standard disk set in a drill hole in a boulder. It is stamped RAWLES 1955, 3 1/2 feet west of a blasted tree with a nail in the center of base, about 22 feet east of center of ridge.
 Reference Mark 1 is a standard disk set in a drill hole in a boulder. It is stamped RAWLES NO 1 1955 and it is about 5 feet lower than the station, about 50 feet east of center of ridge, 22 feet north of a broken top blasted pine tree and on the east slope of the ridge.
 Reference Mark 2 is a standard disk set in a drill hole in a boulder. It is stamped RAWLES NO 2 1955 and it is about 22 feet west northwest of a blasted pine tree. Azimuth Mark, is station DUCKWALL(USGS). To reach see station description.

*Refer to notes for methods of triangulation and other particulars of triangulation. 1) Direction-angle measurement technique, referred to initial station. 2) Measurements only, when the triangulation is leveling alone.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: RAWLES YEAR: 1956
 STATE: California LOCALITY: Hetch Hetchy To Mono Lake
 Second-order Triangulation SOURCE: G-11404 FIELD SKETCH: Calif 427

GRID DATA	COORDINATES (E+U)	PLANE AZIMUTH θ FOR θm ANGLE	MARK
STATE: Calif	x 2, 115, 512.90		
ZONE: 3	y 507, 273.27	+ 0 14 42	
CODE: 0403			
STATE: Z			
ZONE: Y			
CODE:			
GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION
LATITUDE: 37°53'33".128			1,407.6 METERS
LONGITUDE: 120 05 58.943			4,618 FEET
TO STATION	GEODETIC AZIMUTH (From 0000)	LOGARITHM (Dist)	METERS
DREW USGS	287°06'18".8		

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HORIZONTAL CONTROL DATA

Coast and Geodetic Survey
 by the
 NORTH AMERICAN 1927 DATUM

QUAD 371201 STATION 1019
 GAITF
 LATITUDE 37°30' 70 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NO 10-9 SAN JOSE

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: **SIBBIT** STATE: **California** COUNTY: **Trojilume**

CHIEF OF PARTY: **H. E. Szytar** YEAR: **1956** DESCRIBED BY: **H. J. N.**

MARK	HEIGHT OF REFERENCE MARK FROM MEAN SEA LEVEL	DISTANCE AND BEARING TO ADJACENT MARKS, REFERENCE MARKS, OR PERMANENT OBJECTS WHICH CAN BE SEEN FROM THE STATION AT THE STATION	HEIGHT OF INSTRUMENT STATION		BENCH MARK
			FEET	METERS	
2	120	BRG HILL 1931	11.5 m (38.1)	0	00 00.0
		Schorra	{ 0.5 m (1.6)	83	25 39.1
		Astunth mark	{ 8.512	117	55 50.2
		BR 1	21.03	258	11 01.0
		BR 2	6.411	352	59 01.0

The station is located on a prominent oak covered hill 1/5 miles northwest of Coulterville, 13 miles southwest of Groveland, 6 miles southwest of Jacksonville, 6 miles southwest of Chinese Station, 4 1/2 miles southeast of Keyholes and 1/2 mile south of a Hetch Hetchy power transmission line.

Station mark, stamped **SIBBIT 1956**, is a standard disk cemented in a drill hole in a flat topped boulder 5 feet in diameter and projects 4 feet. It is 28.7 feet northwest of a 30 inch oak tree with a triangular base and 73.0 feet north of a 10 inch oak tree. Reference mark No. 1, a standard disk stamped **SIBBIT NO 1 1956**, is cemented in a drill hole in a 2 foot by 4 foot boulder. It is 19.5 feet west of a 30 inch oak tree, 12.0 feet southeast of a 10 inch oak tree, and 2 feet lower than the station. The boulder projects 2 feet above the ground. Reference mark No. 2, a standard disk cemented in a drill hole in a 3 foot by 6 foot boulder projecting 3 feet, is stamped **SIBBIT NO 2 1956**. It is 19.0 feet northwest of a 10 inch oak tree, and 1 foot lower than the station mark.

Astunth mark, a standard disk stamped **SIBBIT AZIMUTH 1956**, is cemented in a drill hole in the southwest footing of power transmission line tower No. 86. It is 235 feet south of the south right of way fence of an old railroad grade, 84 feet north of a property fence line and 31 feet southwest of a large oak tree. The footing projects 6 inches.

To reach from the post office at Chinese Station, go west 1 block to a secondary paved road, turn left, southwest, and follow paved road for 4.0 miles to a T intersection, turn left, south, on a paved road toward La Grange for 0.4 mile to a fork, take the right fork, south, for 1.9 miles to two metal gates on the left, turn left thru the second gate on a dirt road and go southwest for 0.6 mile to a fork, take the right fork uphill for 0.2 mile to a low saddle, turn left, east of the track road and go across country for 0.2 mile around north side of hill to the summit and station.

To reach the astunth mark, pass through the first one of two wire gates mentioned above and follow a gravel road along an old railroad grade for 1.2 mile, cross fence and walk east for 100 yards to power transmission line tower No. 86 and the astunth mark.

A 4 wheel drive station.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: **SIBBIT** YEAR: **1956**

STATE: **California** LOCALITY: **Hetch Hetchy To Mono Lake**

Second order triangulation SOURCE: **G-11404** FIELD SKETCH: **GAITF 427**

MARK	COORDINATES (Feet)	PLANE ANGLE θ (10000 units)	MARK
GAITF	2,012,857.25	234°07'146"	AZIMUTH MARK
3	467,855.08	+ 0 01 38	
0403			

MARK	POSITION	RECORDS IN METERS	ELEVATION METERS
GAITF	LATITUDE: 37°17'105.816 LONGITUDE: 120 27 19.835	NORTH WEST	456.6 1,498

AZIMUTH MARK

THIRD ORDER
234°09'24.42

STATION	POSITION	RECORDS IN METERS	ELEVATION METERS
AZIMUTH MARK	LATITUDE: 37°17'105.816 LONGITUDE: 120 27 19.835	NORTH WEST	456.6 1,498

FORM 384 (2-53) 501

USCGO-DC 8217

*Refer to notes to manuals of triangulation and other publications of triangulation.
 1) Direction-angle measured clockwise, referred to radial station.
 2) Azimuth measured clockwise, referred to radial station.
 3) Azimuth measured counter-clockwise, referred to radial station.

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U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
WASHINGTON, D. C.

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 371201 STATION 1020,1020A
CALIF
LATITUDE 37°30' TO 38°00'
LONGITUDE 120°00' TO 120°30'
DIAGRAM NJ 10-9 SAN JOSE

CALIFORNIA

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: SMITH PK STATE: California COUNTY: Tuolumne & Mariposa
CHIEF OF PARTY: N. E. SFLAR Year: 1956 Described by: F.T.L.
12c Height of reference mark 1.54 meters; HEIGHT OF LIGHT ABOVE STATION MARK
11a Substation mark DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

OBJECT	BEARING	DISTANCE		DIRECTION!
		feet	meters	
GROVELAND				
Pilot Pk. L. O.	ESE	36.05	10.989	00 00 00.0
R. M. No. 1	SE	20.37	6.207	181 55 08.9
USFS BU Smith Peak L.O.	SE			209 33 26
R.M. No. 2	SW	20.44	6.231	217 45 10
				31A 21 27

The station is on a small prominent hill at a lookout tower about 7 miles air-line east-southeast of Groveland, 8 miles air-line northeast of Coulterville and about 13 1/2 miles southeast of Tuolumne.
To reach from the post office in Groveland, go east on State Highway 120 for 9.5 miles to side road right, this is 0.7 mile beyond Groveland Ranger Station, go right on dirt road for 1.7 miles, keep straight ahead at crossroad and go 0.5 mile to summit of hill and station site at base of lookout tower.
The station mark is 4.5 feet east of the northeast leg of lookout tower. The mark is set flush and the disk is stamped SMITH PK 1956
R. M. No. 1 is 12 feet east-southeast of a cedar tree and the disk is stamped SMITH PK of metal flag pole. The boulder projects 18 inches and the disk is stamped SMITH PK

NO 1 1956.
R. M. No. 2 is a standard reference mark disk set in a drill hole in the southeast corner of the concrete base for lookout stairs. The mark is flush and the disk is stamped SMITH PK NO 2 1956.
Another mark was cut in, a USFS mark stamped SMITH PEAK L. O. ELEVATION 3362. It is set in a drill hole in outcropping bedrock. It is 4 feet northwest of cedar tree. Pilot Peak L. O. was cut in to serve as ground azimuth.

* Refer to notes in manuals of triangulation and state publications of triangulation. (Distances—angle measured clockwise, referred to initial station. If measured counter only, then no trigonometric leveling is being done.) 16-5020-1 U. S. GOVERNMENT PRINTING OFFICE

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: SMITH PEAK YEAR: 1956
STATE: California LOCALITY: Hetch Hetchy To Mono Lake
Second-order Triangulation SOURCE: G-11404 FIELD SKETCH: CALIF 427

GRID DATA	COORDINATES (FPM)	PLANE AZIMUTH θ (ORDEN ANGLE)	MARK
STATE: Calif	x 2,115,633.87	285°57'46"	PILOT PEAK LOOKOUT
ZONE: 3	y 473,889.20	+ 0 14 42	TOWER
CODE: 0403			

STATE:	ZONE:	CODE:
x	y	

GEODEIC DATA	POSITION		ELEVATION METERS FEET
	LATITUDE: LONGITUDE:	NORTH WEST	
	37°48'03"061		1,180.6
	120 05 59.215		3,873

TO STATION	GEODEIC AZIMUTH (From zenith)	DISTANCE METERS

AZIMUTH MARK PILOT PEAK LOOKOUT TOWER	THIRD ORDER 286°12'28"1	4,179803	15,128.7
---------------------------------------------	----------------------------	----------	----------

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FEB 9

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: SMITH PEAK LOOKOUT USFS YEAR: 1956
STATE: California LOCALITY: Hetch Hetchy to Mono Lake
Second-order Traverse SOURCE: G-11404 FIELD SKETCH: CALIF 427
(No check on this position)

GRID DATA	COORDINATES (FPM)	PLANE AZIMUTH θ (ORDEN ANGLE)	MARK
STATE: Calif	x 2,115,646.46	+ 0 14 42	
ZONE: 3	y 473,873.17		
CODE: 0403			

STATE:	ZONE:	CODE:
x	y	

GEODEIC DATA	POSITION		ELEVATION METERS FEET
	LATITUDE: LONGITUDE:	NORTH WEST	
	37°48'02"902		
	120 05 59.059		

TO STATION	GEODEIC AZIMUTH (From zenith)	DISTANCE METERS

Computed from station SMITH PEAK

JULY 1963
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 COAST AND GEODETIC SURVEY
 WASHINGTON D. C.

