

36°00'
116°45'

CALIFORNIA

301

Index

<u>Station</u>	<u>Project</u>
Bennett	-- (M)
C&GS BM "H 681 1943"	-- (M)
C&GS BM "W 680 1943"	-- (M)
Gold Hill	-- (M)
Pearl	-- (M)
4-93 A	-----

(M) - Multilith

PEARL Inyo County CALIFORNIA

J. A. Lyon, 1949

Located about 24 mi. S. of Furnace Creek Ranch and 12 mi. N. of Wingate Pass.

To reach from Bennetts Well, drive 2.6 mi. S. Station is 150 ft. W. of center line of rd. and opposite CAGS B.M. "B 681 1943".

Station mark: Standard tablet stamped "PEARL 1949" set in concrete post projecting about 4-in. above ground.

Reference mark No. 1: CAGS B.M. "B 681 1943", 231.6 ft. from station mark in azimuth 348°57'37".

Elevation -248. ft. (By Plane table leveling)

Latitude: 36°06'30.205" Longitude: 116°50'37.011"

To Station	Azimuth	Back Azimuth	Feet
Gold Hill	47°34'36.7"	227°30'03.1"	51,739.7
Fanmint (CAGS)	80 29 31.9	266 21 17.0	69,004.7
Bennett	110 12 47.4	292 09 40.1	28,156.7
CAGS BX "W 680 1943"	159 14 42.3	339 13 41.8	23,743.9
Dante (USGS)(CAGS)	219 15 23.3	39 19 36.2	55,474.7
Smith Mtn. (USGS) (CAGS)	305 34 01.4	125 39 30.4	56,445.0
CAGS B.M. "H 681 1943"	348 57 31.6	168 58 13.1	30,205.4

FILE COPY

Pearl USGS

4.000
 GEODETIC TO GRID
 360630.205
 1165037.011
 Y=N=
 289301.255
 X=E=

REPORT ON CONDITION OF SURVEY MARK

QUADRANGLE REPORT

STATE Ill COUNTY Ill QUAD NAME 30 116 33 301
STATION NAME and/or NUMBER H 661 QUAD NUMBER 30 116 33 (301)
LATITUDE _____ ° _____ ' _____ " TYPE of MARK: BM TRAV. TRIANG. DOPPLER
LONGITUDE _____ ° _____ ' _____ " YEAR ESTABLISHED 1943 Line 102
ELEVATION -235.114 ft./meter By: USGS NGS OTHER _____ (Name of agency)
CONDITION Degraded MARK STAMPED: _____

REMARKS or REVISED DESCRIPTION Concrete post found abandoned metal one.
Wooden witness post found in good condition.

SUBMITTED BY W. S. Pindley AGENCY U.S. Geological Survey DATE 03/03/1960

Marks found in good condition need not be reported unless description is inadequate.

Please prepare in triplicate.

GSC-178

4-93A

Inyo County

Calif. (301)

J. T. Long, 1949 (Not occupied)

1927 N.A.D. Unadjusted

Books: PH 129-130

Located about 14.6 mi. S. and 4.6 mi. W. of Furnace Creek Ranch, on highest part of hill.

Station Mark and Signal: Black flag over white X-target on 2 x 2 pole.

V. A. Elev.: 1969 ft.

To Station	Latitude	Azimuth	Back Azimuth	Longitude	Log. meters	Miles
Trail	36° 14' 38.91"			116° 57' 11.49"	3.94714	5.503
Artists					4.15032	8.784
Badwater					4.09753	7.778
Pearl		326° 45' 55"	146° 49' 48"		4.25533	11.186
Bennett		350 46 53	170 47 39		4.07836	7.442

2-26-57 hme ✓
11.11.11

Bennett
CALIFORNIA ZONE
4.000
GEODETTIC TO GRID
360815.355
1165554.789
Y=N=
299357.999
X=E=
2610661.745

C+Gis
Bm "W 680 1943 4.000
GEODETTIC TO GRID
361009.786
1165219.628
Y=N=
311309.213
X=E=
2628058.267

C+Gis Bm "H 681"
CALIFORNIA ZONE
4.000
GEODETTIC TO GRID
360137.020
1164926.589
Y=N=
259792.605
X=E=
2643409.407

Gold Hill
CALIFORNIA ZONE
4.000
GEODETTIC TO GRID
360044.784
1165821.882
Y=N=
253549.598
X=E=
2599560.542

CALIF. 301
36°00'
116°45'