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

CALIFORNIA 451
 QUAD 371201 STATION 1021
 CALIF
 LATITUDE 37°30' TO 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NO 10-9 SAN JOSE

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: SPINN
 STATE: California
 COUNTY: Tuolumne
 DESCRIBED BY: F.T.L.
 YEAR: 1956
 HEIGHT OF TRIANGULATION MARK: 1.35 METERS
 REMIT OF LIMIT ABOVE STATION MARK

MARK	OBJECT	DISTANCE		DIRECTION	REMARKS
		FEET	METERS		
12c	COLFAX Duckwall L. O.	29.56	9.010	NW	00 00 00.0
12	R.M. No. 2	51.95	15.834	ENE	105 07 10.6
	R. M. No. 1			E	134 18 08
					231 47 58

The station is on a small brush covered hill about 1/2 mile west of the main road to Early Intake. It is about 1 1/2 miles airline east of Groveland, 1 1/2 miles airline northeast of Coulterville, 3 1/2 miles southeast of Early Intake Powerhouse and 15 miles airline southeast of Tuolumne.

To reach from the post office in Groveland, go east on State Highway 120 for 15.1 miles to fork, take left fork, paved, and go 2.2 miles to dirt road left, turn back sharp left and go 0.5 mile, keep left on main road and go 0.25 mile to fork, go left and go 0.05 mile, turn left on old railroad grade and go 0.1 mile, take right fork and go 0.2 mile, turn right, up hill and go 0.1 mile to summit of hill and station site.

The station mark is 27 feet south-southwest of a boulder projecting 6 feet. The mark projects 1 foot and the disk is stamped SPINN 1956

R. M. No. 1 is about 1 foot lower than station. The mark projects 8 inches and the disk is stamped SPINN NO 1 1956.

R. M. No. 2 is 10 feet north-northwest of a 6 foot boulder. The mark is flush and the disk is stamped SPINN NO 2 1956.

Duckwall Lookout Tower was cut in for ground azimuth.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: SPINN
 STATE: California
 LOCALITY: Hetch Hetchy To Mono Lake
 SECOND ORDER TRIANGULATION SOURCE: G-11404
 FIELD SKETCH: Calif 427
 YEAR: 1956

GRID DATA	COORDINATES (F=0)	PLANE AZIMUTH FROM ANGLE	MARK
STATE: Calif	2,142,425.82	145 04 24	AZIMUTH MARK DUCKWALL LOOKOUT TOWER
ZONE: 3	7 488,414.42	+ 0 18 07	
CODE: 0403			
STATE: Calif			
ZONE: 3			
CODE: 0403			
GEODETIC DATA	POSITION		ELEVATION
	LATITUDE	LONGITUDE	
	37°50'25"405	120°00'24.442	1,069.19 METERS
			3,507.8 FEET

TO STATION	GEODETIC AZIMUTH (From mark)	DISTANCE	
		METERS	METERS
AZIMUTH MARK DUCKWALL LOOKOUT TOWER	THIRD ORDER 145°22'30"9	FEB 7	1981

FILE COPY

CGS Form 255 (10-5-55)

UFGCMWDC 2487

* Refer to notes for particulars of triangulation and other publications of triangulation. (Direction-angle measured clockwise, referred to local station. 1/2 nearest minor unit, three or four significant figures in listing angles.) (Direction-angle measured clockwise, referred to local station. 1/2 nearest minor unit, three or four significant figures in listing angles.)

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

CALIFORNIA

QUAD 371201 STATION 1022
 CALIF
 LATITUDE 37°30' TO 38°00'
 LONGITUDE 120°00' TO 120°30'
 DIAGRAM NO 10-9 SAN JOSE

457

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: SUGARLOAF STATE: CALIFORNIA COUNTY: TULUMNE

CHIEF OF PARTY: N. E. SYLAR YEAR: 1956 DEPICTED BY: N. J. W.

HEIGHT OF INSTRUMENT FROM STATION BASE 1.73 METERS HEIGHT OF SURVEYOR FROM BASE 5.0 METERS
 DISTANCES AND DIRECTIONS TO ADJACENT MARKS REFERENCED TO STATION WHICH CAN BE SEEN FROM THE QUADRANT AT THE STATION

MARK	DISTANCE	DIRECTION	ELEVATION	
			MARK	STATION
11a	28.96'	8.826'	0	00.0
11b	47.49'	14.475'	89	58.41'
11c	56.32'	17.164'	152	24.45.0
11d	33.66'	10.252'	171	28.27.7
11e			342	11.11.4
11f			354	01.52'

The station is 10 1/2 miles northeast of Occasin, 6 1/2 miles southeast of Tulumne, 6 miles northeast of Groveland, on the south end of a north-south ridge, at a lookout house.

To reach the station from the post office in Tulumne, go east 1 block, turn left, north on Pine Street for 0.2 mile to a T-intersection, turn right, east for 0.09 mile to an intersection, turn left, north east as per sign "Spain Creek" and go 0.3 mile to three forks, take the center fork, northeast on a gravel road for 2.3 miles to a fork, take the right fork, east, across the North Fork Tulumne River and go 2.6 miles to a fork, take the right fork across a stream and go 0.3 mile to a fork, take the left fork, northeast, and go 6.6 miles to a fork at a sign "Sugarloaf L. O.", take the right fork, southeast, and go 0.2 mile to three forks, take the center fork up the ridge and go 1.1 mile to a high saddle and the astrich mark on the left, continue southeast, downhill and go 0.55 mile to the lookout house and station.

The station mark, a standard disk stamped SUGARLOAF 1956 set in a concrete monument, is 47.5 feet north of lookout house. The monument is flush with the ground.
 Reference mark No. 1, a standard disk stamped SUGARLOAF NO 1 1956 set in the top of a concrete monument, is 81.8 feet north of lookout house and 3 feet lower in elevation than the station mark. The monument projects 4 inches.
 Reference mark No. 2, a standard disk stamped SUGARLOAF NO 2 1956 set in the top of a concrete monument, is 48.1 feet northeast of the northeast corner of lookout house and 1 foot lower in elevation than the station mark. The monument projects 2 inches.
 Another mark, a U. S. Forest Service bronze disk stamped V.A.S.M. KEY. 3880 SUGARLOAF R. 17E. T.W. SD. 31 1937, is cemented in the first concrete step leading to the lookout.

The astrich mark, a standard reference disk stamped SUGARLOAF 1956 set in the top of a concrete monument, is 60 feet northeast of the center of road, 24 feet south of the center of a track road, 20.7 feet west of a 6 inch pine tree, and 19.9 feet southeast of a small pine tree. The monument projects 4 inches.

References to marks of triangulation and other markings of geodetic surveys, referred to in this publication, are to be understood as referring to the marks of the surveys of the United States Coast and Geodetic Survey, unless otherwise indicated.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: SUGARLOAF LOCALITY: Hetchy Hetchy To Mono Lake YEAR: 1956

STATE: CALIFORNIA LOCALITY: Hetchy Hetchy To Mono Lake

Second-order Triangulation source: 0-11404 FIELD SKETCH: CALIF 427

GRID DATA	COORDINATES (FEET)	PLANE ANGLE (TENS OF SECONDS)	MARK
STATE: CALIF	± 2,102,454.63	178°16'28"	ASTRICH MARK
ZONE: 3	509,219.71	+ 0 13 03	
CODE: 0403			
STATE: 3			
ZONE: 7			
CODE: 1			

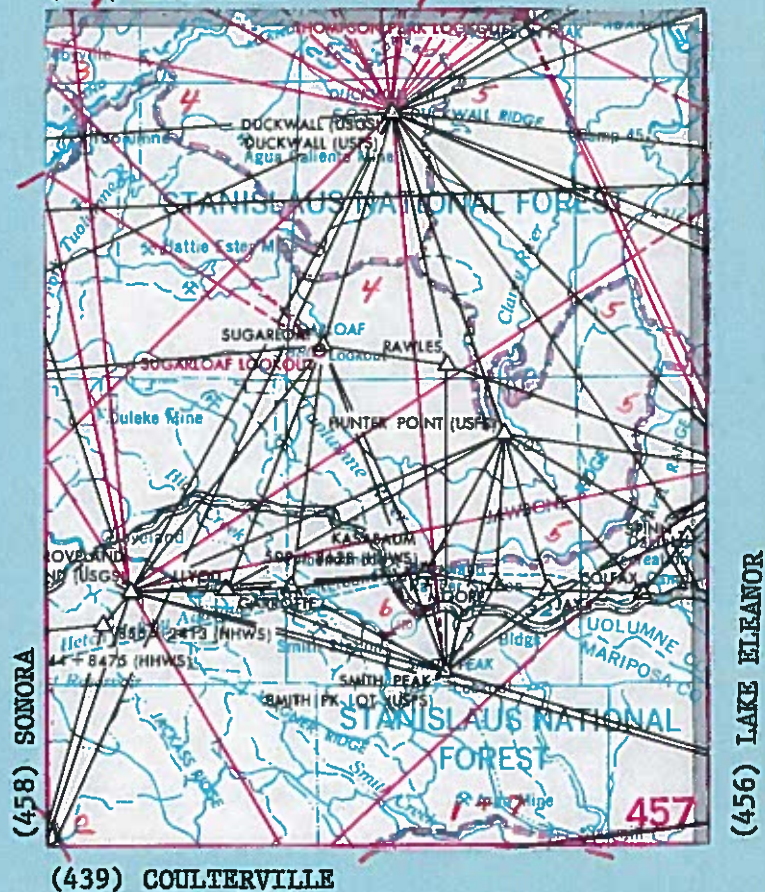
GEODETIC DATA	POSITION	MARK
LATITUDE: 37°31'52".993	120.000	52.85
LONGITUDE: 120°08'41".755	41.755	8.000
		7.000
		46.000
		46.500

AZIMUTH MARK

NOT to be used for Sugarloaf

POSITION	MARK
LAT. LONG.	120.000
AZ.	41.755
DIST.	74646.500
BK. AZ.	56.320
LAT. LONG.	18746446.442
LON.	375352.341
LON.	1200841.850

(474) LONG BARN



(1) C.H. Semper	1905	5714
(2) R.B. Steele	1940	B 8876
(3) G.W. Moore	1945	V 204
(4) G.W. Moore	1945	V 204
(5) G.W. Moore	1945	V 204
(6) G.W. Moore	1945	V 204
(7) G.W. Moore	1945	V 204

TUOLUMNE (457)

California

C. H. Semper, 1905

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: 5714

Latitude 37°45' Longitude 120°00'

(1) FROM ALONG ROADS NORTHEAST, EAST AND SOUTHEAST, JOG
FROM COULTERVILLE QUADRANGLE (Relevelled over same
route in 1945; see Line 7)

Bean Creek bridge, 1.5 mi. E. of, in front of
ranch house of W. H. Dudley, in NW. corner of
front yard fence; standard iron post encased in
concrete with bronze cap stamped "13 S 1905 B
2984" (Recovered in 1945)

2984.520

Reference mark, 160 ft. W. of iron post, 26 ft.
S. of rd., on rock outcrop; chiseled square
(Established in 1945)

2992.30

FILE COPY

4/12/61 hb *eb*

TUOLUMNE (457)

California

R. B. Steele, 1940

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: B 8876

Latitude 37°45' Longitude 120°00'

(2) NORTH AND NORTHWEST ALONG HIGHWAY IN SOUTHWEST
CORNER OF QUADRANGLE

Coulterville, 5.1 mi. NW. of post office, along
State Highway 99, 0.5 mi. NW. of rd. summit, on
SW. side of hwy. at fork of rd. to Miller Mine, 47
ft. SW. of center of rd. forks, in base on E. side
of 12 in. pine tree; copper nail and washer, tag
stamped "1908.2"

1908.02

FILE COPY

4/12/61 hb *do*

TUOLUMNE (457)

California

G. W. Moore, 1945

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: V 204

Latitude 37°45' Longitude 120°00'

(3) FROM LONG BARN QUADRANGLE SOUTHWEST ALONG ROAD BY
WAY OF TUOLUMNE INTO SONORA QUADRANGLE

Twain Harte, 3.4 mi. S. of, 90 ft. E. of forks of
rd. NE., 50 ft. SE. of rd. to Tuolumne, 7 ft.
higher than rd. forks, in root on N. side of 40
in. cedar tree; copper nail and washer 3156.58

Twain Harte, 4.0 mi. S. of, at drain crossing,
30 ft. W. of and 9 ft. higher than rd., in top
of 20 ft. rock ledge; standard tablet stamped
"26 GWM 1945 2950" 2950.155

Reference mark, 70 ft. S. of tablet, 15 ft. W.
of and 4 ft. higher than rd., on top of rock
outcrop; chiseled square 2948.79

Twain Harte, 4.9 mi. S. of, across rd. from
Cherokee School, 22 ft. E. of rd., in root on
E. side of 30 in. oak tree; copper nail and
washer 2840.68

Twain Harte, 5.6 mi. S. of, 200 ft. S. of forks
of rd. SE. to Ralph, 21 ft. SW. of Tuolumne Road,
3 ft. higher than rd., in rock ledge; standard
tablet stamped "27 GWM 1945 2806" 2805.389

Reference mark, 150 ft. S. of tablet, 19 ft. SW.
of rd., 3 ft. N. of ranch gate, on top of rock
ledge; chiseled square 2797.82

Twain Harte, 6.3 mi. S. of, 170 ft. SE. of center
of concrete hwy., bridge over creek, 18 ft. NE. of
hwy., on rock ledge about 1 ft. higher than hwy.;
chiseled square 2624.02

Twain Harte, 7.1 mi. S. of, in N. part of
Tuolumne, 85 ft. SE. of forks of rd. W. to Sonora,
at S. end of park in triangle of rd. forks, 2
ft. S. of lamp post; concrete curb, chiseled
square 2611.789

Tuolumne, 1 block E. of RR. station, 23 ft. W.
of Pine Street, 40 ft. N. of Fir Street, at N.
side of triangle of rd. forks opposite fountain,
in concrete curb; standard tablet stamped
"28 GWM 1945 2577" 2576.583
-destroyed?

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TUOLUMNE (457)

California

G. W. Moore, 1945

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: V 204

Reference mark, 95 ft. S. of tablet, 23 ft. W. of
Pine Street, at edge of sidewalk, on concrete
curb; chiseled square

2576.80

Tuolumne, 0.7 mi. S. of, 73 ft. S. of X-rds., 50
ft. SE. of hwy., in field, on top of boulder;
chiseled square

2582.53

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TUOLUMNE (457)

California

G. W. Moore, 1945

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: V 204

Latitude 37°45' Longitude 120°00'

(4) FROM TUOLUMNE SOUTHEAST ALONG ROAD ABOUT 16 MILES

Tuolumne, 1.2 mi. NE. of civic center, at top of ridge, at W. edge of flume, 15 ft. N. of rd., in top of boulder; standard tablet stamped "40 GWM 1945 2798" 2797.536

Reference mark, 76 ft. E. of tablet, 32 ft. N. of and 5 ft. higher than rd., on top of boulder; chiseled square 2793.55

Tuolumne, 2.2 mi. NE. of civic center, 20 ft. NW. of rd. at curve, 40 ft. W. of drain, on top of boulder; chiseled square 2517.10

"41 GWM 1945 2247" (Destroyed, 1956) 2247.154

Tuolumne, 4.1 mi. E. of, 20 ft. SE. of rd. at U-turn, at S. edge of creek, on top of boulder; chiseled square 2648.80

Tuolumne, 5.1 mi. E. of, 120 ft. E. of forks of ranch rd. S., 22 ft. S. of rd., in base on N. side of 30 in. pine tree; rail spike 2971.80

Tuolumne, 5.8 mi. E. of, 100 ft. S. of forks of ranch rd. NE., 46 ft. SE. of and 4 ft. lower than rd., about 200 ft. SW. of fork, at group of boulders, in top of boulder; standard tablet stamped "42 GWM 1945 2909" 2908.777

Reference mark, 83 ft. NE. of tablet, 60 ft. SE. of forks of rd. to Roy Ingalls Ranch, in root on NW. side of 20 in. alder tree; copper nail and washer 2904.28

Tuolumne, 6.2 mi. E. of, 11 ft. SW. of Alder Spring, 80 ft. E. of E. angle of forks of rd. SW. to Providence Mine, 25 ft. S. of rd., in root on N. side of 20 in. alder tree; copper nail and washer, painted "3009.9" 3009.61

Tuolumne, 7.3 mi. E. of, 20 ft. S. of rd., 40 ft. SE. of drain crossing, in root on N. side of 27 in. oak tree; copper nail and washer 3200.22

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TUOLUMNE (457)

California

G. W. Moore, 1945

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: V 204

Tuolumne, 8.4 mi. E. of, 85 ft. N. of and 14 ft. higher than rd., about 200 ft. NW. of drain crossing, at group of boulders; in top of boulder; standard tablet stamped "43 GWM 1945 3325" 3325.039

Reference mark, 60 ft. S. of tablet, 165 ft. W. of drain, 25 ft. N. of rd., in base on E. side of 20 in. pine tree; rail spike 3315.00

Tuolumne, 9.4 mi. E. of, at right angle turn in rd., 14 ft. N. of rd. from forks of trail SW. of Shanty Flat, on top of boulder; chiseled square 3254.66

Tuolumne, 10.5 mi. E. of, 110 ft. E. of fork across Hunter Creek, 46 ft. SW. of rd. at U-turn and forks of trail NE. to Rogge Ranch, 10 ft. higher than fork, in concrete post; standard tablet stamped "44 GWM 1945 3023" 3023.804

Reference mark, 20 ft. N. of tablet, 12 ft. S. of rd., in root on NW. side of 45 in. fir tree; copper nail and washer 3020.36

Tuolumne, 11.3 mi. E. of, 22 ft. N. of rd., opposite abandoned mine, in trunk on S. side of 12 in. leaning oak tree; copper nail and washer 3358.66

Tuolumne, 12.0 mi. E. of, in wye of rd. forks, 70 ft. W. of forks of rd. S. to Wet Meadow Ranger Station, 2 ft. higher than rd. fork, in base on E. side of 20 in. pine tree; rail spike 3607.49

Tuolumne, 13.2 mi. E. of, at top of Rogge Ridge, 40 ft. SE. of forks of rd. S. to Sugarloaf Lookout, in concrete post; standard tablet stamped "45 GWM 1945 4104" 4104.185

Reference mark, 74 ft. NW. of tablet, 34 ft. NW. of rd. forks, in base on SE. side of 8 in. pine tree; rail spike 4098.74

Tuolumne, 14.0 mi. E. of, on Rogge Ridge, 250 ft. W. of Rogge Ranch trail fork, 18 ft. N. of rd., in root on NE. side of 36 in. oak tree; copper nail and washer 3964.14

TUOLUMNE (457)

California

G. W. Moore, 1945

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: V 204

(4) Tuolumne, 14.8 mi. E. of, 340 ft. N. of fork of rd. E., 60 ft. N. of rd. at sharp bend, in saddle 5.4 ft. higher than rd., in concrete post; standard tablet stamped "46 GWM 1945 3972" 3971.462

Reference mark, 47 ft. SE. of tablet, 20 ft. N. of rd., in base on S. side of 30 in. yellow pine tree; rail spike 3968.34

Tuolumne, 15.6 mi. E. of, 18 ft. N. of and 4 ft. higher than rd. at curve, on W. side of drain, on top of boulder; chiseled square 4107.34

Tuolumne, 16.1 mi. E. of, 95 ft. NE. of forks of rd. N., in wye of forks, 8.4 ft. higher than rd. forks, in concrete post; standard tablet stamped "47 GWM 1945 4179" 4178.875

Reference mark, 34 ft. NW. of tablet, 14 ft. E. of Duckwall Road, in base on S. side of 30 in. oak tree; rail spike 4178.83

TUOLUMNE (457)

California

G. W. Moore, 1945

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: V 204

Latitude 37°45' Longitude 120°00'

(5) FROM LONG BARN QUADRANGLE ALONG ROADS SOUTH AND EAST BY WAY OF THOMPSON MEADOW AND ROGGE RANCH TO JAWBONE GUARD STATION, THENCE SOUTHWEST TO POINT NEAR SMITH STATION (Leveled twice by G. W. Moore)

Long Barn Hotel, 15.2 mi. SE. of, 8 ft. E. of rd., in base on W. side of 72 in. cedar tree; rail spike

4836.23

Long Barn Hotel, 16.2 mi. SE. of, 80 ft. SE. of horse trail fork sign "THOMPSON MEADOW 1 MILE", 12 ft. SW. of and 3 ft. higher than rd. at curve, in concrete post; standard tablet stamped "54 GWM 1945 4764"

4764.406

Reference mark, 90 ft. SE. of tablet, 15 ft. NE. of and 3 ft. lower than rd., in base on NE. side of 54 in. cedar tree; rail spike

4757.67

Long Barn Hotel, 17.2 mi. SE. of, 225 ft. SW. of horse trail fork sign, 10 ft. SE. of rd. at curve, in base on NW. side of 25 in. pine tree; rail spike

4690.97

Long Barn Hotel, 18.2 mi. SE. of, at foot of ridge at drain, 26 ft. SW. of and 4 ft. higher than rd. at U-turn, 8 ft. W. of horse trail S. up wash, in concrete post; standard tablet stamped "55 GWM 1945 4710"

4709.544

Reference mark, 160 ft. N. of tablet, 10 ft. SW. of rd., in base on E. side of 37 in. cedar tree; rail spike

4713.14

Long Barn Hotel, 19.2 mi. E. of, at top of ridge, in saddle, 30 ft. E. of rd. at U-turn, in base on W. side of 25 in. pine tree; copper nail and washer

5107.60

Long Barn Hotel, 20.0 mi. SE. of, 20 ft. N. of forks of rd. to Duckwall Guard Station, on top of ridge, in concrete post; standard tablet stamped "56 GWM 1945 5379"