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

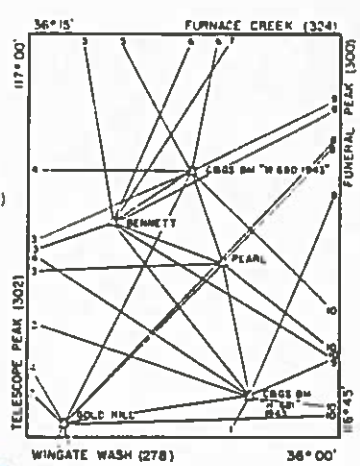
THIRD ORDER TRIANGULATION
North American Datum of 1927

BENNETTS WELL QUADRANGLE
CALIFORNIA

FILE COPY

CA 2500.4 $x = 2,613,409.407$
 $y = 259,792.605$

- Inyo County
Edition of 3/1/57
- Numbered lines indicate listed azimuths and distances to the following stations not on the quadrangle:
1. Sugarloaf (USGS) (C&GS)
 2. Needle
 3. Panamint (C&GS)
 4. Telescope Peak
 5. Trail
 6. Artists
 7. Badwater
 8. Dante (USGS) (C&GS)
 9. Funeral (C&GS)
 10. Smith Mtn. (USGS) (C&GS)



Latitude: 36°01'17.020" Longitude: 116°49'26.589"

To Station	Azimuth	Back Azimuth	Feet
Sugarloaf (USGS) (C&GS)	30°57'14.4"	210°43'33.1"	65,264.3
Gold Hill	83 11 45.0	263 04 28.2	44,204.2
Panamint (C&GS)	108 46 00.3	283 40 44.8	75,423.3
Telescope Peak	123 45 26.2	303 31 05.7	73,423.3
Bennett	141 41 01.0	342 37 12.3	51,739.7
Pearl	168 68 13.1	348 57 31.4	36,156.4
Funeral (C&GS)	202 00 08.1	22 03 31.2	28,156.4
Smith Mtn. (USGS) (C&GS)	264 53 18.5	65 00 24.3	42,254.8

C&GS BM "W 680 1943" Inyo County CALIFORNIA
J. A. Lyon, 1949

Described by U. S. Coast and Geodetic Survey in California Level Line No. 75--"Furnace Creek to Shoshone, Calif.", as follows:

"Along rd. from Furnace Creek Inn to Shoshone via Bennetts Well, 19.4 mi. S. of Furnace Creek Inn, 36 ft. E. of the center of the rd., a witness post has been set. Elevation -239.448 ft.

"Station mark: Standard C&GS B.M. stamped "W 680 1943" set in concrete post."

Note by J.A.L., 1949: Station found as described.

Located about 19 mi. S. of Furnace Creek Ranch and 2 mi. N. of Bennetts Well.
 $x = 2,638,050.267$
 $y = 311,307.213$
Elevation -239.448 ft. (Spirit leveling by C&GS in Calif. Level Line No. 75)

Latitude: 36°10'09.760" Longitude: 116°52'19.622"

To Station	Azimuth	Back Azimuth	Feet
Gold Hill	27°31'25.6"	207°27'52.2"	64,404.7
Bennett	56 46 06.0	236 43 59.0	21,160.2
Panamint (C&GS)	66 22 30.3	246 15 16.0	65,983.8
Telescope Peak	90 13 33.8	270 05 54.2	63,814.2
Trail	152 31 45.4	332 28 15.7	62,537.7
Artists	191 11 26.8	11 12 48.8	58,475.1
Dante (USGS) (C&GS)	244 29 18.2	64 34 31.8	48,212.8
Smith Mtn. (USGS) (C&GS)	315 21 11.0	135 27 46.7	77,353.6
Pearl	339 13 41.8	159 14 42.3	23,743.9

GOLD HILL Inyo County CALIFORNIA
J. A. Lyon, 1949

Located about 12 mi. SW. of Bennetts Well and 5 mi. NW. of Warm Springs, on highest point of top.

Note: "To reach" description from C&GS reconnaissance notes.