How Desc. 179
5379.424

Reference mark, 96 ft. S. of tablet, 23 ft. E. of rd. down ridge, in base on E. side of 33 in. yellow pine tree; rail spike

5371.15

TUOLUMNE (457)

California

G. W. Moore, 1945

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: V 204

(5) Long Barn Hotel, 21.0 mi. SE. of, on narrow ridge,
10 ft. S. of rd., in root on N. side of 23 in.
yellow pine tree; copper nail and washer 4769.08

Long Barn Hotel, 22.0 mi. SE. of, on E. side of
saddle, 22 ft. N. of rd., in top of boulder;
standard tablet stamped "57 GWM 1945 4725" 4725.387

Reference mark, 56 ft. W. of tablet, 24 ft. N.
of rd., on top of boulder; chiseled square 4719.47

Long Barn Hotel, 23.0 mi. SE. of, at top of hill,
on tree with Forest Service tag marked "5 chains
S. to corner Sections 15, 16, 21, 22, T. 1 N.,
R. 17 E", 7 ft. W. of rd., in base on E. side
of 4 in. cedar tree; rail spike 4719.58

Long Barn Hotel, 23.7 mi. SE. of, 0.4 mi. NW.
of Tuolumne-Jawbone Road, in small triangle of
forks of rd. W. to Quilty Mill, in base on SE.
side of 36 in. cedar tree; rail spike 4348.07

Tuolumne, 16.1 mi. E. of, 95 ft. NE. of forks of
rd. N., in wye of forks, 8.4 ft. higher than
rd. forks, in concrete post; standard tablet
stamped "47 GWM 1945 4179" 4178.875

Reference mark, 34 ft. NW. of tablet, 14 ft. E.
of Duckwall Road, in base on S. side of 30 in.
oak tree; rail spike 4178.83

Tuolumne, 16.9 mi. E. of, 0.8 mi. E. of forks
of rd. to Duckwall Lookout, 10 ft. NE. of rd.,
in base on SW. side of 22 in. pine tree; rail
spike 4349.37

Tuolumne, 17.5 mi. E. of, 44 ft. S. of crossing
of Quilty Mill-Hunter Bend Roads, in concrete
post; standard tablet stamped "58 GWM 1945 4336" 4336.031

Reference mark, 55 ft. N. of tablet, 17 ft. NE.
of rd. forks, in base on SW. side of 30 in. yellow
pine tree; rail spike 4334.30

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TUOLUMNE (457)

California

G. W. Moore, 1945

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: V 204

- (5) Tuolumne, 18.5 mi. E. of, 17 ft. N. of rd., in
base on S. side of 25 in. yellow pine tree;
rail spike 4153.32
- Tuolumne, 19.6 mi. E. of, 470 ft. SE. of forks
of rd. to campground, on N. side of drain, 14
ft. W. of rd., in concrete post; standard tablet
stamped "59 GWM 1945 3836" 3835.809
- Reference mark, 100 ft. SE. of tablet, 11 ft.
N. of rd., in trunk on S. side of 7 in. pine
tree; rail spike 3835.66
- Tuolumne, 20.4 mi. E. of, 18 ft. NE. of and 2 ft.
lower than rd. at turn around point of hill, in
base on SW. side of 30 in. yellow pine tree;
rail spike 3648.64
- Tuolumne, 21.2 mi. E. of, on S. side of drain,
16 ft. SW. of and 4 ft. higher than rd. at sharp
bend, in bank at edge of cow path, on top of
boulder; chiseled square 3454.52
- Tuolumne, 21.8 mi. E. of 35 ft. NW. of center of
rd. at U-turn, inside turn at upper rd. level and
5.6 ft. higher than rd., in concrete post;
standard tablet stamped "60 GWM 1945 3307" 3306.927
- Reference mark, 88 ft. SE. of tablet, 53 ft. SE.
of and 5 ft. lower than rd., in trunk on NW.
side and about 2 ft. above base of 50 in. oak
tree; rail spike 3296.44
- Tuolumne, 22.5 mi. E. of, 16 ft. NW. of and 4 ft.
higher than rd. at curve, at NE. edge of drain,
on top of boulder; chiseled square 3090.38
- Tuolumne, 23.6 mi. E. of, at waterfall, 8 ft. W.
of and 2 ft. higher than rd., on SE. angle of
concrete head wall; chiseled square 2669.93
- Tuolumne, 24.4 mi. E. of, at steel bridge over
Clavey River, in N. end of W. concrete abutment;
standard tablet stamped "61 GWM 1945 2410" 2410.233
- Reference mark, 124 ft. E. of tablet, on S. end of
E. abutment of bridge over Clavey River; chiseled
square 2410.18

TUOLUMNE (457)

California

G. W. Moore, 1945

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: V 204

(5) Tuolumne, 25.4 mi. E. of, 13 ft. W. of and 2 ft. lower than rd., on projecting branch of live oak tree; copper nail and washer 2716.21

Tuolumne, 26.1 mi. E. of, 30 ft. S. of and 4 ft. lower than rd. on top of boulder; chiseled square 2997.32

Tuolumne, 27.4 mi. E. of, 34 ft. N. of rd. at U-turn, in concrete post; standard tablet stamped "62 GWM 1945 3358" 3357.872

Reference mark, 152 ft. S. of tablet, in base on E. side of 25 in. pine tree; rail spike 3365.29

Tuolumne, 28.5 mi. E. of, 20 ft. E. of rd., near top of hill at curve, in base on S. side of 25 in. pine tree; rail spike 3704.15

Tuolumne, 29.3 mi. E. of, 22 ft. E. of forks of rd. to Bull Meadow, in concrete post; standard tablet stamped "63 GWM 1945 3892" 3892.751

Reference mark, 200 ft. NE. of tablet, 10 ft. W. of rd., in base on W. side of 18 in. cedar tree; rail spike 3897.38

Tuolumne, 30.2 mi. E. of, 10 ft. SE. of rd., in base on SE. side of 36 in. yellow pine tree; rail spike 3887.62

Tuolumne, 31.0 mi. E. of, 43 ft. N. of rd. forks, 20 ft. NW. of rd., on SE. side of 16 in. pine tree; rail spike 4040.96

Tuolumne, 31.4 mi. E. of, 440 ft. SW. of Bull Meadow Road, 25 ft. NW. of and 3 ft. higher than rd., in top of boulder; standard tablet stamped "64 GWM 1945 4108" 4108.405

Reference mark, 64 ft. NE. of tablet, 47 ft. NW. of rd. at curve, in root on E. side of 25 in. pine tree; copper nail and washer 4109.36

TUOLUMNE (457)

California

G. W. Moore, 1945

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: V 204

(5) Tuolumne, 32.4 mi. E. of, 25 ft. NE. of rd. at
Corral Creek crossing, 6.3 ft. above surface of
water, on SE. side of 40 in. cedar tree; rail
spike 3769.02

Tuolumne, 33.8 mi. E. of, 27 ft. E. of rd. at
drain, in top of boulder; standard tablet stamped
"65 GWM 1945 3652" 3652.361

Reference mark, 195 ft. SE. of tablet, 11 ft. W.
of rd., at curve, in base on E. side of 20 in.
pine tree; rail spike 3652.29

Tuolumne, 34.4 mi. E. of, 16 ft. SW. of rd. at
drain, on top of boulder; chiseled square 3636.44

Tuolumne, 35.2 mi. E. of, about 0.1 mi. S. of
Jawbone Guard Station, 200 ft. S. of rd. fork,
16 ft. W. and 4 ft. higher than rd., in top of
boulder; standard tablet stamped "66 GWM 1945
3364" 3364.924

Reference mark, 180 ft. N. of tablet, 120 ft. S.
of rd. forks at signpost, in base on S. side of
38 in. yellow pine tree; rail spike 3353.65

Jawbone Guard Station, 0.9 mi. S. of, 25 ft. SE.
of rd. forks, in root on NW. side of 27 in. pine
tree; rail spike 3191.37

Jawbone Guard Station, 1.6 mi. S. of, at SE. end
of SW. concrete heading at Corral Creek, standard
tablet stamped "67 GWM 1945 2960" 2960.951

Reference mark, 62 ft. NW. of tablet, 15 ft. N.
of rd., in root on SE. side of twin 15 in. oak
tree; copper nail and washer 2963.59

Jawbone Guard Station, 2.6 mi. S. of, 19 ft. E. of
rd. at curve, on top of boulder; chiseled square 2575.80

Reference mark, 770 ft. NW. of tablet, 30 ft. E.
of rd. at Drew Ridge trail fork, 4 ft. higher than
rd., on top of large boulder; chiseled square 2332.60

TUOLUMNE (457) California G. W. Moore, 1945

Third Order Adjusted Elevations Based
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Book: V 204

Jawbone Guard Station, 3.3 mi. S. of, 16 ft. W. of
rd., at base of rock bluff, in top of boulder;
standard tablet stamped "68 GWM 1945 2268" 2268.567

Jawbone Guard Station, 4.4 mi. S. of, 8 ft. W. of
and 2 ft. higher than rd., on top of boulder;
chiseled square 1870.14

Jawbone Guard Station, 5.3 mi. S. of, on E. side
of N. concrete abutment of steel bridge, Department
of Agriculture Forest Service tablet stamped
"VA BM ELEV 1544, Lumsden Bridge, Sec. 18, T. 1 S.,
R. 18 E., 1937" 1545.962

Reference mark, 160 ft. S. of tablet, on E.
side of S. concrete abutment of steel bridge over
Tuolumne River; chiseled square 1545.93

Jawbone Guard Station, 6.1 mi. S. of, 20 ft. E.
of rd. at curve, on S. side of wash, on top of
boulder; chiseled square 1602.81

Jawbone Guard Station, 6.8 mi. S. of, on W. side
of S. concrete abutment of steel bridge over river;
standard tablet stamped "69 GWM 1945 1480" 1480.207

Reference mark, 100 ft. N. of tablet, on W. side
of N. concrete abutment of steel bridge; chiseled
square 1480.12

Jawbone Guard Station, 7.4 mi. S. of, at foot of
grade, 11 ft. S. of and 2 ft. higher than rd., at
base of bluff; chiseled square 1437.02

Jawbone Guard Station, 8.4 mi. S. of, on N. side
of rd., at curve, on top of boulder; chiseled
square 1735.82

Jawbone Guard Station, 9.3 mi. S. of, 15 ft. S. of
rd., on E. side of masonry culvert; standard
tablet stamped "70 GWM 1945 1895" 1895.752

Reference mark, 65 ft. W. of tablet, 11 ft. NE.
of rd., on top of boulder; chiseled square 1897.66

Jawbone Guard Station, 10.3 mi. S. of, 15 ft. S.
of rd., on masonry culvert; chiseled square 2318.59

TUOLUMNE (457)

California

G. W. Moore, 1945

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- (5) Jawbone Guard Station, 11.1 mi. S. of, 15 ft. S.
of rd., at base of rock bluff; chiseled square 2780.48
- Jawbone Guard Station, 11.9 mi. S. of, 47 ft. NW.
of crossing of Cherry Valley-Rim trails, 8 ft.
SW. of rd., in concrete post; standard tablet
stamped "71 GWM 1945 3041" 3041.469
- Reference mark, 122 ft. SE. of tablet, 11 ft.
S. of rd., in base on N. side of 33 in. pine
tree; rail spike 3040.57
- Buck Meadow, 2.8 mi. W. of, 12.9 mi. S. of
Jawbone Guard Station, 200 ft. N. of rd. fork,
near center of N. base wall of concrete cattle
guard; chiseled square 3059.551
- USC&GS standard disk stamped "H 219 1935" 3023.885
- Reference mark, Smith, 310 ft. SW. of switch
stand, 196 ft. SW. of disk, 25 ft. SE. of rd.,
on top of boulder; chiseled square 3025.95

TUOLUMNE (457)

California

G. W. Moore, 1945

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: V 204

Latitude 37°45' Longitude 120°00'

(6) FROM POINT 1.3 MILES WEST OF BUCK MEADOWS WEST ALONG
STATE HIGHWAY 120 TO SMITH STATION

USC&GS standard disk stamped "J 219 1935" 3194.216

Buck Meadows, 1.6 mi. W. of along State Highway
120, at Mariposa-Tuolumne County line; center of
hwy. 3311.6

Buck Meadows, 1.9 mi. W. of, 45 ft. S. of forks
of rd. S. to Smith Peak Lookout, 3 ft. higher than
rd. forks, in base on N. side of 37 in. oak tree;
rail spike 3254.26

USC&GS standard disk stamped "H 219 1935" 3023.885

TUOLUMNE (457)

California

G. W. Moore, 1945

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: V 204

Latitude 37°45' Longitude 120°00'

- (7) FROM POINT NEAR MIDDLE OF NORTH BORDER OF COULTERVILLE
QUADRANGLE NORTHEAST, EAST, AND SOUTHEAST ALONG ROAD
NEAR SOUTH BORDER INTO EAST PART OF COULTERVILLE
QUADRANGLE NEAR BOWER CAVE

Coulterville, 9.8 mi. E. of, 28 ft. NW. of forks
of Saw Mill Road, at U-bend, on S. side of
Blackstone Creek, on rock outcrop; chiseled square 2909.49

Coulterville, 11.0 mi. E. of, 95 ft. NW. of rd.,
130 ft. N. of top of hill and 1 ft. higher, in
rock outcrop; standard tablet stamped "81 GWM
1945 2119" 2919.116

Reference mark, 44 ft. S. of tablet, 50 ft. NW. of
rd., in base on SE. side of twin 35 in. yellow pine
tree; rail spike 2917.05

Coulterville, 12.1 mi. E. of, 160 ft. SW. of forks
of Jordan Creek Road, 21 ft. SE. of and 4 ft. higher
than rd., in base on NW. side of 25 in. cedar
tree; rail spike 2535.86

Coulterville, 12.6 mi. E. of, 310 ft. W. of forks
of Dog Town Road, 15 ft. S. of rd., in base on S.
side of 30 in. pine tree; rail spike 2474.25

REPORT ON PERMANENT SURVEY MARK

AREA OFFICE

STATE California COUNTY Tuolumne QUADRANGLE Duckwall Mtn 7 1/2' (457)
QUOTE PRIMARY REFERENCE Long Barn Hotel, 20 mi. SE of.
(Direction and distance)

DESIGNATION { LISTED 56 GWM
STAMPED 56 GWM 1945 5379 TYPE OF MARK: BM X TT _____ TRIANG. _____
USGS Line 5

Lat. _____ ° _____ ' _____ " CONDITION
Disturbed
Long. _____ ° _____ ' _____ " Destroyed
Elev. 5379.424 feet Not Found
OK X
ESTABLISHED BY
USGS USBR
USC&GS State GS
USNPS USNFS
USGLO (Other)
USBLM

REMARKS OR REVISED DESCRIPTION:
Long Barn Hotel, 20 mi. SE of, on top of ridge, 67 feet west of section corner 4, township 1 north, range 17 east. At fork of old jeep road south, 6 feet south of road in a concrete post. A standard tablet stamped "56 GWM 1945 5379". Reference mark searched for but not found.

Please prepare in triplicate.

SUBMITTED BY Gary I. Calder
TITLE Carto Tech
AGENCY USGS

DATE 6/29/79

Marks found in good condition need not be reported.

FILL IN ALL AVAILABLE INFORMATION

NAME
DOUBLE
MOUNT HOFFMAN
SMITH
TABLE

STATION
1005
1014
1018
1019

37 119 4 CALIF. 455
37° 45'
119° 30'



JULY 1963
 PUBLISHED AND PRINTED BY:
 U.S. DEPARTMENT OF COMMERCE
 COAST AND GEODETIC SURVEY
 WASHINGTON D.C.

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey/
 NORTH AMERICAN 1927 DATUM

FILE COPY

QUAD 371194 STATION 1005
 CALIF
 LATITUDE 37°30' TO 38°00'
 LONGITUDE 119°30' TO 120°00'
 DIAGRAM NO 11-7 HARIPOSA

37°45'
 119°30'

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: DOUBLE

YEAR: 1956

STATE: California

LOCALITY: Hetch Hetchy to Mono Lake

Second-ORDER Triangulation

FIELD SKETCH: CALIF 430

CHIEF OF PARTY: R. L. Sigsbee	YEAR: 1956	DESCRIPTED BY: S. T. L.	DISTANCE		DIRECTION	
			Feet	Meters		
12a	1. N. No. 1 Calim	SSW	15.20	4.633	00° 00' 00.0"	00.0"
12a	2. V. No. 2	SW	66.27	20.200	75 22 10.8	10.8
		NW			137 16 07	07

Detailed description:
 The station is located on the highest point of the western of two rock pinnacles known as Double Peak. These rocks are about 60 feet higher than the rest of the mountain, the north side of which drops off for several thousand feet into the Tuolumne Gorge.
 To reach the station from the White Wolf Peak Station in Yosemite National Park, take the Ten Lakes trail for about 10 miles to the top of the slickhacks where there are seven trees in a group all with a diamond blaze, turn left and go west about 1.5 miles to Double Peak which is a very outstanding formation. The station mark is 2 feet east of the west edge, 2 feet west of the east edge, 16 feet north of the south edge and 8 feet south of the north edge of the highest point on the west pinnacle. The disk is brass and is stamped DOUBLE 1956

N. No. 1 is 1 foot west of the edge of pinnacle and about the same elevation as station. The disk is set flush and is stamped DOUBLE 1956.
 N. No. 2 is on the highest part of the extreme west end of the west pinnacle. The disk is set flush and the disk is stamped DOUBLE 1956.
 A calum was cut in to be used as an azimuth mark for this station. It is located on a small plateau in a fairly deep saddle on the range of mountains to the south.

* Refer to notes to journals of triangulation and state publications of triangulation.
 † To determine marker only, unless one triangulation leveling is being done.

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH \$10^6\$ AND ANGLE	MARK
STATE: CALIF	X 2,267,990.95	32°08'06"	AZIMUTH MARK (CALIM)
ZONE: 10403	Y 511,096.00	+ 0 34 07	
CODE:			
STATE: CALIF	X 7		
ZONE: 10403	Y 7		
CODE:			
GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION METERS
LATITUDE: 37°34'10.217"			2,981.2
LONGITUDE: 119°34'16.351"			9,781
TO STATION			
AZIMUTH MARK (CALIM)			
		THIRD-ORDER 32 42 12.8	
		LOGARITHM (Feet)	DISTANCE METERS

CG Form 324 (10-21-51)

USCGM-60-C 2887

JAN 1964

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 371194 STATION 1006
 CALIF
 LATITUDE 37°30' TO 38°00'
 LONGITUDE 119°30' TO 120°00'
 DIAGRAM NJ 11-7 MARIPOSA

FILE COPY

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: **DREW (USGS)** STATE: **California** COUNTY: **Tuolumne**

CHIEF OF PARTY: **N. S. Saylor** YEAR: **1956** DESCRIBED BY: **M. J. W.**

HEIGHT OF TELEPOLE ABOVE STATION MARK **1.68** METERS: **HEIGHT OF LIGHT ABOVE STATION MARK**

BEARING: **NE** DISTANCE: **7.008** METERS: **0 00 00.0**

SW: **22.99** (2.3 miles) **297 24 17.2**

SE: **28.91** **312 57 13.1**

WSW: **36.36** **322 04 47.1**

OBJECT	BEARING	DISTANCE	DIRECTION
HUNTER POINT (USFS)	NE	7.008	0 00 00.0
RM 2 (USGS)	SW	22.99	297 24 17.2
Azimuth mark (station SPINN)	SE	28.91	312 57 13.1
RM 1	WSW	36.36	322 04 47.1

12a The station is 15 1/2 miles southeast of Tuolumne, 15 1/2 miles northeast of Colterville, 13 miles east-northeast of Groveland, on a prominent, round, brush and timber covered peak.

To reach from the post office in Groveland, go east on State Highway 120 for 14.6 miles to a fork, take the left fork, northwest, toward Early Intake for 4.6 miles to a gravel side road left, turn left, southwest, and follow gravel road for 0.8 mile to the north base of hill and end of truck travel, climb southeast up steep hill to highest point and the station. The outcrop projects 6 inches.

Station mark, a U. S. Geological Survey bronze disk stamped DREW 1945 cemented in a drill hole in a boulder, is 4 feet northwest of an 18 inch pine tree. The boulder projects 4 inches.

Reference mark No. 1, a standard disk stamped DREW NO 1 1956 cemented in a drill hole in a boulder, is on the southwest slope of the peak, 5-5 feet lower in elevation than the station mark. The boulder projects 18 inches.

Reference mark No. 2, a U. S. Geological Survey bronze reference disk stamped DREW NO 2 cemented in a drill hole in outcropping bedrock, is 1 foot lower in elevation than the station mark. The outcrop projects 6 inches.

Another mark, a U. S. Forest Service bronze disk stamped STATION 10 V.A.B.M. DREW 4125 T15 R188 SEP. 10 1917 cemented in a drill hole in a boulder, is on the southwest slope of peak and 7 feet lower in elevation than the station mark.

Station SPINN will serve as an azimuth mark for this station. To reach the azimuth mark see detailed description to station.

A 15 minute pack.