"To reach from Furnace Creek Inn, drive W. for 0.3 mi. to intersection; take rd. lead S. down Death Valley for 6.1 mi. to mi. forks; take right fork at Bennetts Well for 27.0 mi. to forks and jct. with Warm Springs Canyon Road; turn right 1.0 mi. to Y-fork; take left fork 0.8 mi. to mine; continue 2.15 mi. to Warm Springs; continue 1.85 mi. to Y-fork; take left fork 2.0 mi. to Y-fork and sign "BUTTES VALLEY 3-ARVIL SPRINGS"; take right fork 0.2 mi. to dim track rd. to left at Y-fork; take right fork 1.8 mi. to Y-fork; take left fork 1.0 mi. to new lead mine at base of mountain. Pack up ridge to the highest point and station. About 45-min. pack."

Station mark: Standard tablet stamped "GOLD HILL 1949" set in bedrock.

Reference mark No. 1: Standard reference mark tablet stamped "GOLD HILL NO 1 1949" set in bedrock, 8.34 ft. from station mark in azimuth 32°48'.

Reference mark No. 2: Standard reference mark tablet stamped "GOLD HILL NO 2 1949" set in bedrock, 29.79 ft. from station mark in azimuth 167°45'.

V.A. elevation 5492 ft.

Latitude: 36°00'44.784" Longitude: 116°58'21.882"

To Station	Azimuth	Back Azimuth	Feet
Needle	19°32'20.1"	199°30'24.2"	48,688.2
Panamint (C&GS)	134 55 21.9	314 51 43.5	43,350.0
Telescope Peak	149 14 48.7	329 10 43.6	64,713.0
C&GS BM "W 680 1943"	207 27 52.2	27 31 25.6	64,404.7
Dante (USGS) (C&GS)	223 11 43.7	43 20 30.2	106,532.2
Pearl	227 30 03.1	47 34 36.7	51,739.7
C&GS BM "H 681 1943"	263 06 25.2	83 13 40.0	44,204.2
Smith Mtn. (USGS) (C&GS)	268 30 46.3	88 40 48.2	84,133.3
Sugarloaf (USGS) (C&GS)	344 18 21.4	164 19 54.4	48,254.8

BENNETT Inyo County CALIFORNIA
J. T. Long, 1949

Located about 23 mi. SW. of Furnace Creek Ranch and 4 mi. SW. of Bennetts Well, on the highest point of a low range of hills on W. side of Death Valley.

Note: "To reach" description from C&GS reconnaissance notes. (USGS occupation by helicopter)

"To reach from Furnace Creek Inn, drive S. on State Highway 190 for 6.3 mi. to rd. forks; take right fork (SW.) on unpaved rd. for 16.4 mi. to rd. X-ing and sign "BENNETTS WELL" pointing E.; turn right for 3.2 mi. to Fearlite Mine. Pack W. across country to steep slope; thence up slope to highest point of low hills and station. A 1-hour pack."

Station mark: Standard tablet stamped "BENNETT 1949" set in boulder.

Reference mark No. 1: Standard reference mark tablet stamped "NO 1", set in boulder, 13.06 ft. from station mark and 1.0 ft. lower in azimuth 1°47'.

Reference mark No. 2: Standard reference mark tablet stamped "NO 2" set in boulder, 30.18 ft. from station mark and 8.0 ft. higher in azimuth 113°30'.

$x = 2,610,661.745$
 $y = 279,357.999$ V.A. elevation 1802 ft.
Latitude: 36°08'15.355" Longitude: 116°55'54.789"

To Station	Azimuth	Back Azimuth	Feet
Panamint (C&GS)	70°47'47.2"	250°42'39.8"	45,316.5
Trail	170 22 44.3	350 21 21.8	68,359.1
Artists	202 46 51.7	22 50 20.9	71,782.1
Badwater	212 42 44.6	32 46 41.8	60,824.3
C&GS BM "W 680 1943"	236 43 59.0	56 46 06.0	21,100.2
Dante (USGS) (C&GS)	242 06 17.8	62 13 38.3	69,179.9
Pearl	292 09 40.1	112 12 47.4	28,156.7
Smith Mtn. (USGS) (C&GS)	301 04 46.9	121 13 23.1	84,092.3
C&GS BM "H 681 1943"	321 37 12.3	141 41 01.0	51,360.6

C&GS BM "H 681 1943" Inyo County CALIFORNIA
J. A. Lyon, 1949 Destroyed

Described by U. S. Coast and Geodetic Survey in Calif. Level Line No. 79--"Furnace Creek to Shoshone, Calif." as follows:

"Along the rd. from Furnace Creek Inn to Shoshone via Bennetts Well, 29.2 mi. S. of Furnace Creek Inn, 33.15 mi. N. of the jct. of the rd. to Baker with the rd. to Shoshone, 8.0 mi. S. of Bennetts Well, 36 ft. N. of the center of the rd.; a witness post has been set. Elevation: -239.314 ft.