*Bearing to station is measured by triangulation and also by measurements of triangulation. (Distances are measured clockwise, referred to initial station. 40-3089-1 U. S. GOVERNMENT PRINTING OFFICE)

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: **DREW USGS** YEAR: **1956**

STATE: **California** LOCALITY: **Hetch Hetchy To Mono Lake**

Second -order Triangulation SOURCE: **G-11404** FIELD SKETCH: **Calif 427**

GRID DATA	COORDINATES (F+U)	PLANE AZIMUTH θ (ON Δα) ANGLE	MARK
STATE: Calif	X 2,147,998.30	31°41'32"	AZIMUTH MARK SPINN
ZONE: 3	Y 497,429.99	+0 18 50	
CODE: 0403			
STATE: X			
ZONE: Y			
CODE:			

POSITION	SECONDS IN METERS	ELEVATION METERS
LATITUDE: 37°51'54.244		1,258.5
LONGITUDE: 119 59 14.433		4,129
TO STATION	GEODETIC AZIMUTH (From mark)	DISTANCE METERS
	SECOND-ORDER 32°00'22.13	3,509 1666 3,229.73

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: **STATION 10 USFS** YEAR: **1956**

STATE: **California** LOCALITY: **Hetch Hetchy to Mono Lake**

Second -order Traverse SOURCE: **G-11404** FIELD SKETCH: **CALIF 427**

GRID DATA	COORDINATES (F+U)	PLANE AZIMUTH θ (ON Δα) ANGLE	MARK
STATE: Calif	X 2,147,982.00		
ZONE: 3	Y 497,409.91	+ 0 18 50	
CODE: 0403			
STATE: X			
ZONE: Y			
CODE:			

POSITION	SECONDS IN METERS	ELEVATION METERS
LATITUDE: 37°51'54.047		
LONGITUDE: 119 59 14.812		
TO STATION	GEODETIC AZIMUTH (From mark)	DISTANCE METERS

Computed from station DREW (USGS)

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 COAST AND GEODETIC SURVEY
 WASHINGTON D. C.

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 371194 STATION 1013
 CLIFF
 LATITUDE 37°30' TO 38°00'
 LONGITUDE 119°30' TO 120°00'
 DIAGRAM NJ 11-7 MARIPOSA

DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY
 DATE: JULY 1956

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: JUNE STATE: California COUNTRY: Tuolumne

CHIEF OF PARTY: H. E. S. YEAR: 1956

NOTE: HEIGHT OF THIS STATION FROM SEA LEVEL 1.54 METERS. HEIGHT OF LIGHT ABOVE STATION MARK 0 METERS.

OBJECT	BEARING	DISTANCE		DIRECTION
		feet	METERS	
NORTH MTN.		42.28	13.191	0 00 00.0
R. M. No. 1.		34.39	10.486	102 31 52
R. M. No. 1.				271 00 35
POOPANAUT	NE about 3 miles.			67 33 34.8

The station is on the south side of the main road between OAKLAND TUOLUMNE CAMP and WATHER, on a small rocky hump that projects about 15 feet, 3 meters south of the cut bank on the south side of the road, 10 meters west of the highest point of the hump and 3.8 meters northeast of a triangle blaze on a 2 inch pine tree. Best reached from Groveland as follows: From the Post Office go east on Highway 120 for 15.5 miles, take left fork as per sign Hatch Hetchy Dam and go 5.4 miles, take right fork as per sign Hatch Hetchy Dam and go 5.7 miles to a small rocky hump on the south side of the road and the station. The station mark is a standard station mark disk stamped JUNE 1956 set in a large boulder.

Reference mark No. 1. is a standard reference mark disk cemented in a drill hole in a large boulder, stamped JUNE NO 1 1956.
 Reference mark No. 2. is a standard reference mark disk cemented in a drill hole in a large boulder, stamped JUNE NO 2 1956.
 No azimuth mark was set at this station, POOPANAUT will serve as the azimuth mark.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: JUNE STATE: California LOCALITY: Hetch Hetchy To Mono Lake YEAR: 1956

Second - order Triangulation SOURCE: G-11404 FIELD SKETCH: CLIFF 427

GRID DATA	COORDINATES (FEET)	PLANE AZIMUTH \$ (ORD. ANGLE)	MARK
STATE: CALIF	X 2,176,738.21	+0 22 30	
ZONE: 3	Y 501,604.62		
CODE: 0403			

GEODETTIC DATA	POSITION		SECONDS IN METERS	ELEVATION METERS
	LATITUDE:	LONGITUDE:		
	37°52'33"809	119°53'15.620		1,599.74
				4,264.2

NORTH MTN	GEODETTIC AZIMUTH (FROM STATION)		DISTANCE METERS
	PLANE AZIMUTH	LOCALITY (METERS)	
	166°37'23"14		

* Refer to notes in volumes of triangulation and data publications of triangulation. 17. Instrument used, when the instrument is being used.

455 Calif. JULY 1963
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HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 371194 STATION 1014 CALIF 455
 CALIF
 LATITUDE 37°30' TO 38°00'
 LONGITUDE 119°30' TO 120°00'
 DIAGRAM NJ 11-7 MARIPOSA

FILE COPY

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: **MT HOFFMAN** STATE: **California** COUNTY: **Mariposa**
 CHIEF OF PARTY: **R. L. Engdahl** YEAR: **1956** Described by **F. A. Hartin**
 HEIGHT OF TELESCOPE ABOVE STATION MARK **1.6** METERS: HEIGHT OF LIGHT ABOVE STATION MARK

MARK	OBJECT	BEARING	DISTANCE		DIRECTION	REMARKS
			feet	METERS		
17c	Point	S	17.45	5.319	104	19 56.0
12c	Reference mark No. 1	N	21.40	6.525	306	56 26
12c	Reference mark No. 2					

The station is on the highest part of Mt. Hoffman, which is about 7 1/2 miles east and 1 1/2 miles south of White Wolf, about 7 miles northeast of Yosemite and about 1 mile west of May Lake. The station mark is 4 feet south of a cairn and is stamped MT HOFFMAN 1956. The station mark is 2 feet north of a cairn and 1 foot below station elevation and is stamped MT HOFFMAN NO 1 1956. Reference mark No. 2 is 4 feet south of a cairn and 1 foot below station elevation and is stamped MT HOFFMAN NO 2 1956. The azimuth mark is on a prominent rock ridge that extends north and south. It is 1 foot west of a cairn and is stamped MT HOFFMAN 1956. To reach the station from the Post Office in Groveland go east on State Highway 120 for 25.0 miles to the end of State Highway 130 and the entrance to Yosemite

National Park. Continue into the park following the Mececan road southeast for 6.8 miles to a junction just beyond the Crane Flat Ranger Station. Take left fork and follow Tioga Road northeast for 14.0 miles to the junction of Tioga Road and White Wolf Road. Continue southeasterly on Tioga Road for 13.8 miles to the Hay Lake Parking Area and the end of truck travel. From here pack north on well marked trail for about 1 1/2 miles to May Lake. Then pack west across the south end of the lake southwest thru left of a wooden water tank. Here take the Mt. Hoffman trail and pack southwest thru a canyon and to the southwest end of a small meadow. Then follow the trail, which is well marked by ducks, west-northwest to the highest part of Mt. Hoffman and the station and reference marks as described. Length of pack about three hours. To reach the azimuth mark from the station pack east for about 0.35 mile to the high part of a prominent rock ridge and the azimuth mark.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: **MOUNT HOFFMAN** YEAR: **1956**
 STATE: **California** LOCALITY: **Hetch Hetchy To Mono Lake**
 First -order Triangulation source: **G-11404** FIELD SKETCH: **Calif 430**

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ (Horizontal Angle)	MARK	POSITION		ELEVATION
				LONGITUDE	NORTH	
STATE: Calif ZONE: 3 CODE: 0403	x 2,285,988.53 y 491,953.76	273°35'40" + 0 36 23	AZIMUTH MARK	LONGITUDE: 119 30 34.344	NORTH	3,307.0 10,850
STATE: X ZONE: Y CODE:						

GEODETTIC DATA	TO STATION		GEODETTIC AZIMUTH (From mark)		LOGARITHM (Meters)	METERS
	LONGITUDE	NORTH	WEST	DISTANCE		
AZIMUTH MARK	37°50'49"146			274°12'02"18		

DESCRIPTION OF TRIANGULATION STATION

DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY Form 518 Rev. Aug. 1958	NAME OF STATION: PILOT PEAK	STATE: California	COUNTY: Mariposa & Tuolumne
CHIEF OF PARTY: U. E. Sylar	YEAR: 1956	Described by: H. J. W.	
NOTE: 1. HIGHLY ACCURATE SHORT SIGHTS MADE 1.62 METERS	DISTANCES AND DIRECTIONS TO ADJUTANT MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION	METER	
2. UNDERGROUND-STATION MARK		FEET	
	OBJECT	BEARING	DIRECTION
		Feet	degrees
17c	PENON BLANCO	(0.1 mile)	0° 00' 00.0"
12c	Adelphi mark	21.20'	149° 32' 03.1"
	RM 1	6.663'	197° 00' 28.0"
	Pilot Peak lookout (Pilot USGS)	32.94'	258° 12' 29.2"
	RM 2 (USGS)	10.070'	278° 56' 27.0"

The station is located 17 1/2 miles southeast of Groveland, 1 1/2 miles east-northeast of Gontierville, and 3 miles south of State Highway 120, on the summit of Pilot Peak. Station mark, a standard disk stamped PILOT PEAK 1956 cemented in a drill hole in a boulder, is 45.0 feet north of the lookout house, 27.0 feet northeast of the northeast corner of garage, and 6.0 feet south of the north edge of earth fill. The boulder projects 6 inches.

Reference mark No. 1, a standard disk stamped PILOT PEAK NO 1 1956 cemented in a drill hole in a boulder, is 47.2 feet east of the northeast corner of garage, 40.2 feet north of the north edge of lookout house, and about the same elevation as the station. The boulder projects 3 inches.

Reference mark No. 2, a U. S. Geological Survey bronze reference disk cemented in a drill hole in a boulder, is stamped PILOT NO 2 1945. It is 27.1 feet southeast of the southeast corner of garage, 15.6 feet northeast of the northeast corner of lookout house, 8 feet southeast of a tree, on the south edge of steps leading to the lookout house. It is 2 feet higher in elevation than the station mark.

Azimuth mark, a standard disk stamped PILOT PEAK 1956 cemented in a drill hole in a boulder, is on a rocky knoll 100 feet east-southeast of road leading to the station, 30 feet southeast of summit of knoll, and 1.5 feet south of a small cistern. The boulder projects 8 inches.