"Station mark: Standard C&GS B.M. disk stamped "H 681 1943", set in top of concrete post."

Note by J.A.L., 1949: Station found as described.

$x = 2,643,409.407$
 $y = 259,792.605$ Elevation -239.314 ft. (Spirit leveling by C&GS in Calif. Level Line No. 79)

Books: FH 129-130

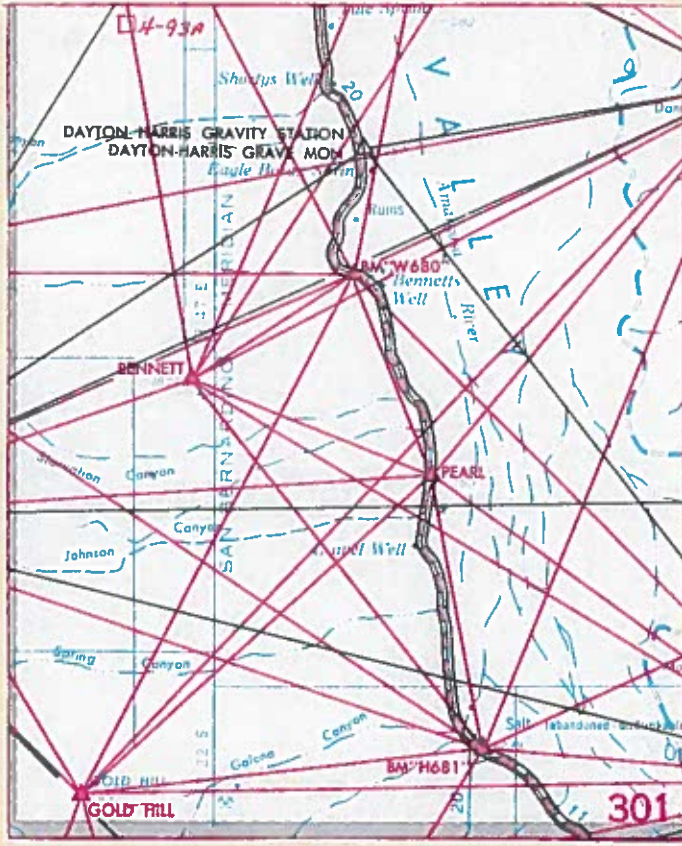
Zone 4

Zone 4

FILE COPY

Zone 4 $x = 2,599,560.542$
 $y = 253,549.598$

324



36° 00'

278

116° 45'

FILE COPY

36 116 3 CALIF. 301
36°00'
116°45'

NAME

DAYTON HARRIS GRAVITY STA
DAYTON HARRIS GRAVE MON

STATION

1004
1004

CALIF. 301

HORIZONTAL CONTROL DATA

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

FILE COPY

QUAD 561163 STATION 1004
CALIF-NEV
LATITUDE 36°00' TO 36°30'
LONGITUDE 116°30' TO 117°00'
DIAGRAM NJ 11-11 DEATH VALLEY

36°00'
116°45'

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: DAYTON HARRIS GRAVITY STATION / CALIFORNIA / COUNTY: INYO / STA.
CHIEF OF PARTY: R. J. Sippo / YEAR: 1950 / DESCRIBED BY: J. G.

OBJECT	BEARING	HORIZ. DISTANCE	DIRECTION:
SMITH Mtn (USES) AZ. MK. Approx. 0.25 mile Dayton-Harris Grave Monument	SSW 117°	247.42' (75.414)	0 00 00.0 52 32 31.9 197 28 31.7

The station is located in Death Valley about 26 miles west-southwest of Death Valley Junction, about 18 miles south of Furnace Creek, about 200 feet east of the road between Furnace Creek and Bennett's Well and 19 feet east of a white witness post. The station was reinforced with additional concrete because the original concrete appeared to be deteriorating. It was not moved horizontally or vertically. The station mark is a U.S. Coast and Geodetic Survey standard bronze gravity station disk set in a 12x12 inch concrete post, projecting 5 inches. It is stamped "DAYTON HARRIS 1950m". There were no reference marks established at this station. The Dayton-Harris Grave Monument is a rectangular cairn with a 5x6 foot base. It is about 6 feet high. On the west side of the cairn there is a bronze plaque dedicated to the two pioneers buried at its base. The point intersected on the cairn was the center of a 1x1 that is apparently the top and center of the cairn.