To reach from the post office in Groveland, go east on State Highway 120 for 10.7 miles to Buck Meadows Lodge, take a gravelled road right, south, then southeast for 5.8 miles to a T-intersection, turn left, east, and go 0.5 mile to a fork, take the left fork, east, along the north side of a creek and follow the main gravelled road for 10.0 miles to a fork at an old fire guard station, take the left fork, west, uphill as per sign for Pilot Peak L. O. 1.4, and go 1.25 miles to the azimuth mark on the left, continue uphill for 0.15 mile to lookout house and station.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: PILOT PEAK	LOCALITY: Hetch Hetchy To Mono Lake	YEAR: 1956
STATE: California	SOURCE: G-11404	FIELD SKETCH: CALIF 427, 430
First - ORDER: Triangulation		
GEODETIC DATA	COORDINATES (7-44)	PLANE AZIMUTH SLOPE ANGLE
STATE: CALIF	2,163,334.23	+ 0 20 45
ZONE: 3	7 460,290.60	
CODE: 0403		
STATE: 3		
ZONE: 7		
CODE:		
POSITION	SECTION IN METERS	ELEVATION
LATITUDE: 37°45'14.6"181	NORTH	1,830.6 METERS
LONGITUDE: 119°56'05.909	WEST	6,006 FEET
TO STATION	GEODETIC AZIMUTH (From center)	DISTANCE
	83°21'03.7"0	METERS

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: PILOT PEAK LOOKOUT TOWER	LOCALITY: Hetch Hetchy to Mono Lake	YEAR: 1956
STATE: California	SOURCE: G-11404	FIELD SKETCH: CALIF 427, 430
Third - ORDER: Triangulation		
GEODETIC DATA	COORDINATES (7-44)	PLANE AZIMUTH SLOPE ANGLE
STATE: CALIF	2,163,351.48	+ 0 20 45
ZONE: 3	7 460,240.04	
CODE: 0403		
STATE: 3		
ZONE: 7		
CODE:		
POSITION	SECTION IN METERS	ELEVATION
LATITUDE: 37°45'14.5"680	NORTH	1,832 METERS
LONGITUDE: 119°56'05.698	WEST	6,010 FEET
TO STATION	GEODETIC AZIMUTH (From center)	DISTANCE
		METERS

Computed from stations PENON BLANCO, SMITH PEAK, PILOT PEAK, NORTH MOUNTAIN, POOPANAVUT, BALD
 No Description Available

Refer to notes in manuals of triangulation and state publications of triangulation.
 1 Distances are measured clockwise, referred to field meridian.
 2 The assumed meridian only, when an independent leveling is being done.

FILE COPY

DEPARTMENT OF COMMERCE
 U.S. COAST AND GEODETIC SURVEY
 FORM 524
 1-7-54

NAME OF STATION: SMITH STATE: California COUNTY: Tuolumne
 CHIEF OF PARTY: H.J. Engdahl YEAR: 1956 Described by: K.D. Barber
 HEIGHT OF TRANSIT ABOVE STATION MARK METERS
 HEIGHT OF LIGHT ABOVE STATION MARK METERS
 SURFACE-STATION MARK DISTANCES AND DIRECTIONS TO ADJUTANT MARK, REFERENCE MARK, AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

MARK	OBJECT	BEARING	DISTANCE		DIRECTION:
			Feet	Meters	
12c	GILBERT	NE	68.40	20.850	0. 00 00.00
12c	R.M. No. 1	SW	51.11	15.587	62 40 52
	R.M. No. 2				308 13 52

The station is located on the highest part of Smith Peak, which is a bare topped hill with heavy timber on all sides. It is about 7 miles northeast of Mather, 6 miles northwest of White Wolf and 3 miles southeast of the O'Shaughnessy Dam. The mark is set on the highest point in a large boulder about 8 by 12 feet in diameter and is stamped SMITH 1956.
 Reference mark No. 1 is set near the northeast end of the mountain in and out-cropping boulder and is about 2 feet lower than the station. It is stamped SMITH NO 1 1956 and set flush.
 Reference mark No. 2 is set in the top of a large boulder which is about 15 feet high and about 6 by 6 feet square and is 3 feet lower than the station. It is stamped SMITH NO 2 1956 and set flush with the rock.
 To reach the station from the Joe Barnes Stables in Mather, follow the cotton-

wood trail to cottonwood meadows, then follow the Smith Peak and Harden Lake Trail to the northeast corner of Smith Meadows, take the left fork and follow the Smith Peak trail about 1.5 miles to the end of horse travel, from here pack south to the top of the peak and the station as described. A 15 minute pack.

DEPARTMENT OF COMMERCE
 U.S. COAST AND GEODETIC SURVEY
 FORM 525
 1-7-54

RECOVERY NOTE, TRIANGULATION STATION

NAME OF STATION: SMITH STATE: California
 ESTABLISHED BY: H.L.E. YEAR: 1956
 RECOVERED BY: H.S.E. YEAR: 1957 COUNTY: Tuolumne

Detailed statement as to the status of the original description, including marks found, stampings, changes made, and other pertinent facts:
 Station recovered as described. Line of sight from standard 1-2 blocked clear in all directions. Disc flush with rock top. Reference marks recovered in good condition.

*Name of chief of party should be inserted here. The officer who actually retook the station should sign the name at the end of the recovery note.
 Note.—Use of these forms must be used for error correction.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: SMITH YEAR: 1956
 STATE: California LOCALITY: Hetch Hetchy To Mono Lake
 First-order Triangulation source: G-11404 FIELD SKETCH: Calif 430

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ FOR SIGHT ANGLE	MARK
STATE: Calif	X 2,220,929.00	+ 0 28 08	
ZONE: 3	Y 520,426.03		
CODE: 0403			
STATE: X			
ZONE: Y			
CODE:			
GEODETIC DATA	POSITION	SECOND IN METERS	ELEVATION
	LATITUDE: 37°55'36"670	NORTH	2,363.0 METERS
	LONGITUDE: 119°44'02.548	WEST	7,753 FEET
	TO STATION	GEODETIC AZIMUTH (From station)	DISTANCE
GILBERT		166°12'51.6	
			LOGARITHM (Meters)
			METERS

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HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

FILE COPY

QUAD 371194 STATION 1019
 CALIF 37°30' TO 38°00'
 LONGITUDE 119°30' TO 120°00'
 DIAGRAM NO 11-7 MARIPOSA

CR 11 F 455

DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY
 WASHINGTON 20540

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: TERT
 STATE: California
 COUNTY: Mono

CHIEF OF PARTY: L. L. Englund
 YEAR: 1956
 DISTRICT: 1.0
 DELETED BY: L. J. Fraser

NOTE	OBJECT	BEARING	DISTANCE		DIRECTION
			Feet	Meters	
2	GOLD MARK Reference mark No. 2 Reference mark No. 1	N 19.83 E 18.99	6.059 5.723	00 221 43 27	00.00 27.50

The station is located on the highest point of a north-south ridge, 1.0 mile east of Table Lake, 2.0 miles east southeast of Pleasant Valley, 1.5 miles west of Rodgers Canyon and 3.0 miles southwest of Benson Lake. It is a standard disk cemented in a drill hole in outcropping bedrock, projects 6 inches above the surface of the ground and is stamped "TABLE No. 1 1956".
 Reference mark No. 1 is a standard disk cemented in a drill hole in outcropping bedrock, projects 8 inches above the surface of the ground and is stamped "TABLE No. 1 1956".
 Reference mark No. 2 is a standard disk cemented in a drill hole in outcropping bedrock, projects 8 inches above the surface of the ground and is stamped "TABLE No. 2 1956".
 A standard mark was established at this station.

To reach the station from mile half follow the Table Valley Trail for 11.0 miles to Table Valley and where the trail forks, take the Pleasant Valley Trail for 4.7 miles to where the trail forks, continue on the Pleasant Valley Trail for about 30 minutes to where the trail starts down grade and the end of horse travel, pack east to the crest of the ridge then turn left and pack northerly to highest point of ridge and station as described.
 This station is about and 8 hour horse pack and 2 hour back pack.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: TABLE
 STATE: California
 LOCALITY: Hetch Hetchy to Mono Lake
 YEAR: 1956

Second-order Triangulation
 SOURCE: G-11404
 FIELD SKETCH: CALIP 430

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH Bearing Angle	MARK
STATE: CALIF ZONE: 3403	E 2,276,262.87 N 539,495.63	+ 0 35 12	

GEODETTIC DATA	POSITION		GEODETTIC AZIMUTH (From south)	ELEVATION METERS
	LATITUDE	LONGITUDE		
TO STATION	37°58'40".37	119°32'29".23	NORTH WEST	2,999.1 9,843

COLD MTN

295°03'52"3

* Refer to scales of triangulation and other publications of the Department of Commerce, U. S. Coast and Geodetic Survey, for information regarding the use of this data.

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 COAST AND GEODETIC SURVEY
 WASHINGTON D.C.
 Revised FEB 1964

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 371194 STATIONS 1020
 CALIF
 LATITUDE 37°30' TO 38°00'
 LONGITUDE 119°30' TO 120°00'
 DIAGRAM NJ 11-7 MARIPOSA

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: WOODS RIDGE STATE: California COUNTY: Tuolumne
 CHIEF OF PARTY: H. L. Taylor YEAR: 1956 Described by: J. W. Johnson

HEIGHT OF TELESCOPE ABOVE PRISM MARK 31.963 METERS HEIGHT OF LIGHT ABOVE STATION MARK METERS
 1a Surface-station mark DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

NO.	OBJECT	BEARING	DISTANCE	DIRECTION:
1b			FEET	
	CONDON			0 00 06.00
	North Mtn. L.O.	SE	(4.5 Mile)	45 05 50.14
11a	Reference mark NO. 2 (Center of Woods Ridge L.O.)		51.28	15.630 159 19 25.3
12a	Reference mark NO. 1		113.62	34.631 312 02 10.

The station is located about 17 miles northeast of Groveland, 6 miles north of the Early Intake Dam, 4 1/2 miles northwest of North L.O., 4.5 miles west southwest of Lake Eleanor, and at the Woods Ridge Forest Service Lookout Tower. Post Office in Groveland, 50 east on State Highway 120 for 14.3 miles to the Cliff House and the Soda Fork of the Tuolumne River, continue on highway 120 for 0.5 mile to a fork, take left fork as per sign "Cherry Valley Dam" and go 5.3 mile to a fork, take left fork as per sign "Early Intake Dam" and go 3.0 mile to a bridge below the Early Intake Dam, continue on main traveled road for 11.1 mile to a "T" road: left and sign on the right, camp 45 and Woods Ridge, turn left and go 0.15 mile to a fork, take left fork for 0.2 mile to a fork, take right fork and go 0.5 mile to three forks of the road, take extreme right fork and .05 mile to a fork, take right fork, and go 1.25 mile to a fork and go 1.35 mile to the Woods Ridge L.O. and station.

The station is 51.28 feet northeast of the center of the Woods Ridge L.O. tower and in the center of a circle driveway. It is a standard disk and it is stamped WOODS RIDGE 1956 and it is set flush with the ground surface.
 Reference mark NO. 1 is 23 feet north northeast of driveway to L.O. cabin, 8 feet northeast of a 18" oak tree, and it is about 2 feet lower than the station. It is a standard disk set in a drill hole in bed rock and it is stamped WOODS RIDGE NO 1 1956 and it projects about 2 inches.
 Reference mark NO. 2 is set in the center of the Woods Ridge Forest Service L.O. tower and it is about 18 inches higher than the station. It is a standard disk stamped WOODS RIDGE NO 2 1956 and it is set flush with the ground surface.
 No azimuth mark to this station.

* Refer to notes in manuals of triangulation and state publications of triangulation. (1) To nearest minute only, when an angle is not being used. (2) Direction-angle measured clockwise, referred to initial station. (3) 1956-1957 U.S. STANDARD METER UNIT

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: WOODS RIDGE YEAR: 1956
 STATE: California LOCALITY: Hetch Hetchy To Mono Lake
 Second -order Triangulation SOURCE: G-11404 FIELD SKETCH: Calif 427

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ (100' x 100' ANGLE)	MARK	SECONDS IN METERS		ELEVATION METERS
				NORTH	WEST	
STATE: Calif ZONE: 3 CODE: 0403	X 2,153,455.72 Y 531,742.43	+ 0 19 33		37° 57' 33" 176 119 58 03.868		1,830.3 6,005
STATE: ZONE: CODE:	X Y			TO STATION	GEODETIC AZIMUTH (From center)	DISTANCE METERS
					269° 42' 33" 9	

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: WOODS RIDGE LOOKOUT TOWER (WOODS RIDGE RM 2) YEAR: 1956
 STATE: California LOCALITY: Hetch Hetchy to Mono Lake
 Third -order Triangulation SOURCE: G-11404 FIELD SKETCH: CALIF 427

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ (100' x 100' ANGLE)	MARK	SECONDS IN METERS		ELEVATION METERS
				NORTH	WEST	
STATE: Calif ZONE: 3 CODE: 0403	X 2,153,407.94 Y 531,723.84	+ 0 19 33		37° 57' 32" 995 119 58 04.466		
STATE: ZONE: CODE:	X Y			TO STATION	GEODETIC AZIMUTH (From center)	DISTANCE METERS

Computed from stations DREW (USGS), WOODS RIDGE, NORTH MOUNTAIN, PILOT PEAK
 No Description Available

FILE COPY

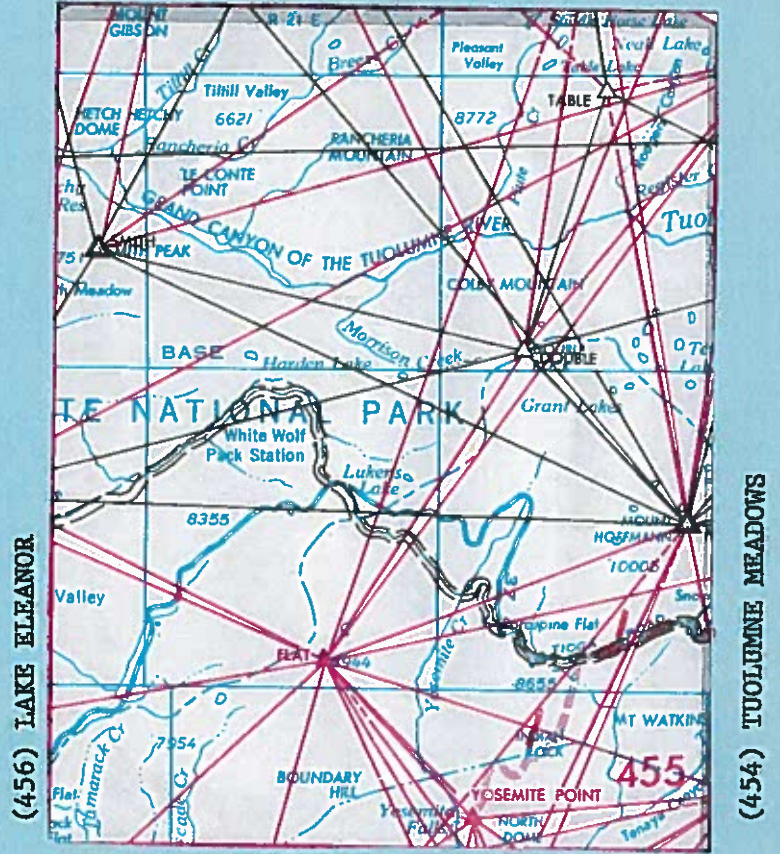
HETCH HETCHY RESERVOIR

37°45'
119 30

CALIFORNIA 455

NGS 37 119 41 (79)

(472) TOWER PEAK



(437) YOSEMITE

(1) R.A. Farmer &
C.H. Semper

1905
1905

7683
5714

HETCH HETCHY RESERVOIR (455) California C.H. Semper, 1905
R.A. Farmer, 1905

Third Order Adjusted Elevations Based
on Sea Level Datum of 1929

Books: 5714, 7683

Latitude 37°45' Longitude 119°30'

(1) UP YOSEMITE FALLS TRAIL NORTHEAST TO SNOW FLAT

Yosemite Valley, in angle of trail to Yosemite Falls; 100 ft
from large flat rock used as lookout to bottom of falls; top
of large granite rock; aluminum tablet stamped "5143 B" 5143.561

Yosemite Valley, top of Yosemite Falls; east side of bridge
over Yosemite Creek; south side of rock foundation of abut-
ment; aluminum tablet stamped "6603 B" *SFNF 1986*
6603.952

Yosemite Point, at west end of iron railing; triangulation
tablet 6935.506

Latitude 37°45'22.59" Longitude 119°35'32.14" (Prelim.) -

Summit N. of trail, in rock 5 ft base, 3 ft high; aluminum tab-
let stamped "F 7852 1905" (Not Found, 1956) ** New Desc* *Found SFNF 1986*
7852.655
Found 2008

Junc. of trail with Tioga Wagon Rd., S. of; on rock; aluminum
tablet stamped "7981 F" (Not Found) 7981.903

() 9-1165*

FILE COPY

REPORT ON CONDITION OF SURVEY MARK

STATE Calif. COUNTY Mariposa QUAD NAME Hatch Hatchy S.E.
STATION NAME and/or NUMBER 6603 B QUAD NUMBER N37119442 USGS line
LATITUDE _____ " TYPE of MARK BM TRAV TRIANG DOPPLER
LONGITUDE _____ " YEAR ESTABLISHED 1905
ELEVATION 6603.952 ft/meter By USGS NGS OTHER _____
CONDITION _____ MARK STAMPED 6603 B (Name of agency)

REMARKS or REVISED DESCRIPTION

This bench mark was SFNF in 1986 at the location of the present bridge. After this search and during a discussion with the superintendant of trail maintenance it was determined that the original bridge had been washed out in the winter of 1957/58 and a new bridgeput in at a different location. This BM is shown on the 1958 special edition "Map of Yosemite Valley" about 300 feet below the bridge as it existed in 1958. It has been sketched on the 1955 photos GS-VJS 2-23 There is a possibility that the BM can be found if the abutments for the old bridge can be found.

SUBMITTED BY David E. Reed AGENCY USGS DATE 8/26/86

Marks found in good condition need not be reported unless description is inadequate.

Please prepare in triplicate.

GSC-17a

REPORT ON CONDITION OF SURVEY MARK

STATE Calif. COUNTY Mariposa QUAD NAME Hatch Hatchy S.E.
STATION NAME and/or NUMBER F 7852 QUAD NUMBER N37119442 USGS line
LATITUDE _____ " TYPE of MARK BM TRAV TRIANG DOPPLER
LONGITUDE _____ " YEAR ESTABLISHED 1905
ELEVATION 7852.655 ft/meter By USGS NGS OTHER _____
CONDITION Good MARK STAMPED F 7852 1905 (Name of agency)

REMARKS or REVISED DESCRIPTION

This bench mark was reported not found in 1956. New description is as follows:
Up Yosemite Falls Trail northeast to Snow Flat; at the top of the saddle between
Lehamite Creek and Porcupine Creek, 70 feet northeast of the trail fork to Indian
Ridge, 15 feet northwest of the trail fork to Snow Creek, cemented in the top
of a 3 feet by 5 foot boulder, an aluminum tablet stamped F 7852 1905 and about
2 feet higher than the trail fork.

SUBMITTED BY David E. Reed AGENCY USGS DATE 8/26/86

455
Line 1



"TOM ROHRER"
<zdoldtt69tr05@dellcity.com>

To "Dale P Benson" <dpbenson@usgs.gov>

cc

bcc

10/19/2008 04:43 PM

Subject USGS BM 7853 YNP

AT UTM: 274756E

4185064N Z11

apparently a USGS BM listed on topo map as 7853. I could not find data sheet for it. attached a jpg as I found it



BM7853 (trail to YosPt).jpg



CA 45.5

F 78.52

12/08


```
=====
      North (Meters)      East (Meters)      Datum      Zone
INPUT = 4185064.         274756.           NAD83      11
=====
```

```
LATITUDE      LONGITUDE      ZONE  CONVERGENCE  SCALE FACTOR
DD MM SS.sssss  DDD MM SS.sssss  -----  DD MM SS.ss  -----
-----
37 47 6.69950 N 119 33 28.23199 W 11  - 1 34 4.28 1.00022494
```

REPORT ON CONDITION OF SURVEY MARK

STATE Calif. COUNTY Mariposa QUAD NAME Hatch Hatchy S.E.
 STATION NAME and/or NUMBER 6603 B QUAD NUMBER N37119442 USGS 11ne
 LATITUDE _____ " TYPE of MARK BM TRAV TRIANG DOPPLER
 LONGITUDE _____ " Quad 455
 ELEVATION 6603.952 ft./meter By USGS NCS OTHER _____ (Name of agency)
 CONDITION _____ MARK STAMPED 6603 B

REMARKS or REVISED DESCRIPTION

This bench mark was SPNF in 1986 at the location of the present bridge. After this search and during a discussion with the superintendent of trail maintenance it was determined that the original bridge had been washed out in the winter of 1957/58 and a new bridgeput in at a different location. This BM is shown on the 1958 special edition "Map of Yosemite Valley" about 300 feet below the bridge as it existed in 1958. It has been sketched on the 1955 photos GS-435 2-23 There is a possibility that the BM can be found if the abutments for the old bridge can be found.

SUBMITTED BY David E. Reed AGENCY USGS DATE 8/26/86

Marks found in good condition need not be reported unless description is inadequate. Please prepare in triplicate. GSC-178

REPORT ON CONDITION OF SURVEY MARK

STATE Calif. COUNTY Mariposa QUAD NAME Hatch Hatchy S.E.
 STATION NAME and/or NUMBER F 7852 QUAD NUMBER N37119442 USGS 11ne
 LATITUDE _____ " TYPE of MARK BM TRAV TRIANG DOPPLER
 LONGITUDE _____ " Quad 455
 ELEVATION 7852.655 ft./meter By USGS NCS OTHER _____ (Name of agency)
 CONDITION Good MARK STAMPED F 7852 1905

REMARKS or REVISED DESCRIPTION

This bench mark was reported not found in 1956. New description is as follows: Up Yosemite Falls Trail northeast to Snow Flat; at the top of the saddle between Lehamite Creek and Porcupine Creek, 70 feet northeast of the trail fork to Indian Ridge, 15 feet northwest of the trail fork to Snow Creek, cemented in the top of a 3 feet by 5 foot boulder, an aluminum tablet stamped F 7852 1905 and about 2 feet higher than the trail fork.

SUBMITTED BY David E. Reed AGENCY USGS DATE 8/26/86