The azimuth mark is located on the top of a small rise of ground which is about 5 feet higher than the surrounding country. The mark is 31 paces west of the center of a graded road and 6 feet southeast of a white witness post. It projects 3 inches and is stamped "DAYTON HARRIS 1950m". To reach the station from the road junction 0.1 mile west of the entrance to the Furnace Creek Inn, go south on a paved road for 5.8 miles to a fork and sign "Devils Golf Course, Bennett's Well"; turn right and follow the main graded road for 12.2 miles to the station on the left (east). A drive station. To reach the azimuth mark from the station, go south on the graded road for 0.25 miles to the azimuth on the right (west) as described above.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: DAYTON HARRIS GRAVITY STATION
STATE: California LOCALITY: Beatty Area
Second-order Triangulation SOURCE: G-9241
YEAR: 1950
FIELD SKETCH: NEV 31-1

GRID DATA	COORDINATES (Foot)	PLANE AZIMUTH ± 10' 10" 10" ANGLE	MARK	POSITION		ELEVATION
				LATITUDE:	LONGITUDE:	
STATE: Calif ZONE: 4 CODE: 0404	x 2,628,551.56 y 324,995.51	13 23 23 +1 16 17	AZIMUTH MARK	NORTH 36°12'24.043	WEST 116 52 08.593	78.23 - 256.7 METERS FEET
STATE: ZONE: CODE:	x y			TO STATION		LOGARITHM (Meters)
GEODETIC DATA	GEOCENTRIC AZIMUTH (From mean)		GEOCENTRIC AZIMUTH (From mean)		DISTANCE METERS	
	THIRD ORDER 14°39'39".6					

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: DAYTON HARRIS GRAVE MONUMENT
STATE: California LOCALITY: Beatty Area
Second-order Traverse SOURCE: G-9241
YEAR: 1950
FIELD SKETCH: NEV 31-1

GRID DATA	COORDINATES (Foot)	PLANE AZIMUTH ± 10' 10" 10" ANGLE	MARK	POSITION		ELEVATION
				LATITUDE:	LONGITUDE:	
STATE: Calif ZONE: 4 CODE: 0404	x 2,628,521.63 y 325,206.05	+ 0 16 16		NORTH 36°12'27".053	WEST 116 52 10.121	METERS FEET
STATE: ZONE: CODE:	x y			TO STATION		LOGARITHM (Meters)
GEODETIC DATA	GEOCENTRIC AZIMUTH (From mean)		GEOCENTRIC AZIMUTH (From mean)		DISTANCE METERS	
	THIRD ORDER 14°39'39".6					

Computed from Station DAYTON HARRIS GRAVITY STATION
JAN 1964

* Station to which the measurements of triangulation and state publications of triangulation. (Distances are in meters unless otherwise indicated.)
† To nearest tenth only, unless an instrument is known to be better than.

BENNETTS WEIL (301)

California

L.F. Biggs, 1907

Third Order Tentative Adjusted Elevations Based
on the Sea Level Datum of 1929

Book: A 6668

Latitude 36°00'

Longitude 116°45'

(1) NORTH THROUGH DEATH VALLEY (By L.F. Biggs, 1907; Book: A 6668)

Bennetts Well, 10.0 mi S. of, 20 ft E. of rd.; iron post stamped
"B 1907 -235" -236.118

Bennetts Well, 7.2 mi S. of, 40 ft E. of Mesquite Wells; iron
post stamped "B 1907 -244" (Not recovered) -245.313
Not Found '83

Bennetts Well, 4.2 mi S. of, 20 ft E. of rd.; iron post stamped
"B 1907 -248" (Not recovered) -249.415

Bennetts Well, 20 ft E. of; iron post stamped "B 1907 -276"
-267.284
Not Found '83

Bennetts Well, 3.5 mi N. of, 20 ft E. of rd.; iron post stamped
"B 1907 260" (Disturbed) -251.140
Not Found '83

(Continued in Furnace Creek Quadrangle 324)

12/27/74 jk

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D.K.